



United States  
Department of  
Agriculture

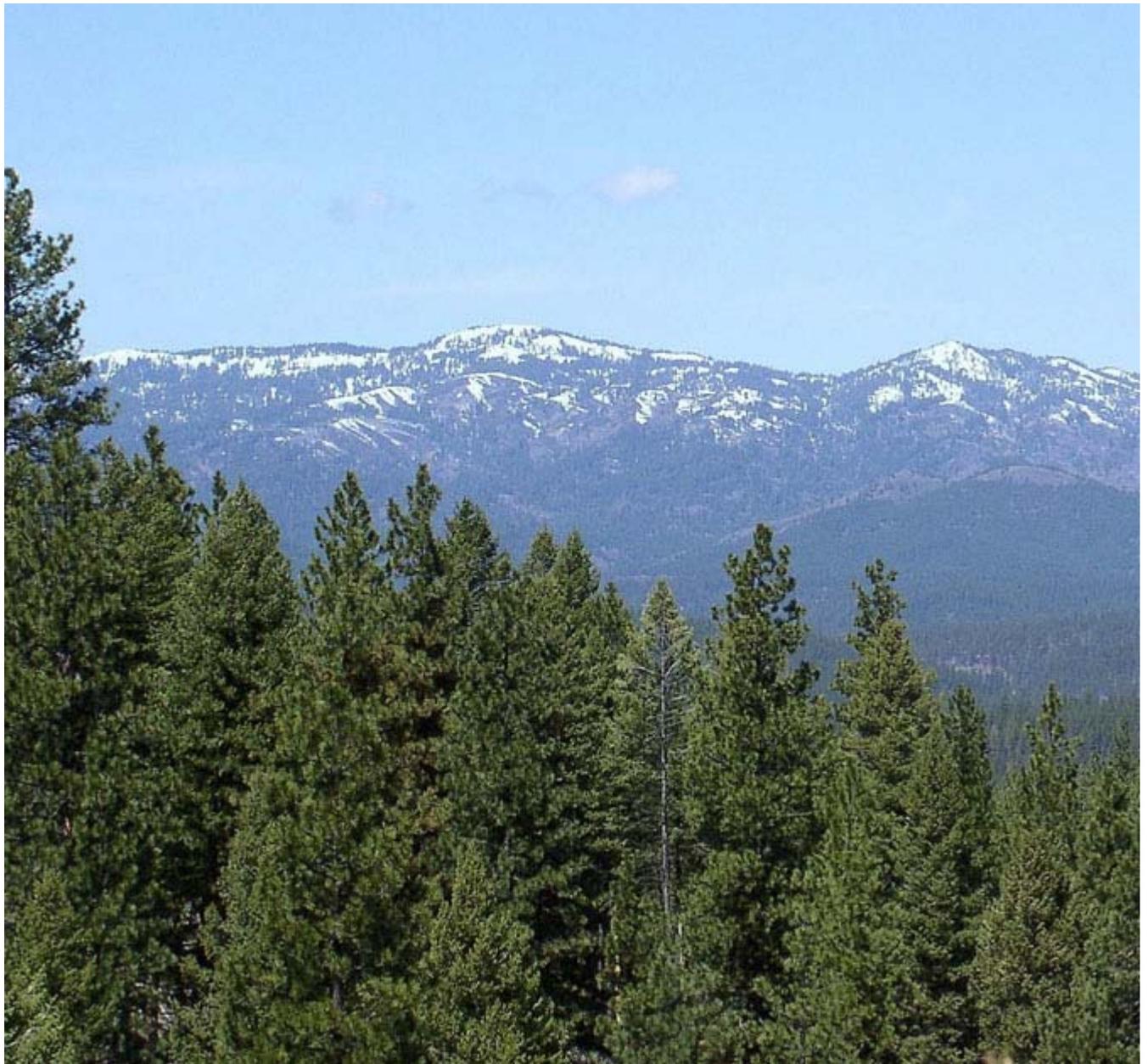


NRCS

Natural  
Resources  
Conservation  
Service

In cooperation with  
United States Department of  
the Interior, Bureau of Land  
Management; United States  
Department of Agriculture,  
Forest Service; and  
University of Idaho, College  
of Agricultural and Life  
Sciences

# Soil Survey of Boise County Area, Idaho, Parts of Ada and Boise Counties





# How To Use This Soil Survey

## General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

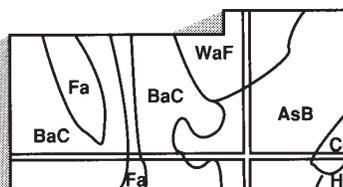
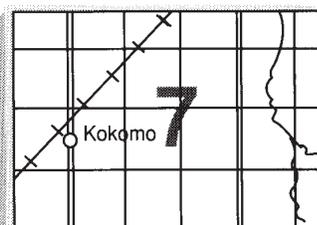
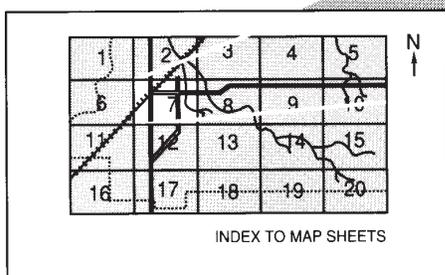
To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

## Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.



NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.

---

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 2003. Soil names and descriptions were approved in 2005. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2003. This survey was made cooperatively by the Natural Resources Conservation Service and the Bureau of Land Management, Forest Service, and University of Idaho, College of Agricultural and Life Sciences. The survey is part of the technical assistance furnished to the Squaw Creek Soil Conservation District.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Since the publication of this survey, more information on soil properties may have been collected, new interpretations may have been developed, or existing interpretive criteria may have been modified. The most current soil information and interpretations for this survey are in the Field Office Technical Guide (FOTG) at the local field office of the Natural Resources Conservation Service. The soil maps in this publication are in digital form. The digitizing of the maps was completed in accordance with the Soil Survey Geographic (SSURGO) database standards. The digital SSURGO-certified maps are considered the official maps for the survey area and are part of the FOTG at the local field office of the Natural Resources Conservation Service.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

**Cover: Snow-covered mountains of Boise Ridge, near New Centerville.**

*Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at <http://www.nrcs.usda.gov>.*

# Contents

---

<b>How To Use This Soil Survey</b> .....	i
<b>Contents</b> .....	iii
<b>Foreword</b> .....	xi
General Nature of the Survey Area .....	1
History and Development .....	2
Ecoregions .....	3
Climate .....	4
How This Survey Was Made .....	5
<b>General Soil Map Units</b> .....	9
1. Piercepark-Boise .....	9
2. Middlefork-Stardust .....	10
3. Breadloaf-Doubledia .....	12
4. Brownlee-Dobson-Robbscreek .....	12
5. Hovelton-McDesh .....	13
6. Shirts-Charters-Kosh .....	14
7. Highvalley-Shilling .....	15
Broad Land Use Considerations .....	15
<b>Detailed Soil Map Units</b> .....	17
220—Oxyaquic Xerofluvents-Cumulic Haploxerolls complex, nearly level .....	18
221—Bissell loam, 2 to 4 percent slopes .....	20
222—Bissell loam, 4 to 8 percent slopes .....	21
223—Staircase sandy loam, 1 to 4 percent slopes .....	22
224—Porter sandy loam, 1 to 4 percent slopes .....	23
225—Boise coarse sandy loam, 3 to 8 percent slopes .....	24
226—Flofeather-Shawmount complex, 1 to 3 percent slopes .....	25
227—Piercepark loam, 2 to 4 percent slopes .....	27
228—Piercepark loam, 4 to 8 percent slopes .....	28
229—Piercepark coarse sandy loam, 8 to 25 percent slopes .....	29
230—Hann-Doubledia complex, 2 to 15 percent slopes .....	30
232—Jasseek loam, 1 to 3 percent slopes .....	32
233—Jasseek loam, 3 to 8 percent slopes .....	34
238—Adaboi silt loam, 1 to 4 percent slopes .....	35
240—Collister-Flofeather complex, 1 to 3 percent slopes .....	36
300—Shawmount gravelly loam, 8 to 35 percent slopes .....	38
301—Breadloaf-Doubledia complex, 4 to 15 percent slopes .....	39
302—Breadloaf-Doubledia-Hann complex, 15 to 50 percent slopes .....	41
303—Doubledia-Hann-Breadloaf complex, 15 to 50 percent slopes .....	43
304—Breadloaf-Doubledia-Hullsgulch complex, 2 to 35 percent slopes .....	45
305—Siphonlake-Solarview complex, 35 to 65 percent slopes .....	48
306—Van Dusen-Siphonlake complex, 35 to 65 percent slopes .....	50
307—Adaboi-Meclo complex, 4 to 15 percent slopes .....	52
308—Breadloaf-Crawley-Doubledia complex, 25 to 65 percent slopes .....	53
309—Hullsgulch-Solarview complex, 35 to 65 percent slopes .....	55
311—Meclo-Crawley-Adaboi complex, 15 to 50 percent slopes .....	57
328—Gacey stony loam, 3 to 8 percent slopes .....	59

329—Ayette-Duco complex, 25 to 65 percent slopes .....	60
330—Breadloaf-Ayette-Immig complex, 4 to 35 percent slopes .....	62
331—Ayette-Yad complex, 8 to 25 percent slopes .....	64
332—Hann-Ayette-Picketpin complex, 25 to 65 percent slopes .....	66
333—Ayette-Crawley-Hullsgulch complex, 25 to 65 percent slopes .....	68
335—Gimmi-Ayette-Doubledia complex, 4 to 35 percent slopes .....	70
400—Ralsen-Foxlane-Pay complex, 0 to 2 percent slopes .....	73
401—Staircase sandy loam, 0 to 2 percent slopes .....	75
402—Crossbow-Foxlane complex, 1 to 4 percent slopes .....	76
403—Ralsen-Pay-Crossbow complex, 0 to 2 percent slopes .....	78
404—Riverpoint-Hellake complex, 2 to 25 percent slopes .....	81
405—Hellake-Staircase complex, 0 to 2 percent slopes .....	83
406—Hellake loam, 2 to 8 percent slopes .....	85
407—Hellake loam, 8 to 25 percent slopes .....	86
408—Stardust fine gravelly loam, 1 to 3 percent slopes .....	87
409—Stardust fine gravelly loam, 3 to 8 percent slopes .....	88
410—Stardust-Riverpoint complex, 8 to 25 percent slopes .....	90
411—Huston-Zeb association, 25 to 65 percent slopes .....	91
412—Huston-Stardust association, 8 to 65 percent slopes .....	93
413—Cloudyway fine gravelly sandy loam, 4 to 15 percent slopes .....	95
414—Hellake-Middlefork complex, 8 to 50 percent slopes .....	96
415—Middlefork-Pinney complex, 8 to 50 percent slopes .....	98
416—Pinney-Middlefork-Zeb complex, 15 to 50 percent slopes .....	100
417—Middlefork-Zeb complex, 8 to 25 percent slopes .....	102
418—Middlefork-Zeb complex, 25 to 65 percent slopes .....	104
419—Charters-Zeb complex, 15 to 50 percent slopes .....	105
420—Pioneervil-Grimescreek complex, 0 to 3 percent slopes .....	107
421—Dumps-Oxyaquic Xerorthents complex, undulating .....	109
422—Lithic Xerorthents-Dumps-Dystric Xeropsamments complex, gently rolling .....	111
423—Dystric Xeropsamments-Ultic Haploxeralfs-Lithic Xerorthents complex, hilly .....	113
424—Middlefork-Charters complex, 8 to 25 percent slopes .....	115
425—Middlefork-Brassey complex, 3 to 15 percent slopes .....	118
426—Middlefork loam, 8 to 25 percent slopes .....	120
427—Middlefork loam, 25 to 50 percent slopes .....	121
428—Zeb-Republic complex, 25 to 65 percent slopes .....	122
429—Huston gravelly coarse sandy loam, 8 to 25 percent slopes .....	124
503—Cartwright loam, 3 to 8 percent slopes .....	125
504—Cartwright loam, 8 to 25 percent slopes .....	126
505—Brownlee loam, 4 to 15 percent slopes .....	127
506—Brownlee-Robbscreek-Whisk complex, 8 to 35 percent slopes .....	128
507—Shoebend-Dobson-Jerusalem complex, 25 to 65 percent slopes .....	130
509—Arrowrock-Borid-Rock outcrop complex, 35 to 90 percent slopes .....	133
511—Olaton-Roney complex, moist, 35 to 90 percent slopes .....	134
513—Shimo-Cartwright-Robbscreek complex, 35 to 90 percent slopes .....	136
516—Shimo-Olaton-Schiller complex, 35 to 90 percent slopes .....	138
525—Robbscreek-Dobson-Brownlee complex, 25 to 65 percent slopes .....	140
526—Cartwright-Brownlee-Robbscreek complex, 25 to 65 percent slopes .....	142
527—Dobson-Roney complex, 35 to 90 percent slopes .....	145
528—Roney-Dobson-Olaton complex, 25 to 65 percent slopes .....	147
529—Roney-Kisky-Olaton complex, 25 to 65 percent slopes .....	149
532—Schiller-Shimo complex, 25 to 65 percent slopes .....	151
533—Olaton-Roney complex, 35 to 90 percent slopes .....	152

534—Shimo-Kisky-Schiller complex, 35 to 90 percent slopes .....	154
538—Borid-Shimo complex, 35 to 90 percent slopes .....	156
541—Roney-Kisky complex, 8 to 35 percent slopes .....	158
544—Arrowrock-Borid-Painter complex, 35 to 90 percent slopes .....	159
551—Shimo-Kisky complex, 35 to 90 percent slopes .....	161
555—Brownlee-Schiller complex, 8 to 65 percent slopes .....	163
556—Kisky-Shimo-Brownlee complex, 35 to 90 percent slopes .....	165
558—Kisky-Whisk-Roney complex, 35 to 90 percent slopes .....	167
560—Robbscreek-Hellake-Shimo complex, 25 to 65 percent slopes .....	169
561—Shimo-Kisky-Olaton complex, 35 to 90 percent slopes .....	171
562—Kisky-Shimo-Roney complex, 35 to 90 percent slopes .....	173
600—McDesh-Immig-Gwin complex, 4 to 25 percent slopes .....	175
601—Hann-Gwin-Shafer complex, 2 to 25 percent slopes .....	177
602—Hillcreek-Hovelton-Hann complex, 25 to 65 percent slopes .....	179
604—Shafer-Hann complex, 2 to 35 percent slopes .....	182
605—Gwin-Flybow complex, 4 to 25 percent slopes .....	183
606—Hillcreek-Hovelton complex, 35 to 65 percent slopes .....	185
607—Duco-Immig-Rubble land complex, 25 to 65 percent slopes .....	186
608—Duco-Hovelton-McDesh complex, 25 to 65 percent slopes .....	188
610—Hovelton-Duco-McDesh complex, 25 to 65 percent slopes .....	190
612—Hann-Hillcreek complex, 4 to 15 percent slopes .....	192
613—Duco-Searles-McDesh complex, 25 to 65 percent slopes .....	194
618—McDesh-Duco-Shafer complex, 8 to 35 percent slopes .....	196
619—McDesh-Gwin-Shafer complex, 8 to 35 percent slopes .....	198
620—Immig-McDesh-Duco complex, 25 to 65 percent slopes .....	200
621—McDaniel-Hovelton association, 35 to 65 percent slopes .....	202
622—Hovelton-Gwin complex, 15 to 65 percent slopes .....	204
630—Gwin-Flybow-Rock outcrop complex, 35 to 65 percent slopes .....	205
631—Flybow-Rock outcrop-Rubble land complex, 35 to 90 percent slopes .....	207
634—Gwin-McDesh-Rock outcrop complex, 4 to 25 percent slopes .....	208
635—Shafer-Karney-Yad complex, 8 to 35 percent slopes .....	210
636—Hann-McDesh-Robbscreek complex, 15 to 50 percent slopes .....	212
638—Yad-Cranegulch-Duco complex, 4 to 15 percent slopes .....	215
640—Timberbutte very gravelly ashy silt loam, 35 to 65 percent slopes .....	217
641—Aradaran-Yad complex, 4 to 15 percent slopes .....	218
650—Longs-Highvalley-Hoff complex, 15 to 35 percent slopes .....	220
651—Hess-Lidos-Cleymor complex, 4 to 35 percent slopes .....	222
652—Hess-Lidos-Klicker complex, 15 to 35 percent slopes .....	224
653—Lidos-Klicker-Hess complex, 35 to 65 percent slopes .....	226
654—Shilling-Highvalley-Hoff complex, 35 to 65 percent slopes .....	229
655—Shilling-Highvalley complex, 15 to 35 percent slopes .....	231
656—Shilling-Highvalley complex, 35 to 65 percent slopes .....	233
657—Pumpkin stony loam, 8 to 25 percent slopes .....	234
658—Cleymor-Pumpkin complex, 4 to 35 percent slopes .....	235
659—Hoff gravelly ashy loam, 8 to 50 percent slopes .....	237
660—Longs-Highvalley complex, 35 to 65 percent slopes .....	238
661—Awley-Bo complex, 15 to 35 percent slopes .....	240
662—Awley-Bo complex, 35 to 65 percent slopes .....	242
663—Cleymor-Hoff complex, 15 to 50 percent slopes .....	243
666—Pachic Argixerolls-Rubble land-Typic Haploxerolls complex, very steep ...	245
700—Drybuck-Whisk complex, 8 to 25 percent slopes .....	247
701—Drybuck-Whisk complex, 25 to 65 percent slopes .....	248
702—Deerrun-Kisky-Drybuck complex, 35 to 90 percent slopes .....	250
704—Drybuck-Northfork-Whisk association, 25 to 65 percent slopes .....	252

705—Northfork-Shirts complex, 15 to 35 percent slopes .....	254
706—Northfork-Shirts-Zimmer complex, 35 to 90 percent slopes .....	256
707—Packerjohn-Shirts-Zimmer complex, 35 to 65 percent slopes .....	258
708—Zimmer-Northfork-Rock outcrop complex, 35 to 90 percent slopes .....	260
709—Shirts-Charters complex, 15 to 35 percent slopes .....	262
710—Charters-Northfork-Shirts complex, 35 to 90 percent slopes .....	264
711—Charters-Shirts-Zimmer complex, 15 to 35 percent slopes .....	266
712—Charters-Shirts-Zimmer complex, 35 to 90 percent slopes .....	268
714—Shirts-Eagleson-Charters complex, 35 to 65 percent slopes .....	270
715—Eagleson-Kosh complex, 25 to 90 percent slopes .....	272
716—Zan-Belsh-Montchief complex, 35 to 90 percent slopes .....	274
718—Charters-Crumley-Eagleson complex, 35 to 90 percent slopes .....	276
720—Drybuck-Deerrun-Kisky complex, 25 to 65 percent slopes .....	278
721—Shirts-Kosh-Charters complex, 25 to 65 percent slopes .....	280
726—Garval-Kisky complex, 35 to 90 percent slopes .....	282
730—Hellake-Stardust complex, 8 to 25 percent slopes .....	284
731—Shirts-Charters-Zimmer complex, 35 to 90 percent slopes .....	287
733—Shirts-Kosh complex, 8 to 25 percent slopes .....	289
734—Shirts-Kosh complex, 35 to 90 percent slopes .....	290
735—Shirts-Zimmer-Charters complex, 35 to 90 percent slopes .....	292
738—Tripod-Packerjohn-Pajo complex, 35 to 90 percent slopes .....	294
739—Shirts-Zimmer-Packerjohn complex, 35 to 90 percent slopes .....	296
740—Charters-Eagleson complex, 35 to 90 percent slopes .....	298
741—Zan fine gravelly ashy coarse sandy loam, 4 to 35 percent slopes .....	300
742—Crumley-Eagleson complex, 35 to 90 percent slopes .....	301
743—Packerjohn-Shirts complex, 8 to 35 percent slopes .....	303
744—Packerjohn-Shirts-Tripod complex, 4 to 35 percent slopes .....	305
745—Tripod-Packerjohn complex, 35 to 90 percent slopes .....	307
746—Packerjohn ashy sandy loam, 15 to 35 percent slopes .....	308
747—Pinney-Charters-Shirts complex, 25 to 65 percent slopes .....	309
748—Belsh-Zan complex, 8 to 35 percent slopes .....	312
749—Quartzburg-Charters complex, 35 to 90 percent slopes .....	313
750—Garval-Kisky-Rock outcrop complex, 35 to 90 percent slopes .....	315
751—Belsh-Zan complex, 35 to 65 percent slopes .....	317
752—Josie-Zimmer complex, 8 to 50 percent slopes .....	318
753—Tripod-Packerjohn-Shirts complex, 15 to 50 percent slopes .....	320
754—Packerjohn-Shirts complex, moist, 8 to 35 percent slopes .....	322
755—Zimmer-Quartzburg-Rock outcrop complex, 50 to 90 percent slopes .....	324
756—Pajo-Tripod-Kosh complex, 50 to 90 percent slopes .....	325
758—Eagleson-Kosh-Charters complex, 35 to 90 percent slopes .....	327
759—Charters-Shirts-Kosh complex, 25 to 65 percent slopes .....	330
761—Charters-Middlefork complex, 8 to 50 percent slopes .....	332
762—Drybuck-Hellake-Deerrun complex, 8 to 50 percent slopes .....	333
763—Eagleson-Kosh-Rock outcrop complex, 35 to 90 percent slopes .....	336
765—Backswitch-Zimmer-Rock outcrop complex, 8 to 35 percent slopes .....	337
766—Backswitch-Charters-Zimmer complex, 8 to 50 percent slopes .....	340
767—Shirts-Kosh-Charters complex, 15 to 50 percent slopes .....	342
768—Shirts-Kosh-Eagleson complex, 35 to 90 percent slopes .....	345
770—Shirts-Charters-Kosh complex, 15 to 65 percent slopes .....	347
771—Backswitch-Shirts complex, 25 to 65 percent slopes .....	349
772—Pajo-Packerjohn-Kosh complex, 35 to 90 percent slopes .....	351
900—Pits and Dumps, gravel .....	353
901—Dumps, landfill .....	353
999—Water .....	354

<b>Use and Management of the Soils</b> .....	355
Interpretive Ratings .....	355
Rating Class Terms .....	355
Numerical Ratings .....	355
Crops and Pasture .....	356
Yields per Acre .....	358
Land Capability Classification .....	359
Prime Farmland .....	360
Agricultural Waste Management .....	361
Rangeland and Grazeable Forestland .....	364
Forestland .....	368
Forestland Productivity .....	372
Forest Management .....	373
Recreation .....	375
Wildlife Habitat .....	377
Engineering .....	378
Building Site Development .....	379
Sanitary Facilities .....	381
Construction Materials .....	382
Water Management .....	383
Disturbed Land Reclamation .....	384
<b>Soil Properties</b> .....	387
Engineering Properties .....	387
Physical Properties .....	388
Chemical Properties .....	390
Water Features .....	390
Soil Features .....	391
<b>Classification of the Soils</b> .....	393
Taxonomic Units and Their Morphology .....	393
Aadabo Series .....	394
Aadaran Series .....	396
Arrowrock Series .....	397
Awley Series .....	398
Ayette Series .....	400
Backswitch Series .....	402
Belsh Series .....	403
Bissell Series .....	405
Bo Series .....	406
Boise Series .....	408
Borid Series .....	410
Brassey Series .....	411
Breadloaf Series .....	413
Brownlee Series .....	415
Cartwright Series .....	416
Charters Series .....	417
Cleymor Series .....	419
Cloudyway Series .....	421
Collister Series .....	423
Cranegulch Series .....	425
Crawley Series .....	427
Crossbow Series .....	428
Crumley Series .....	430
Cumulic Haploxerolls .....	431
Deerrun Series .....	432

Dobson Series .....	434
Doubledia Series .....	435
Drybuck Series .....	437
Duco Series .....	438
Dystric Xeropsamments .....	440
Eagleson Series .....	441
Flofeather Series .....	442
Flybow Series .....	443
Foxlane Series .....	444
Gacey Series .....	446
Garval Series .....	448
Gimmi Series .....	449
Grimescreek Series .....	451
Gwin Series .....	453
Hann Series .....	454
Hellake Series.....	455
Hess Series .....	457
Highvalley Series .....	459
Hillcreek Series .....	461
Hoff Series .....	463
Hovelton Series .....	464
Hullsgulch Series .....	466
Huston Series .....	468
Immig Series .....	470
Jasseek Series .....	471
Jerusalem Series .....	473
Josie Series .....	474
Karney Series .....	476
Kisky Series .....	477
Klicker Series .....	478
Kosh Series .....	480
Lidos Series .....	481
Lithic Xerorthents.....	483
Longs Series.....	484
McDaniel Series .....	486
McDesh Series .....	487
Meclo Series .....	489
Middlefork Series .....	490
Montchief Series .....	492
Northfork Series.....	493
Olaton Series .....	495
Oxyaquic Xerofluvents.....	496
Oxyaquic Xerorthents .....	498
Pachic Argixerolls .....	499
Packerjohn Series .....	500
Painter Series .....	502
Pajo Series .....	503
Pay Series.....	505
Picketpin Series .....	507
Piercepark Series .....	508
Pinney Series.....	510
Pioneervil Series.....	511
Porter Series.....	514
Pumpkin Series .....	515

Quartzburg Series .....	517
Ralsen Series .....	519
Republic Series.....	520
Riverpoint Series .....	522
Robbscreek Series .....	524
Roney Series .....	526
Schiller Series.....	527
Searles Series .....	528
Shafer Series .....	530
Shawmount Series.....	531
Shilling Series .....	533
Shimo Series .....	535
Shirts Series .....	536
Shoebend Series .....	538
Siphonlake Series .....	539
Solarview Series .....	541
Staircase Series .....	542
Stardust Series .....	544
Timberbutte Series .....	545
Tripod Series.....	547
Typic Haploxerolls .....	549
Ultic Haploxeralfs .....	550
Van Dusen Series .....	552
Whisk Series.....	553
Yad Series.....	554
Zan Series .....	556
Zeb Series .....	558
Zimmer Series .....	559
<b>Formation of the Soils .....</b>	<b>561</b>
Time .....	561
Climate.....	562
Living Organisms .....	563
Parent Material .....	564
Relief.....	565
<b>References .....</b>	<b>567</b>
<b>Glossary .....</b>	<b>571</b>
<b>Tables .....</b>	<b>587</b>
Table 1.--Temperature and Precipitation .....	588
Table 2.--Freeze Dates in Spring and Fall .....	590
Table 3.--Growing Season .....	591
Table 4.--Acreage and Proportionate Extent of the Soils .....	592
Table 5.--Yields per Acre of Crops and Pasture .....	598
Table 6.--Land Capability Classification .....	601
Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage .....	618
Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow .....	680
Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and .....	773
Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities .....	864
Table 11.--Forest Productivity .....	957
Table 12a.--Forestland Management (Part I) .....	978
Table 12b.--Forestland Management (Part II) .....	996
Table 12c.--Forestland Management (Part III) .....	1013

Table 12d.--Forestland Management (Part IV) .....	1033
Table 12e.--Forestland Management (Part V) .....	1050
Table 13a.--Recreation (Part I) .....	1071
Table 13b.--Recreation (Part II) .....	1112
Table 14a.--Building Site Development (Part I) .....	1152
Table 14b.--Building Site Development (Part II) .....	1193
Table 15.--Sanitary Facilities .....	1244
Table 16a.--Construction Materials (Part I) .....	1297
Table 16b.--Construction Materials (Part II) .....	1363
Table 17.--Water Management .....	1416
Table 18.--Engineering Properties .....	1455
Table 19.--Physical Properties of the Soils .....	1582
Table 20.--Chemical Properties of the Soils .....	1654
Table 21.--Water Features .....	1706
Table 22.--Soil Features .....	1746
Table 23.--Taxonomic Classification of the Soils .....	1777

Issued August 2008

# Foreword

---

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

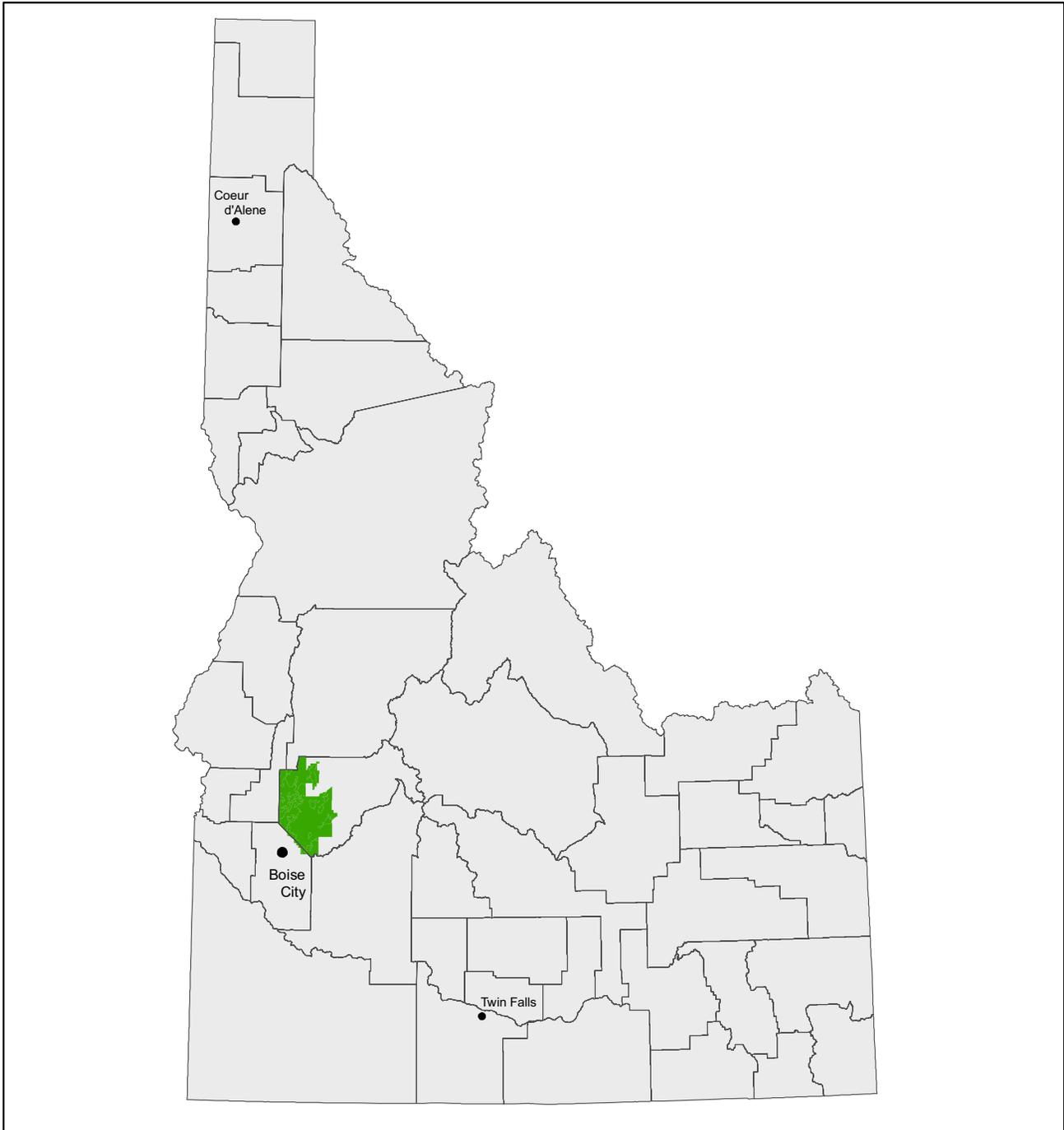
This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Jeffery B. Burwell  
State Conservationist  
Natural Resources Conservation Service



Location of Boise County Area, Idaho

# Soil Survey of Boise County Area, Idaho, Parts of Ada and Boise Counties

---

By Alan L. Harkness, Natural Resources Conservation Service

Fieldwork by Alan L. Harkness, David J. Trochlell, Mark E. Johnson, and Michael P. Regan, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with  
United States Department of the Interior, Bureau of Land Management;  
United States Department of Agriculture, Forest Service; and University of Idaho, College of Agricultural and Life Sciences

BOISE COUNTY AREA is in the west-central part of Idaho, north of Boise City, the state capitol. The survey area covers 462,762 acres, or about 723 square miles, most of which is in western Boise County. The Ada County part consists of 6,800 acres along the northeastern boundary of the county. The survey area consists of intermingled private, State, and Federal land. The Federal land is administered by the Forest Service, Bureau of Land Management, and Corps of Engineers. The county seat is the historic mining community of Idaho City, which had a population of 458 in 2000.

The survey area consists of narrow, nearly level flood plains along major drainageways; gently rolling relict lakebed terraces and steeply dissected fan remnants in mountain valleys and basins; and steep hills and mountains characterized by very steep canyons. The majority of the area is drained by the Payette River system. Boise Basin and the southeastern part of the area are drained by tributaries of the Boise River. These watersheds are divided by the mountainous Boise Ridge, which is oriented north and south. Shafer Butte, which has an elevation of 7,582 feet, is the highest point in the area. The lowest point, at an elevation of 2,550 feet, is on the Payette River where it runs west out of Boise County.

The soils in the area are very shallow to very deep. They generally are loamy and well drained; however, the full range of soil textures and natural drainage conditions are in the area. Rangeland and forestland are the dominant uses because of the climate and topography. The major concerns in managing the soils for crops and pasture are climate and erosion.

The soil survey of Boise Front Project, Idaho, an interim report that covers a southwestern portion of this survey area, was published in 1997 (USDA, 1997). The present survey provides updated and additional information.

## General Nature of the Survey Area

This section gives information about the natural and cultural features that affect the use and management of the soils in the survey area. It briefly discusses history and development, ecoregions, and climate.

## History and Development

People have inhabited west-central Idaho for 14,000 years or more. Until about 8,000 years ago, they were primarily big game hunters. Since then they have specialized more in natural crops and seeds and smaller game. Salmon, which were plentiful in most rivers, were caught, dried, and stored in summer. Roots and bulbs, particularly camas lily, sego lily, bitterroot, and biscuitroot, and chokecherries, huckleberries, and serviceberries were mashed and dried. Communal hunts for rabbit, antelope, and buffalo were organized (Idaho State Historical Society, n.d.).

About the middle of the 18th century, drastic changes began to affect the way of life. The Boise Shoshone were among the earliest North American Indians to possess horses, and they became the most prominent band in the region. Influenced by their eastern neighbors, the Shoshone adopted the methods, living habits, dress, and patterns of organization that went with hunting buffalo on horseback. At the time of exploration by white people, the Indians traveled widely and traded furs for manufactured goods.

A hundred centuries or more of unrestricted, unsettled wilderness habitation ended on August 2, 1862, at Boston Bar on Grimes Creek. The discovery of gold in Boise Basin marked the beginning of a major gold rush in Idaho. The amount of gold in the area eclipsed anything that had been discovered in the Pacific Northwest. In January of the next year, newspapers reported that 4,000 men had already found their way to the basin, hundreds more were arriving daily, and 7,000 to 8,000 were expected to arrive by mid-February (Wells, 2002).

Placerville, Idaho City, Pioneer City, Centerville, and Granite Creek became thriving cities. By the summer of 1863, the area had become the largest population center in the Pacific Northwest, with a population of 12,000 to 14,000. Enthusiasm for mining continued well into the 20th century. A large number of Oriental workers also came to the basin. By 1880, these workers accounted for 60 percent of the population.

In total, the area produced more than 3 million ounces of gold. Quartz mining was common also, but it was less profitable than placer mining mainly because of the greater capital investment needed. Placer mining progressed from use of sluice boxes to large-scale hydraulic nozzles, which could wash away entire mountains of gravel. Dredging technology of the 20th century was used to mine gold in the drainageways. Large areas of mined land and piles of placer and dredge tailings now characterize the basin.

Still part of the Washington Territory, Boise County was established on January 29, 1863, with a total area of 62,000 square miles. On March 4, 1863, Congress established the Idaho Territory. Idaho became a state on July 3, 1890.

Water resource development as a result of placer mining facilitated early settlement and irrigated farming in the area. The mining communities provided important markets for early farmers and ranchers. Gold rush routes pushed back the frontier and became highways for commerce. Cattle and sheep ranching became prominent toward the end of the century in areas such as Garden Valley. In 1915 the U.S. Reclamation Service initiated the Boise Project with completion of Arrowrock Dam on the Boise River. With a height of 348 feet, it was the tallest dam in the world.

In the 20th century, logging broadened the economic base of the area. Ventures such as the Barber Lumber Company consolidated family-sized timber claims into large commercial holdings. Beginning in 1915, timber was hauled out of Boise Basin by rail, and after the Depression it was hauled out on newly constructed logging roads.

In 1905 President Theodore Roosevelt proclaimed the establishment of the Sawtooth Forest Reserve, which was the lineal predecessor of the Boise National

Forest. It was the responsibility of the ranger to fight fires and establish an orderly system to control the cutting of timber and manage livestock grazing. Since 1933 the Boise Basin Experiment Station, near Idaho City, has developed innovative forest and range management practices for the intermountain region. Areas of Boise County to the east and north of the survey area are nearly all public land that is managed by the U.S. Forest Service. Numerous land exchanges have consolidated State and Federal holdings in the survey area (Smith, 1983).

In the mid-1930's, the Civilian Conservation Corps (CCC) came to the area. Camps were located in Horseshoe Bend, Gardena, Garden Valley, and Idaho City. Until World War II, the CCC provided most of the labor force for firefighting and construction of trails, public facilities, and conservation projects. To centralize federally assisted conservation work, the Soil Conservation Service (now the Natural Resources Conservation Service) was established in 1935. General interest in soil erosion resulted in the formation of the local Squaw Creek Soil Conservation District on December 21, 1940.

As the population of Treasure Valley, immediately to the southwest, expands at a record pace, large-scale housing developments are being planned and built. In the scenic mountain valleys and canyons, recreational and residential lots have become popular. Recreation has become a major part of the local economy. The large gold mines and sawmills are gone, but forestry, ranching, and farming remain viable industries.

## **Ecoregions**

Ecoregions denote areas that have similar ecosystems and type, quality, and quantity of environmental resources. They are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. This survey area is in the southwestern corner of the Idaho Batholith ecoregion (McGrath and others, 2002).

The major subdivision of this ecosystem is the Southern Forested Mountains. This area is mantled with droughty soils derived from granitic rock and is marginally affected by maritime influences. It has common open areas of Douglas fir, grand fir, and subalpine fir at higher elevations, ponderosa pine in canyons, and mountain sagebrush in the southern part. Streams are subject to sedimentation when the soils are disturbed.

The second major subdivision, Foothill Shrublands-Grasslands, forms an arch to the south and west and transitions to the Snake River Plain ecoregion. The hills and benches in this area are dry, do not support trees, and are covered with shrubs and grasses.

A third subdivision of relatively minor extent, Hot Dry Canyons, is in the northern part of the survey area. These deeply dissected canyons (local relief of more than 3,000 feet), which become warmer and drier as depth increases, support widespread ponderosa pine, mountain sagebrush, and grasses. The south-facing slopes are drier and less wooded than are the north-facing slopes. Locally, the canyon bottoms serve as major transportation corridors.

The survey area is at the western fringe of the Columbia River Plateau and the northern fringe of the Snake River Plain. The ecosystems associated with these adjoining major physiographic landforms are uniquely different from those associated with the Idaho Batholith. Fingers and isolated pockets of these contrasting ecosystems are common along the boundaries of these landforms. Within the Idaho Batholith ecoregion, transitions are more diffuse and more extreme. The ecosystems range from semiarid sagebrush steppe to high mountain mixed conifer forest.

## Climate

Prepared by the Natural Resources Conservation Service, National Water and Climate Center, Portland, Oregon.

The climate tables were created from data recorded at the Garden Valley Ranger Station and Idaho City, Idaho, climate stations. Additional information was derived from the mean annual temperature and precipitation maps of Idaho developed for the Natural Resources Conservation Service by the Spatial Climate Analysis Service at Oregon State University using the Parameter-elevation Regressions on Independent Slopes Model (PRISM) climate mapping system. Thunderstorm days, relative humidity, percent sunshine, and wind information were estimated from data recorded at the First Order station at Boise, Idaho.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Garden Valley Ranger Station and Idaho City in the period 1971 to 2000. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season.

In winter, the average temperature was 28.0 degrees F at Garden Valley Ranger Station and 25.9 degrees at Idaho City. The average daily minimum temperature in winter was 19.0 degrees at Garden Valley Ranger Station and 14.6 degrees at Idaho City. The lowest temperature on record was -25 degrees at Garden Valley Ranger Station on January 25, 1949, and -38 degrees at Idaho City on January 21, 1937. In summer, the average temperature was 65.8 degrees at Garden Valley Ranger Station and 63.2 degrees at Idaho City. The average daily maximum temperature in summer was 86.4 degrees at Garden Valley Ranger Station and 83.1 degrees at Idaho City. The highest temperature recorded was 110 degrees at Garden Valley Ranger Station on August 3, 1961, and 109 degrees at Idaho City on July 29, 1934.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The average annual precipitation across the survey area is related to elevation and location. At Garden Valley Ranger Station, which is at an elevation of 3,210 feet, the average annual precipitation is about 25.3 inches. At Idaho City, which is at an elevation of 3,970 feet, the average annual precipitation is about 24.1 inches. Most of the survey area receives 13 to 30 inches of precipitation annually, but the higher areas west of Placerville and north of Banks receive as much as 48 inches. Only a few inches, or about 10 percent, of the annual precipitation throughout the survey area falls in June through August. The growing season for most crops falls within this period. The heaviest 1-day precipitation during the period of record was 3.36 inches at Garden Valley Ranger Station on February 16, 1982, and 2.61 inches at Idaho City on June 12, 1958. Thunderstorms occur on about 20 days each year, and most occur in May through August.

The average seasonal snowfall is 53.3 inches at Garden Valley Ranger Station and 71.4 inches at Idaho City. The amount of snowfall also is highly dependent on elevation. As much as 150 inches falls in a typical season at the highest elevations. The greatest snow depth at any one time during the period of record was 46 inches at Garden Valley Ranger Station on February 15, 1949, and 74 inches at Idaho City on February 17, 1949. On average, at the lower elevations about 40 to 60 days per year have at least 1 inch of snow on the ground and at the higher elevations snow can cover the ground for more than 6 months. Typically, the number of days per year that have at least 1 inch of snow on the ground is 54 days at Garden Valley Ranger Station and 119 days at Idaho City. The heaviest 1-day snowfall on record was 17.0

inches at Garden Valley Ranger Station on January 11, 1979, and 24.1 inches at Idaho City on February 1, 1957.

The average relative humidity in midafternoon is about 25 percent in summer and 70 percent in winter. Humidity is higher at night, and the average at dawn is about 55 percent in summer and 80 percent in winter. The sun shines about 80 percent of the time in summer and 45 percent of the time in winter. The prevailing wind is highly dependent on location, exposure, and elevation, but it generally is from the south. Average windspeed is highest, about 9 miles per hour, in March and April.

## How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down to bedrock or into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-

observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

This survey was mapped at two levels of detail. At the more detailed level, map units are narrowly defined. Map unit boundaries were plotted and verified at closely spaced intervals. At the less detailed level, map units are broadly defined. Boundaries were plotted and verified at wider intervals. The detail of mapping was selected to meet the anticipated long-term use of the survey, and the map units were designed to meet the needs for that use.

The descriptions, name, and delineations of the soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

The general procedures used in making this survey are described in the National Soil Survey Handbook and the Soil Survey Manual (USDA, 2003c; USDA, 1993). The soil survey maps made for conservation planning on individual farms prior to the start of this survey and the geology maps published by the Idaho Geological Survey were among the references used (Kiilsgaard and others, 1997; Mitchell and Bennett, 1979a; Mitchell and Bennett, 1979b).

Before the fieldwork began, preliminary boundaries of slopes and landforms were plotted stereoscopically on aerial photographs taken in 1987 and then enlarged to a scale of 1:24,000. Soil scientists studied U.S. Geological Survey topographic maps, which were produced at a scale of 1:24,000, to relate land and image features. Reconnaissance of the area was done by vehicle before the landscape was traversed on foot.

Sample areas were selected to represent the major landscapes in the survey area. These areas were investigated more closely than the other areas. Extensive notes were taken on the composition of map units in these preliminary study areas. As mapping progressed, these notes were modified and a final assessment of the composition of the individual map units was made. In areas used for intensive farming or where the soil pattern is very complex, transects were as little as 100 yards apart. In areas used as rangeland and forestland or where the soil pattern is relatively simple, transects were as much as 1 mile apart.

As the transects were made, the soil scientists divided the landscape into landforms or landform segments based on the use and management of the soils. For example, a hill was separated from a depression and a gently sloping summit from a very steep backslope of a ridge. In most areas, examinations of the soils along the

transects were made on sites representative of the major repetitive geomorphic processes.

Characteristics such as landform, vegetation, and excavations were observed without regard to spacing. Soil boundaries were determined on the basis of examination of soils, observation of sites, and photo interpretation. A hand auger or spade was used to aid in examining the soils to a depth of about 6 feet or to bedrock. The pedons described as typical were observed and studied in pits that were dug with shovels, spades, or backhoes.

Samples for chemical and physical analyses and for analyses of engineering properties were taken from representative sites of several of the soils in the survey area. The chemical and physical analyses were made at the Soil Survey Laboratory of the National Soil Survey Center in Lincoln, Nebraska.



# General Soil Map Units

---

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils and some minor soils or miscellaneous areas. It is named for the major, or most extensive, soils. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified. Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management. The textures given for the units are taxonomic family particle-size class terms.

Some soil boundaries and names on the general soil map for this survey area do not match those on the general soil map for adjacent survey areas in Idaho, including Ada County Area; Gem County Area; Middle Fork Payette River Area, Parts of Valley and Boise Counties; and Valley County Area, Parts of Adams and Valley Counties. These differences are the result of evolving series concepts, application of the latest soil classification system, and additional data collection.

## 1. Piercepark-Boise

*Very deep, fine-loamy and coarse-loamy textured, gently sloping to moderately steep, well drained and somewhat excessively drained soils that formed in alluvium*

### **Setting**

*Landscape position:* Valleys

*Percentage of survey area:* 1 percent

*Elevation:* 2,520 to 4,790 feet

*Average annual precipitation:* 13 to 17 inches

*Frost-free season:* 110 to 150 days

### **Soil Properties and Qualities**

#### **Piercepark**

*Depth class:* Very deep

*Drainage class:* Well drained

*Position on landform:* Fan remnants

*Parent material:* Loamy alluvium

*Surface texture:* Loam or coarse sandy loam

*Slope range:* 2 to 25 percent

**Boise**

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Position on landform:* Fan remnants

*Parent material:* Coarse-loamy alluvium

*Surface texture:* Coarse sandy loam

*Slope range:* 3 to 8 percent

**Minor Components**

Bissell, Shawmount, Flofeather, and Jasseek soils, Oxyaquic Xerofluvents, and Cumulic Haploxerolls

**Major Uses**

Irrigated and nonirrigated hay and pasture (fig. 1), and homesites

**2. Middlefork-Stardust**

*Very deep, fine-loamy textured, gently sloping to steep, well drained soils that formed in loamy lacustrine and alluvial deposits*

**Setting**

*Landscape position:* Valleys, canyonland, and intermontane basins

*Percentage of survey area:* 8 percent



Figure 1.—Irrigated hay and pasture in an area of general soil map unit 1 in foreground. Lower foothills are in an area of general soil map unit 3. Foothills and canyon in background are in an area of general soil map unit 4.

*Elevation:* 2,720 to 5,270 feet  
*Average annual precipitation:* 20 to 30 inches  
*Frost-free season:* 60 to 120 days

### ***Soil Properties and Qualities***

#### **Middlefork**

*Depth class:* Very deep  
*Drainage class:* Well drained  
*Position on landform:* Dissected fan remnants and outwash terraces  
*Parent material:* Loamy lacustrine deposits  
*Surface texture:* Loam  
*Slope range:* 3 to 50 percent

#### **Stardust**

*Depth class:* Very deep  
*Drainage class:* Well drained  
*Position on landform:* Fan remnants  
*Parent material:* Loamy alluvium  
*Surface texture:* Fine gravelly loam  
*Slope range:* 1 to 25 percent

### ***Minor Components***

Dystric Xeropsamments, Huston and Hellake soils, Ultic Haploxeralfs, Charters soils, Lithic Xerorthents, and Pinney soils

### ***Major Uses***

Hay and pasture (fig. 2), homesites, recreation, and wildlife habitat



Figure 2.—Irrigated hay and pasture interspersed with homesites in an area of general soil map unit 2. Forested mountains in background are in an area of general soil map unit 6.

### 3. Breadloaf-Doubledia

*Moderately deep and deep, fine textured, undulating to steep, well drained soils that formed in clayey lacustrine deposits*

#### **Setting**

*Landscape position:* Foothills and valleys  
*Percentage of survey area:* 3 percent  
*Elevation:* 2,610 to 4,650 feet  
*Average annual precipitation:* 14 to 20 inches  
*Frost-free season:* 90 to 150 days

#### **Soil Properties and Qualities**

##### **Breadloaf**

*Depth class:* Moderately deep  
*Drainage class:* Well drained  
*Position on landform:* Hillslopes and landslides  
*Parent material:* Clayey lacustrine deposits  
*Surface texture:* Clay loam  
*Slope range:* 4 to 50 percent

##### **Doubledia**

*Depth class:* Deep  
*Drainage class:* Well drained  
*Position on landform:* Hillslopes, landslides, and fan remnants  
*Parent material:* Clayey lacustrine deposits  
*Surface texture:* Silty clay loam or clay loam  
*Slope range:* 2 to 50 percent

#### **Minor Components**

Ayette, Hann, Siphonlake, Crawley, and Hullsgulch soils

#### **Major Uses**

Livestock grazing, hay and pasture, and homesites

### 4. Brownlee-Dobson-Robbscreek

*Shallow to deep, fine-loamy textured, rolling to very steep, well drained and somewhat excessively drained soils that formed in colluvium derived from granodiorite*

#### **Setting**

*Landscape position:* Foothills and canyonland  
*Percentage of survey area:* 20 percent  
*Elevation:* 2,520 to 5,820 feet  
*Average annual precipitation:* 12 to 22 inches  
*Frost-free season:* 90 to 155 days

#### **Soil Properties and Qualities**

##### **Brownlee**

*Depth class:* Deep  
*Drainage class:* Well drained  
*Position on landform:* Hillslopes

*Parent material:* Colluvium derived from granodiorite

*Surface texture:* Loam

*Slope range:* 4 to 50 percent

#### **Dobson**

*Depth class:* Shallow

*Drainage class:* Somewhat excessively drained

*Position on landform:* Hillslopes and canyon walls

*Parent material:* Colluvium derived from granodiorite

*Surface texture:* Fine gravelly coarse sandy loam

*Slope range:* 25 to 90 percent

#### **Robbscreek**

*Depth class:* Moderately deep

*Drainage class:* Well drained

*Position on landform:* Hillslopes and canyon walls

*Parent material:* Colluvium derived from granodiorite

*Surface texture:* Fine gravelly coarse sandy loam

*Slope range:* 8 to 65 percent

### **Minor Components**

Roney, Shimo, Kisky, Olaton, and Cartwright soils

### **Major Uses**

Livestock grazing, hay and pasture, and wildlife habitat

## **5. Hovelton-McDesh**

*Moderately deep, fine and loamy-skeletal textured, rolling to very steep, well drained soils that formed in colluvium derived from basalt or welded tuff with varying amounts of volcanic ash on the surface*

### **Setting**

*Landscape position:* Foothills

*Percentage of survey area:* 5 percent

*Elevation:* 2,580 to 5,750 feet

*Average annual precipitation:* 13 to 22 inches

*Frost-free season:* 90 to 150 days

### **Soil Properties and Qualities**

#### **Hovelton**

*Depth class:* Moderately deep

*Drainage class:* Well drained

*Position on landform:* Hillslopes

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

*Surface texture:* Gravelly or cobbly ashy loam

*Slope range:* 25 to 65 percent

#### **McDesh**

*Depth class:* Moderately deep

*Drainage class:* Well drained

*Position on landform:* Hillslopes and structural benches

*Parent material:* Colluvium derived from basalt

*Surface texture:* Loam or very stony loam

*Slope range:* 4 to 65 percent

### **Minor Components**

Duco, Hillcreek, Gwin, Hann, Immig, and Shafer soils

### **Major Uses**

Livestock grazing and wildlife habitat

## **6. Shirts-Charters-Kosh**

*Shallow, moderately deep, and very deep, coarse-loamy and sandy-skeletal textured, rolling to very steep, somewhat excessively drained and excessively drained soils that formed in colluvium derived from granodiorite and rhyolite*

### **Setting**

*Landscape position:* Mountains and canyonland

*Percentage of survey area:* 60 percent

*Elevation:* 2,750 to 7,580 feet

*Average annual precipitation:* 20 to 36 inches

*Frost-free season:* 50 to 90 days

### **Soil Properties and Qualities**

#### **Shirts**

*Depth class:* Moderately deep

*Drainage class:* Somewhat excessively drained

*Position on landform:* Mountain slopes and canyon walls

*Parent material:* Colluvium derived from granodiorite

*Surface texture:* Sandy loam, coarse sandy loam, or fine gravelly sandy loam

*Slope range:* 4 to 90 percent

#### **Charters**

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Position on landform:* Mountain slopes and canyon walls

*Parent material:* Colluvium derived from granodiorite

*Surface texture:* Sandy loam, coarse sandy loam, or fine gravelly sandy loam

*Slope range:* 8 to 90 percent

#### **Kosh**

*Depth class:* Shallow

*Drainage class:* Excessively drained

*Position on landform:* Mountain slopes and canyon walls

*Parent material:* Colluvium derived from granodiorite and rhyolite

*Surface texture:* Fine gravelly sandy loam

*Slope range:* 8 to 90 percent

### **Minor Components**

Eagleson, Kisky, Zimmer, Packerjohn, Backswitch, Deerrun, and Drybuck soils

### **Major Uses**

Timber production, livestock grazing, recreation, and wildlife habitat

## 7. Highvalley-Shilling

*Very deep, fine-loamy and loamy-skeletal textured, hilly to very steep, well drained soils that formed in volcanic ash and colluvium derived from basalt and welded tuff*

### **Setting**

*Landscape position: Mountains  
Percentage of survey area: 3 percent  
Elevation: 3,780 to 6,780 feet  
Average annual precipitation: 26 to 36 inches  
Frost-free season: 60 to 90 days*

### **Soil Properties and Qualities**

#### **Highvalley**

*Depth class: Very deep  
Drainage class: Well drained  
Position on landform: Mountain slopes  
Parent material: Volcanic ash and colluvium derived from basalt and welded tuff  
Surface texture: Ashy loam  
Slope range: 15 to 65 percent*

#### **Shilling**

*Depth class: Very deep  
Drainage class: Well drained  
Position on landform: Mountain slopes  
Parent material: Volcanic ash and colluvium derived from basalt  
Surface texture: Gravelly ashy loam  
Slope range: 15 to 65 percent*

### **Minor Components**

Hoff, Hess, Lidos, Awley, Longs, Klicker, Pumpkin, Cleymor, and Bo soils

### **Major Uses**

Timber production, livestock grazing, recreation, and wildlife habitat

## **Broad Land Use Considerations**

The soils in the survey area vary in their suitability for major land uses. About two-thirds of the total acreage is forestland used mainly for timber production, livestock grazing, and wildlife habitat. Most of this acreage is in general map units 2, 6, and 7. Erodibility and leaching potential are the main limitations of unit 2. Also, a seasonal high water table and flooding are common along drainageways. The steepness of slope, depth to bedrock, and cold temperatures are common limitations of units 6 and 7. Erodibility and shrink-swell potential are limitations of unit 6.

Most nonforested upland areas are used for livestock grazing and wildlife habitat. The soils in general soil map units 3, 4, and 5 commonly are droughty, especially areas on exposed aspects. Slope stability, erodibility, and shrink-swell potential are the main limitations of units 3 and 5. Steepness of slope and depth to bedrock are common limitations of units 4 and 5. Surface stones are a management concern in some areas of unit 5.

A relatively small acreage of the survey area is used for cultivated crops, dominantly irrigated hay. The less sloping areas of general soil map units 1, 2, and 3 generally are suitable for cultivation. A seasonal high water table, leaching, and flooding may restrict the use of the soils along drainageways in units 1 and 2. Slope stability, erodibility, and shrink-swell potential are the main limitations of unit 3. The soils in units 1 and 3 are droughty.

A few areas are used as homesites. In general, the less sloping, deep, loamy, and well drained soils are best suited to building site development. Areas of the Boise and Piercepark soils in general soil map unit 1 and the Middlefork and Stardust soils in unit 2 are examples. The soils in the other units are limited by soil depth, steepness of slope, slope stability, and shrink-swell potential. Areas of the soils on flood-plain steps, such as those in units 1 and 2, generally are unsuitable as sites for buildings because of flooding.

The limitations that affect the suitability of the soils for recreational uses range from severe to slight, depending on the intensity of the expected use. Slope, soil depth, and surface rock fragments are common restrictive features of units 3 through 7. All of the general soil map units are suitable for some recreational uses, such as paths and trails for hiking or horseback riding. Even in the areas that have severe limitations, small areas generally are suitable for intensive recreational uses.

The suitability for wildlife habitat generally is good throughout the survey area. All of the general soil map units have major soils that are generally well suited to habitat for openland wildlife and woodland wildlife, or both. Riparian areas suitable for wetland wildlife habitat are common in units 1 and 2.

## Detailed Soil Map Units

---

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the major soil components. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase

commonly indicates a feature that affects use or management. For example, Packerjohn ashy sandy loam, 15 to 35 percent slopes, is a phase of the Packerjohn series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or associations.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Packerjohn-Shirts complex, 8 to 35 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Huston-Stardust association, 8 to 65 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Each detailed soil map unit is assigned to a major land resource area (MLRA) (USDA, 1981). The MLRA for each map unit is given in this section under the heading "Map Unit Setting." Some map units, such as Rock outcrop, Water, and other miscellaneous areas, may not be assigned to a single MLRA because the unit can occur in any MLRA.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

## **220—Oxyaquic Xerofluvents-Cumulic Haploxerolls complex, nearly level**

### **Map Unit Setting**

*General landscape:* Valleys

*Major land resource area (MLRA):* 11

*Elevation:* 2,520 to 3,630 feet

*Mean annual precipitation:* 13 to 16 inches

*Mean annual air temperature:* 49 to 51 degrees F

*Frost-free period:* 130 to 150 days

### **Map Unit Composition**

*Oxyaquic Xerofluvents and similar soils:* 45 percent

*Cumulic Haploxerolls and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Oxyaquic Xerofluvents**

#### **Setting**

*Landform:* Flood-plain steps, islands

*Geomorphic position:* Lower areas

*Parent material:* Sandy and gravelly alluvium

#### **Properties and qualities**

*Slope:* 0 to 2 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* About 20 to 40 inches (see Water Features table)

*Available water capacity (entire profile):* About 1.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Land capability subclass (irrigated):* 7s

*Ecoclass habitat type:* Riparian cottonwood/willow subseries (HCSX)

#### **Typical profile**

Ap—0 to 5 inches; loamy sand

C1—5 to 11 inches; loamy sand

C2—11 to 18 inches; loamy sand

2C3—18 to 39 inches; extremely gravelly coarse sand

2C4—39 to 60 inches; stratified extremely gravelly coarse sand to fine gravelly loamy sand

### ***Cumulic Haploxerolls***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Upper areas

*Parent material:* Sandy and gravelly alluvium

#### **Properties and qualities**

*Slope:* 0 to 2 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)

*Available water capacity (entire profile):* About 6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6c

*Land capability subclass (irrigated):* 4s

*Ecoclass habitat type:* Riparian shrub/bunchgrass subseries (SDGX)

#### **Typical profile**

Ap—0 to 10 inches; sandy loam

A—10 to 26 inches; sandy loam

Bw1—26 to 36 inches; fine sandy loam

Bw2—36 to 50 inches; fine sandy loam

C—50 to 60 inches; loamy sand

### ***Dissimilar Minor Components***

#### **Riverwash**

*Composition:* 10 percent

*Geomorphic position:* Channels

**Fluvaquentic Endoaquolls**

*Composition:* 5 percent

*Geomorphic position:* Channels

*Ecoclass habitat type:* Moist meadow series (MM)

**Major Uses**

Irrigated hay and pasture, recreation, wildlife habitat

**221—Bissell loam, 2 to 4 percent slopes****Map Unit Setting**

*General landscape:* Valleys

*Major land resource area (MLRA):* 11

*Elevation:* 2,640 to 3,080 feet

*Mean annual precipitation:* 13 to 15 inches

*Mean annual air temperature:* 50 to 51 degrees F

*Frost-free period:* 140 to 150 days

**Map Unit Composition**

*Bissell and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

**Major Component****Bissell****Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy alluvium

**Properties and qualities**

*Slope:* 2 to 4 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6c

*Land capability subclass (irrigated):* 2e

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Typical profile**

Ap—0 to 7 inches; loam

A—7 to 10 inches; loam

Bt1—10 to 15 inches; clay loam

Bt2—15 to 26 inches; clay loam

Bt3—26 to 41 inches; sandy clay loam

C—41 to 60 inches; very gravelly coarse sandy loam

### ***Dissimilar Minor Components***

#### **Bissell, gently sloping**

*Composition:* 10 percent

*Geomorphic position:* Areas that have slopes of 4 to 8 percent

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Piercepark, loam**

*Composition:* 5 percent

*Geomorphic position:* Swales

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

### ***Major Use***

Irrigated hay and pasture

## ***222—Bissell loam, 4 to 8 percent slopes***

### ***Map Unit Setting***

*General landscape:* Valleys

*Major land resource area (MLRA):* 11

*Elevation:* 2,520 to 3,100 feet

*Mean annual precipitation:* 13 to 15 inches

*Mean annual air temperature:* 50 to 51 degrees F

*Frost-free period:* 140 to 150 days

### ***Map Unit Composition***

*Bissell and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### ***Major Component***

#### ***Bissell***

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 4 to 8 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Land capability subclass (irrigated):* 3e

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Typical profile**

Ap—0 to 7 inches; loam  
 A—7 to 10 inches; loam  
 Bt1—10 to 15 inches; clay loam  
 Bt2—15 to 26 inches; clay loam  
 Bt3—26 to 41 inches; sandy clay loam  
 C—41 to 60 inches; very gravelly coarse sandy loam

***Dissimilar Minor Components*****Shawmount, stony surface**

*Composition:* 10 percent  
*Geomorphic position:* Side slopes  
*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Piercepark, loam**

*Composition:* 5 percent  
*Geomorphic position:* Concave areas  
*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

***Major Use***

Irrigated hay and pasture

**223—Staircase sandy loam, 1 to 4 percent slopes*****Map Unit Setting***

*General landscape:* Foothills, mountain valleys and canyons  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,310 to 4,410 feet  
*Mean annual precipitation:* 16 to 18 inches  
*Mean annual air temperature:* 47 to 48 degrees F  
*Frost-free period:* 110 to 120 days

***Map Unit Composition***

*Staircase and similar soils:* 85 percent  
*Dissimilar minor components:* 15 percent

***Major Component******Staircase, Dry*****Setting**

*Landform:* Flood-plain steps  
*Geomorphic position:* Upper areas  
*Parent material:* Coarse-loamy alluvium

**Properties and qualities**

*Slope:* 1 to 4 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Moderately well drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* Rare (see Water Features table)  
*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)  
*Available water capacity (entire profile):* About 5.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3c

*Land capability subclass (irrigated):* 2e

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

**Typical profile**

Ap—0 to 6 inches; sandy loam

A—6 to 20 inches; loam

AB—20 to 27 inches; fine gravelly sandy loam

Bw1—27 to 42 inches; fine gravelly sandy loam

Bw2—42 to 60 inches; fine gravelly loamy sand

***Dissimilar Minor Components*****Cartwright, dry**

*Composition:* 10 percent

*Geomorphic position:* Higher stream terraces

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Entic Ultic Haploxerolls, loamy sand, somewhat poorly drained**

*Composition:* 5 percent

*Geomorphic position:* Lower areas

*Ecological site:* SEMIWET MEADOW (R043AY008ID)

***Major Uses***

Irrigated hay and pasture, livestock grazing, wildlife habitat

**224—Porter sandy loam, 1 to 4 percent slopes*****Map Unit Setting***

*General landscape:* Foothills, valleys

*Major land resource area (MLRA):* 10, 11

*Elevation:* 2,610 to 3,360 feet

*Mean annual precipitation:* 13 to 16 inches

*Mean annual air temperature:* 49 to 51 degrees F

*Frost-free period:* 130 to 150 days

***Map Unit Composition***

*Porter and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Major Component******Porter*****Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Upper areas

*Parent material:* Coarse-loamy alluvium

**Properties and qualities**

*Slope:* 1 to 4 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)

*Available water capacity (entire profile):* About 6.4 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4c

*Land capability subclass (irrigated):* 2e

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

### **Typical profile**

Ap1—0 to 4 inches; sandy loam

Ap2—4 to 11 inches; sandy loam

A—11 to 22 inches; sandy loam

Bw—22 to 34 inches; sandy loam

BC—34 to 48 inches; coarse sandy loam

C—48 to 72 inches; gravelly loamy coarse sand

### ***Dissimilar Minor Components***

#### **Boise**

*Composition:* 5 percent

*Geomorphic position:* Higher convex areas

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

#### **Entic Ultic Haploxerolls, loamy sand, somewhat poorly drained**

*Composition:* 5 percent

*Geomorphic position:* Lower areas

*Ecological site:* SEMIWET MEADOW (R043AY008ID)

#### **Fluvaquentic Endoaquolls, very poorly drained**

*Composition:* 5 percent

*Geomorphic position:* Swales, channels

*Ecological site:* WET MEADOW (R011XY019ID)

### ***Major Uses***

Irrigated hay and pasture, homesites, wildlife habitat

## **225—Boise coarse sandy loam, 3 to 8 percent slopes**

### ***Map Unit Setting***

*General landscape:* Valleys, canyonland

*Major land resource area (MLRA):* 11

*Elevation:* 2,560 to 3,360 feet

*Mean annual precipitation:* 13 to 15 inches

*Mean annual air temperature:* 50 to 51 degrees F

*Frost-free period:* 140 to 150 days

### ***Map Unit Composition***

*Boise and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### ***Major Component***

#### ***Boise***

#### **Setting**

*Landform:* Alluvial fans

*Geomorphic position:* Convex areas

*Parent material:* Coarse-loamy alluvium

**Properties and qualities**

*Slope:* 3 to 8 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Land capability subclass (irrigated):* 3e

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

**Typical profile**

Ap1—0 to 3 inches; coarse sandy loam

Ap2—3 to 7 inches; coarse sandy loam

A—7 to 15 inches; fine gravelly coarse sandy loam

Bw—15 to 28 inches; fine gravelly coarse sandy loam

BC—28 to 36 inches; very gravelly coarse sandy loam

C1—36 to 53 inches; very gravelly loamy coarse sand

C2—53 to 60 inches; extremely gravelly loamy coarse sand

***Dissimilar Minor Components*****Cumulic Ultic Haploxerolls, very bouldery surface**

*Composition:* 10 percent

*Geomorphic position:* Mouth of adjacent draws

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

**Bissell**

*Composition:* 5 percent

*Geomorphic position:* Concave areas

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

***Major Uses***

Irrigated hay and pasture, homesites, livestock grazing

***226—Flofeather-Shawmount complex, 1 to 3 percent slopes******Map Unit Setting***

*General landscape:* Valleys

*Major land resource area (MLRA):* 11

*Elevation:* 2,520 to 2,770 feet

*Mean annual precipitation:* 13 to 14 inches

*Mean annual air temperature:* 50 to 51 degrees F

*Frost-free period:* 140 to 150 days

***Map Unit Composition***

*Flofeather and similar soils:* 55 percent

*Shawmount and similar soils:* 30 percent

*Dissimilar minor components:* 15 percent

## **Major Components**

### ***Flofeather, Very Rarely Flooded***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Slightly convex areas

*Parent material:* Coarse-loamy alluvium

#### **Properties and qualities**

*Slope:* 1 to 3 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Very rare (see Water Features table)

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6c

*Land capability subclass (irrigated):* 2s

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

#### **Typical profile**

Ap1—0 to 7 inches; sandy loam

Ap2—7 to 11 inches; sandy loam

Bw1—11 to 17 inches; sandy loam

Bw2—17 to 32 inches; sandy loam

BC—32 to 52 inches; loamy coarse sand

C—52 to 60 inches; gravelly loamy coarse sand

### ***Shawmount, Stony Surface***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Smooth and slightly concave areas

*Parent material:* Gravelly alluvium

#### **Properties and qualities**

*Slope:* 1 to 3 percent

*Percentage of surface area covered by stones and boulders:* Less than 1 percent

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* Very rare (see Water Features table)

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6c

*Land capability subclass (irrigated):* 3s

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Typical profile**

A—0 to 4 inches; gravelly loam

Bt1—4 to 9 inches; very gravelly clay loam

Bt2—9 to 14 inches; very gravelly clay loam

Bt3—14 to 26 inches; very gravelly sandy clay loam  
 E&Bt—26 to 35 inches; very gravelly sandy loam  
 C—35 to 60 inches; extremely cobbly sandy loam

### ***Dissimilar Minor Components***

#### **Boise**

*Composition:* 5 percent

*Geomorphic position:* Areas that have slopes of 3 to 8 percent

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

#### **Porter, sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Drainageways

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

#### **Entic Ultic Haploxerolls, loamy sand, somewhat poorly drained**

*Composition:* 5 percent

*Geomorphic position:* Lower concave areas

*Ecological site:* SEMIWET MEADOW (R011XY020ID)

### ***Major Uses***

Irrigated hay and pasture, homesites

## ***227—Piercepark loam, 2 to 4 percent slopes***

### ***Map Unit Setting***

*General landscape:* Valleys

*Major land resource area (MLRA):* 11

*Elevation:* 2,600 to 4,790 feet

*Mean annual precipitation:* 13 to 17 inches

*Mean annual air temperature:* 47 to 51 degrees F

*Frost-free period:* 110 to 150 days

### ***Map Unit Composition***

*Piercepark and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### ***Major Component***

#### ***Piercepark, Loam***

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 2 to 4 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6c

*Land capability subclass (irrigated):* 2e

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Typical profile**

Ap—0 to 7 inches; loam

A—7 to 12 inches; loam

BA—12 to 22 inches; loam

Bt1—22 to 28 inches; sandy clay loam

Bt2—28 to 37 inches; fine gravelly sandy clay loam

Bt3—37 to 50 inches; fine gravelly sandy clay loam

Bt4—50 to 60 inches; gravelly sandy clay loam

***Dissimilar Minor Components*****Bissell**

*Composition:* 5 percent

*Geomorphic position:* Convex areas

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Flofeather**

*Composition:* 5 percent

*Geomorphic position:* Lower stream terraces

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

**Piercepark, loam, gently sloping**

*Composition:* 5 percent

*Geomorphic position:* Areas that have slopes of 4 to 8 percent

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

***Major Use***

Irrigated hay and pasture

***228—Piercepark loam, 4 to 8 percent slopes******Map Unit Setting***

*General landscape:* Valleys

*Major land resource area (MLRA):* 11

*Elevation:* 2,610 to 3,300 feet

*Mean annual precipitation:* 13 to 16 inches

*Mean annual air temperature:* 49 to 51 degrees F

*Frost-free period:* 130 to 150 days

***Map Unit Composition***

*Piercepark and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Major Component******Piercepark, Loam*****Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy alluvium

**Properties and qualities**

*Slope:* 4 to 8 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Land capability subclass (irrigated):* 3e

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Typical profile**

Ap—0 to 7 inches; loam

A—7 to 12 inches; loam

BA—12 to 22 inches; loam

Bt1—22 to 28 inches; sandy clay loam

Bt2—28 to 37 inches; fine gravelly sandy clay loam

Bt3—37 to 50 inches; fine gravelly sandy clay loam

Bt4—50 to 60 inches; gravelly sandy clay loam

***Dissimilar Minor Components*****Shawmount, stony surface**

*Composition:* 10 percent

*Geomorphic position:* Convex areas

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Boise**

*Composition:* 5 percent

*Geomorphic position:* Concave areas

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

***Major Use***

Irrigated hay and pasture

***229—Piercepark coarse sandy loam, 8 to 25 percent slopes******Map Unit Setting***

*General landscape:* Valleys, foothills

*Major land resource area (MLRA):* 11

*Elevation:* 2,520 to 3,410 feet

*Mean annual precipitation:* 13 to 16 inches

*Mean annual air temperature:* 48 to 51 degrees F

*Frost-free period:* 130 to 150 days

***Map Unit Composition***

*Piercepark and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Major Component**

#### ***Piercepark, Coarse Sandy Loam***

##### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Slightly convex areas

*Parent material:* Loamy alluvium

##### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.3 inches

##### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Land capability subclass (irrigated):* 4e

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

##### **Typical profile**

A1—0 to 2 inches; coarse sandy loam

A2—2 to 6 inches; coarse sandy loam

A3—6 to 10 inches; coarse sandy loam

AB—10 to 16 inches; coarse sandy loam

BA—16 to 27 inches; coarse sandy loam

Bt1—27 to 34 inches; sandy clay loam

Bt2—34 to 60 inches; fine gravelly sandy clay loam

#### ***Dissimilar Minor Components***

##### **Cumulic Ultic Haploxerolls, very bouldery surface**

*Composition:* 10 percent

*Geomorphic position:* Mouth of adjacent draws

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

##### **Bissell**

*Composition:* 5 percent

*Geomorphic position:* Areas that have slopes of 2 to 8 percent

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Major Uses**

Irrigated hay and pasture, livestock grazing

### ***230—Hann-Doubledia complex, 2 to 15 percent slopes***

#### **Map Unit Setting**

*General landscape:* Valleys, foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,670 to 4,320 feet

*Mean annual precipitation:* 14 to 18 inches

*Mean annual air temperature:* 47 to 50 degrees F

*Frost-free period:* 110 to 140 days

### **Map Unit Composition**

*Hann and similar soils:* 60 percent

*Doubledia and similar soils:* 15 percent

*Dissimilar minor components:* 25 percent

### **Major Components**

#### **Hann**

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Slightly concave areas

*Parent material:* Clayey alluvium

#### **Properties and qualities**

*Slope:* 2 to 15 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 13.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Land capability subclass (irrigated):* 4e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A—0 to 3 inches; silt loam

Bt1—3 to 6 inches; silty clay loam

Bt2—6 to 13 inches; silty clay

Bt3—13 to 25 inches; silty clay

Bt4—25 to 44 inches; silty clay loam

Bt5—44 to 72 inches; silty clay loam

#### **Doubledia, Silty Clay Loam**

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Clayey lacustrine deposits

#### **Properties and qualities**

*Slope:* 2 to 15 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.7 inches

**Interpretive groups***Land capability subclass (nonirrigated): 6e**Land capability subclass (irrigated): 4e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A—0 to 3 inches; silty clay loam

Bt—3 to 6 inches; clay

Btss1—6 to 11 inches; clay

Btss2—11 to 21 inches; clay

B't—21 to 25 inches; clay loam

B'tss1—25 to 34 inches; paragravelly clay

B'tss2—34 to 41 inches; very paragravelly clay

Crk—41 to 51 inches; weathered bedrock

***Dissimilar Minor Components*****Piercepark, loam***Composition: 10 percent**Geomorphic position: Swales**Ecological site: LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)***Breadloaf***Composition: 5 percent**Geomorphic position: Footslopes of adjacent hills**Ecological site: CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)***Duco, very gravelly loam, stony surface***Composition: 5 percent**Geomorphic position: Knolls, shoulders**Ecological site: SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)***Cumulic Vertic Epiaquolls, very poorly drained***Composition: 5 percent**Geomorphic position: Fluves**Ecological site: WET MEADOW (R011XY019ID)****Major Uses***

Irrigated hay and pasture, livestock grazing

***232—Jasseek loam, 1 to 3 percent slopes******Map Unit Setting****General landscape: Valleys**Major land resource area (MLRA): 11**Elevation: 2,600 to 2,750 feet**Mean annual precipitation: 13 to 14 inches**Mean annual air temperature: 50 to 51 degrees F**Frost-free period: 140 to 150 days****Map Unit Composition****Jasseek and similar soils: 85 percent**Dissimilar minor components: 15 percent*

## **Major Component**

### **Jasseek**

#### **Setting**

*Landform:* Relict lakebeds

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Clayey lacustrine deposits over sandy alluvium

#### **Properties and qualities**

*Slope:* 1 to 3 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6s

*Land capability subclass (irrigated):* 3s

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Typical profile**

Ap—0 to 7 inches; loam

A—7 to 10 inches; loam

Bt1—10 to 18 inches; clay loam

Bt2—18 to 27 inches; clay

Bt3—27 to 33 inches; clay loam

Bt4—33 to 43 inches; sandy clay loam

2C—43 to 60 inches; loamy sand

### **Dissimilar Minor Components**

#### **Bissell**

*Composition:* 5 percent

*Geomorphic position:* Upper concave areas

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Piercepark, loam**

*Composition:* 5 percent

*Geomorphic position:* Swales

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Vertic Argixerolls, thick surface**

*Composition:* 5 percent

*Geomorphic position:* Lower concave areas

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

### **Major Use**

Irrigated hay and pasture

## **233—Jasseek loam, 3 to 8 percent slopes**

### **Map Unit Setting**

*General landscape:* Valleys  
*Major land resource area (MLRA):* 11  
*Elevation:* 2,620 to 2,820 feet  
*Mean annual precipitation:* 13 to 14 inches  
*Mean annual air temperature:* 50 to 51 degrees F  
*Frost-free period:* 140 to 150 days

### **Map Unit Composition**

*Jasseek and similar soils:* 85 percent  
*Dissimilar minor components:* 15 percent

### **Major Component**

#### **Jasseek**

#### **Setting**

*Landform:* Relict lakebeds  
*Geomorphic position:* Smooth and slightly convex areas  
*Parent material:* Clayey lacustrine deposits over sandy alluvium

#### **Properties and qualities**

*Slope:* 3 to 8 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 40 to 60 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 8.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Land capability subclass (irrigated):* 3e  
*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Typical profile**

Ap—0 to 7 inches; loam  
 A—7 to 10 inches; loam  
 Bt1—10 to 18 inches; clay loam  
 Bt2—18 to 27 inches; clay  
 Bt3—27 to 33 inches; clay loam  
 Bt4—33 to 43 inches; sandy clay loam  
 2C—43 to 60 inches; loamy sand

### **Dissimilar Minor Components**

#### **Bissell**

*Composition:* 10 percent  
*Geomorphic position:* Shoulders, convex areas  
*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Vertic Argixerolls, thick surface***Composition:* 5 percent*Geomorphic position:* Lower concave areas*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)**Major Use**

Irrigated hay and pasture

**238—Adaboi silt loam, 1 to 4 percent slopes****Map Unit Setting***General landscape:* Foothills*Major land resource area (MLRA):* 11*Elevation:* 3,350 to 3,430 feet*Mean annual precipitation:* 15 to 16 inches*Mean annual air temperature:* 49 to 50 degrees F*Frost-free period:* 130 to 140 days**Map Unit Composition***Adaboi and similar soils:* 85 percent*Dissimilar minor components:* 15 percent**Major Component****Adaboi****Setting***Landform:* Fan remnants*Geomorphic position:* Smooth and slightly convex areas*Parent material:* Loamy slope alluvium over silty lacustrine deposits**Properties and qualities***Slope:* 1 to 4 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* High*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Well drained*Permeability class (slowest):* Very slow*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 11.3 inches**Interpretive groups***Land capability subclass (nonirrigated):* 6c*Land capability subclass (irrigated):* 3s*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)**Typical profile**

A1—0 to 2 inches; silt loam

A2—2 to 9 inches; silt loam

Bt1—9 to 13 inches; silty clay loam

Bt2—13 to 20 inches; silty clay loam

Bt/E—20 to 25 inches; silty clay loam

Btb1—25 to 43 inches; silty clay

Btb2—43 to 66 inches; clay

### ***Dissimilar Minor Components***

#### **Meclo**

*Composition:* 5 percent

*Geomorphic position:* Areas near knolls and footslopes of adjacent hills

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Porter**

*Composition:* 5 percent

*Geomorphic position:* Stream terraces

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

#### **Fluvaquentic Endoaquolls, very poorly drained**

*Composition:* 5 percent

*Geomorphic position:* Drainageways

*Ecological site:* WET MEADOW (R011XY019ID)

### ***Major Use***

Irrigated hay and pasture

## ***240—Collister-Flofeather complex, 1 to 3 percent slopes***

### ***Map Unit Setting***

*General landscape:* Valleys

*Major land resource area (MLRA):* 11

*Elevation:* 3,340 to 3,730 feet

*Mean annual precipitation:* 15 to 16 inches

*Mean annual air temperature:* 49 to 50 degrees F

*Frost-free period:* 130 to 140 days

### ***Map Unit Composition***

*Collister and similar soils:* 65 percent

*Flofeather and similar soils:* 25 percent

*Dissimilar minor components:* 10 percent

### ***Major Components***

#### ***Collister***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Smooth and slightly concave areas

*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 1 to 3 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)

*Available water capacity (entire profile):* About 11 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6c

*Land capability subclass (irrigated):* 2e

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

#### **Typical profile**

Ap1—0 to 4 inches; loam

Ap2—4 to 10 inches; loam

A1—10 to 19 inches; loam

A2—19 to 23 inches; loam

Bw1—23 to 28 inches; clay loam

Bw2—28 to 36 inches; silty clay loam

Bw3—36 to 42 inches; silt loam

Bw4—42 to 58 inches; sandy clay loam

C—58 to 66 inches; sandy loam

### ***Flofeather***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Slightly convex areas

*Parent material:* Coarse-loamy alluvium

#### **Properties and qualities**

*Slope:* 1 to 3 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6c

*Land capability subclass (irrigated):* 2s

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

#### **Typical profile**

A1—0 to 7 inches; sandy loam

A2—7 to 22 inches; sandy loam

Bw1—22 to 30 inches; sandy loam

Bw2—30 to 41 inches; sandy loam

BC—41 to 48 inches; fine gravelly sandy loam

C—48 to 60 inches; fine gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Shawmount, stony surface**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex areas

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Entic Ultic Haploxerolls, loamy sand, somewhat poorly drained***Composition:* 5 percent*Geomorphic position:* Channels*Ecological site:* SEMIWET MEADOW (R011XY020ID)**Major Uses**

Irrigated hay and pasture, livestock grazing

**300—Shawmount gravelly loam, 8 to 35 percent slopes****Map Unit Setting***General landscape:* Valleys, foothills*Major land resource area (MLRA):* 10, 11*Elevation:* 2,550 to 3,210 feet*Mean annual precipitation:* 13 to 15 inches*Mean annual air temperature:* 50 to 51 degrees F*Frost-free period:* 140 to 150 days**Map Unit Composition***Shawmount and similar soils:* 75 percent*Dissimilar minor components:* 25 percent**Major Component****Shawmount, Stony Surface****Setting***Landform:* Stream terraces, relict lakebeds*Geomorphic position:* Shoulders, risers*Parent material:* Gravelly alluvium and colluvium**Properties and qualities***Slope:* 8 to 35 percent*Percentage of surface area covered by stones and boulders:* Less than 0.1 percent*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Well drained*Permeability class (slowest):* Moderate*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 4.1 inches**Interpretive groups***Land capability subclass (nonirrigated):* 6e*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)**Typical profile**

A—0 to 4 inches; gravelly loam

Bt1—4 to 9 inches; very gravelly clay loam

Bt2—9 to 14 inches; very gravelly clay loam

Bt3—14 to 26 inches; very gravelly sandy clay loam

E&amp;Bt—26 to 35 inches; very gravelly sandy loam

C—35 to 60 inches; extremely cobbly sandy loam

### ***Dissimilar Minor Components***

#### **Bissell**

*Composition:* 10 percent

*Geomorphic position:* Summits

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Porter**

*Composition:* 5 percent

*Geomorphic position:* Seeps, gullies

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

#### **Aridic Haploxerolls, south slope**

*Composition:* 5 percent

*Geomorphic position:* Steep, south-facing risers

*Ecological site:* SAND 8-12 ARTRT/ACHY (R011XY011ID)

#### **Pachic Argixerolls, north slope, stony surface**

*Composition:* 5 percent

*Geomorphic position:* Steep, north-facing risers

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

### ***Major Uses***

Livestock grazing, wildlife habitat, mining

## ***301—Breadloaf-Doubledia complex, 4 to 15 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,610 to 4,390 feet

*Mean annual precipitation:* 16 to 18 inches

*Mean annual air temperature:* 47 to 48 degrees F

*Frost-free period:* 100 to 120 days

### ***Map Unit Composition***

*Breadloaf and similar soils:* 55 percent

*Doubledia and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Breadloaf***

#### **Setting**

*Landform:* Landslides, hillslopes

*Geomorphic position:* Convex areas

*Parent material:* Clayey lacustrine deposits

#### **Properties and qualities**

*Slope:* 4 to 15 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Typical profile**

A—0 to 2 inches; clay loam

Bt—2 to 6 inches; clay

Btss1—6 to 12 inches; clay

Btss2—12 to 17 inches; clay

Btss3—17 to 23 inches; paragravelly clay

Crk—23 to 33 inches; weathered bedrock

#### ***Doubledia, Silty Clay Loam***

#### **Setting**

*Landform:* Fan remnants, hillslopes

*Geomorphic position:* Concave areas

*Parent material:* Clayey lacustrine deposits

#### **Properties and qualities**

*Slope:* 4 to 8 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A—0 to 3 inches; silty clay loam

Bt—3 to 6 inches; clay

Btss1—6 to 11 inches; clay

Btss2—11 to 21 inches; clay

B't—21 to 25 inches; clay loam

B'tss1—25 to 34 inches; paragravelly clay

B'tss2—34 to 41 inches; very paragravelly clay

Crk—41 to 51 inches; weathered bedrock

#### ***Dissimilar Minor Components***

#### **Hann**

*Composition:* 10 percent

*Geomorphic position:* Toeslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Leptic Haploxererts, stony surface***Composition:* 10 percent*Geomorphic position:* Convex areas*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)**Major Use**

Livestock grazing

**302—Breadloaf-Doubledia-Hann complex, 15 to 50 percent slopes****Map Unit Setting***General landscape:* Foothills*Major land resource area (MLRA):* 10*Elevation:* 2,660 to 4,650 feet*Mean annual precipitation:* 14 to 18 inches*Mean annual air temperature:* 47 to 51 degrees F*Frost-free period:* 110 to 150 days**Map Unit Composition***Breadloaf and similar soils:* 40 percent*Doubledia and similar soils:* 35 percent*Hann and similar soils:* 20 percent*Dissimilar minor component:* 5 percent**Major Components****Breadloaf****Setting***Landform:* Hillslopes*Geomorphic position:* Convex, south-facing backslopes*Parent material:* Clayey lacustrine deposits**Properties and qualities***Slope:* 15 to 50 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* High*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)*Drainage class:* Well drained*Permeability class (slowest):* Very slow*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 3.7 inches**Interpretive groups***Land capability subclass (nonirrigated):* 7e*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)**Typical profile**

A—0 to 2 inches; clay loam

Bt—2 to 6 inches; clay

Btss1—6 to 12 inches; clay

Btss2—12 to 17 inches; clay

Btss3—17 to 23 inches; paragravelly clay  
 Crk—23 to 33 inches; weathered bedrock

***Doubledia, Silty Clay Loam***

**Setting**

*Landform:* Fan remnants, hillslopes

*Geomorphic position:* Slightly concave backslopes and footslopes

*Parent material:* Clayey lacustrine deposits

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6  
 (R010XY010ID)

**Typical profile**

A—0 to 3 inches; silty clay loam

Bt—3 to 6 inches; clay

Btss1—6 to 11 inches; clay

Btss2—11 to 21 inches; clay

B't—21 to 25 inches; clay loam

B'tss1—25 to 34 inches; paragravelly clay

B'tss2—34 to 41 inches; very paragravelly clay

Crk—41 to 51 inches; weathered bedrock

***Hann***

**Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave footslopes

*Parent material:* Clayey alluvium

**Properties and qualities**

*Slope:* 15 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 13.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Typical profile**

A—0 to 3 inches; silt loam  
 Bt1—3 to 6 inches; silty clay loam  
 Bt2—6 to 13 inches; silty clay  
 Bt3—13 to 25 inches; silty clay  
 Bt4—25 to 44 inches; silty clay loam  
 Bt5—44 to 72 inches; silty clay loam

***Dissimilar Minor Component*****Leptic Haploxerepts, stony surface**

*Composition:* 5 percent

*Geomorphic position:* Convex summits and shoulders

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

***Major Use***

Livestock grazing

***303—Doubledia-Hann-Breadloaf complex, 15 to 50 percent slopes******Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,610 to 4,650 feet

*Mean annual precipitation:* 14 to 20 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 90 to 140 days

***Map Unit Composition***

*Doubledia and similar soils:* 40 percent

*Hann and similar soils:* 25 percent

*Breadloaf and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

***Major Components******Doubledia, Silty Clay Loam*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave, north-facing backslopes and footslopes

*Parent material:* Clayey lacustrine deposits

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.7 inches

**Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A—0 to 3 inches; silty clay loam

Bt—3 to 6 inches; clay

Btss1—6 to 11 inches; clay

Btss2—11 to 21 inches; clay

B't—21 to 25 inches; clay loam

B'tss1—25 to 34 inches; paragravelly clay

B'tss2—34 to 41 inches; very paragravelly clay

Crk—41 to 51 inches; weathered bedrock

**Hann****Setting***Landform: Hillslopes**Geomorphic position: Concave footslopes**Parent material: Clayey alluvium***Properties and qualities***Slope: 15 to 25 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: Moderate**Depth to restrictive feature: None within a depth of 60 inches**Drainage class: Well drained**Permeability class (slowest): Slow**Flooding frequency: None**Seasonal high water table (minimum depth): More than 72 inches**Available water capacity (entire profile): About 13.5 inches***Interpretive groups***Land capability subclass (nonirrigated): 6e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A—0 to 3 inches; silt loam

Bt1—3 to 6 inches; silty clay loam

Bt2—6 to 13 inches; silty clay

Bt3—13 to 25 inches; silty clay

Bt4—25 to 44 inches; silty clay loam

Bt5—44 to 72 inches; silty clay loam

**Breadloaf****Setting***Landform: Hillslopes**Geomorphic position: Slightly convex backslopes and footslopes**Parent material: Clayey lacustrine deposits***Properties and qualities***Slope: 15 to 50 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: High**Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)**Drainage class: Well drained**Permeability class (slowest): Very slow*

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Typical profile**

A—0 to 2 inches; clay loam

Bt—2 to 6 inches; clay

Btss1—6 to 12 inches; clay

Btss2—12 to 17 inches; clay

Btss3—17 to 23 inches; paragravelly clay

Crk—23 to 33 inches; weathered bedrock

#### ***Dissimilar Minor Components***

#### **Leptic Haploxerepts, stony surface**

*Composition:* 10 percent

*Geomorphic position:* Convex shoulders and summits

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Hillcreek**

*Composition:* 5 percent

*Geomorphic position:* North-facing backslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### ***Major Use***

Livestock grazing

### ***304—Breadloaf-Doubledia-Hullsgulch complex, 2 to 35 percent slopes***

#### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,750 to 3,890 feet

*Mean annual precipitation:* 14 to 17 inches

*Mean annual air temperature:* 48 to 50 degrees F

*Frost-free period:* 120 to 140 days

#### ***Map Unit Composition***

*Breadloaf and similar soils:* 30 percent

*Doubledia and similar soils:* 30 percent

*Hullsgulch and similar soils:* 30 percent

*Dissimilar minor components:* 10 percent

#### ***Major Components***

##### ***Breadloaf***

#### **Setting**

*Landform:* Landslides (fig. 3)

*Geomorphic position:* Convex areas

*Parent material:* Clayey lacustrine deposits



Figure 3.—The potential for landslides (earthflows) limits use of Breadloaf-Doubledia-Hullsgulch complex, 2 to 35 percent slopes.

#### **Properties and qualities**

*Slope:* 4 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Typical profile**

A—0 to 2 inches; clay loam

Bt—2 to 6 inches; clay

Btss1—6 to 12 inches; clay

Btss2—12 to 17 inches; clay

Btss3—17 to 23 inches; paragravelly clay

Crk—23 to 33 inches; weathered bedrock

#### ***Doubledia, Silty Clay Loam***

#### **Setting**

*Landform:* Landslides (fig. 3)

*Geomorphic position:* Concave areas

*Parent material:* Clayey lacustrine deposits

#### **Properties and qualities**

*Slope:* 2 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Very slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A—0 to 3 inches; silty clay loam  
 Bt—3 to 6 inches; clay  
 Btss1—6 to 11 inches; clay  
 Btss2—11 to 21 inches; clay  
 B't—21 to 25 inches; clay loam  
 B'tss1—25 to 34 inches; paragravelly clay  
 B'tss2—34 to 41 inches; very paragravelly clay  
 Crk—41 to 51 inches; weathered bedrock

#### ***Hullsgulch, Loam***

#### **Setting**

*Landform:* Landslides (fig. 3)  
*Geomorphic position:* Slightly convex areas  
*Parent material:* Loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 5 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 9.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Typical profile**

A1—0 to 2 inches; loam  
 A2—2 to 9 inches; loam  
 BA—9 to 15 inches; loam  
 Bt1—15 to 29 inches; sandy clay loam  
 Bt2—29 to 46 inches; sandy clay loam  
 E&Bt1—46 to 58 inches; fine gravelly coarse sandy loam  
 E&Bt2—58 to 66 inches; fine gravelly loamy coarse sand

#### ***Dissimilar Minor Components***

#### **Leptic Haploxerepts, stony surface**

*Composition:* 5 percent  
*Geomorphic position:* Convex areas  
*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)



Figure 4.—Rangeland in an area of Breadloaf-Doubledia-Hullsgulch complex, 2 to 35 percent slopes. Doubledia-Hann-Breadloaf complex, 15 to 50 percent slopes, in background.

**Cumulic Endoaquolls, poorly drained**

*Composition:* 5 percent

*Geomorphic position:* Drainageways

*Ecological site:* WET MEADOW (R011XY019ID)

**Major Uses**

Livestock grazing (fig. 4), wildlife habitat

**305—Siphonlake-Solarview complex, 35 to 65 percent slopes**

**Map Unit Setting**

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,160 to 4,550 feet

*Mean annual precipitation:* 14 to 17 inches

*Mean annual air temperature:* 48 to 50 degrees F

*Frost-free period:* 120 to 140 days

**Map Unit Composition**

*Siphonlake and similar soils:* 60 percent

*Solarview and similar soils:* 25 percent

*Dissimilar minor components:* 15 percent

**Major Components**  
**Siphonlake, South Slope**

**Setting***Landform:* Hillslopes*Geomorphic position:* Slightly concave, south-facing backslopes*Parent material:* Sandy lacustrine deposits**Properties and qualities***Slope:* 35 to 65 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)*Drainage class:* Well drained*Permeability class (slowest):* Moderately rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 6.7 inches**Interpretive groups***Land capability subclass (nonirrigated):* 7e*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)**Typical profile**

A—0 to 10 inches; sandy loam

Bt1—10 to 19 inches; sandy loam

Bt2—19 to 22 inches; sandy loam

BC—22 to 46 inches; sandy loam

C—46 to 56 inches; coarse sandy loam

Cr—56 to 66 inches; weathered bedrock

**Solarview****Setting***Landform:* Hillslopes*Geomorphic position:* Convex, south-facing backslopes*Parent material:* Sandy lacustrine deposits**Properties and qualities***Slope:* 35 to 65 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* 14 to 20 inches to bedrock (paralithic)*Drainage class:* Excessively drained*Permeability class (slowest):* Rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 1 inch**Interpretive groups***Land capability subclass (nonirrigated):* 7e*Ecological site:* SAND 8-12 ARTRT/ACHY (R011XY011ID)**Typical profile**

A—0 to 2 inches; coarse sandy loam

AC—2 to 12 inches; loamy coarse sand

C—12 to 16 inches; fine gravelly coarse sand

Cr—16 to 26 inches; weathered bedrock

### ***Dissimilar Minor Components***

#### **Boise**

*Composition:* 5 percent

*Geomorphic position:* Toeslopes

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

#### **Aridic Argixerolls, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Side slopes

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Ledges

### ***Major Uses***

Livestock grazing, wildlife habitat

## ***306—Van Dusen-Siphonlake complex, 35 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,760 to 4,330 feet

*Mean annual precipitation:* 15 to 20 inches

*Mean annual air temperature:* 46 to 48 degrees F

*Frost-free period:* 100 to 120 days

### ***Map Unit Composition***

*Van Dusen and similar soils:* 45 percent

*Siphonlake and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Van Dusen***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave, north-facing backslopes

*Parent material:* Loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.8 inches

**Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A—0 to 7 inches; loam

BA—7 to 23 inches; loam

Bt1—23 to 39 inches; loam

Bt2—39 to 49 inches; clay loam

Bt3—49 to 60 inches; clay loam

***Siphonlake*****Setting***Landform: Hillslopes**Geomorphic position: Slightly convex, north-facing backslopes**Parent material: Sandy lacustrine deposits***Properties and qualities***Slope: 35 to 65 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: Low**Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)**Drainage class: Well drained**Permeability class (slowest): Moderately rapid**Flooding frequency: None**Seasonal high water table (minimum depth): More than 72 inches**Available water capacity (entire profile): About 5.7 inches***Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A1—0 to 2 inches; sandy loam

A2—2 to 6 inches; sandy loam

BA—6 to 19 inches; sandy loam

Bt—19 to 31 inches; coarse sandy loam

BC—31 to 42 inches; coarse sandy loam

C—42 to 47 inches; fine gravelly loamy coarse sand

Cr—47 to 57 inches; weathered bedrock

***Dissimilar Minor Components*****Solarview***Composition: 10 percent**Geomorphic position: Convex backslopes**Ecological site: SAND 8-12 ARTRT/ACHY (R011XY011ID)***Aridic Argixerolls, moderately deep***Composition: 5 percent**Geomorphic position: Slightly convex backslopes**Ecological site: SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)***Rock outcrop***Composition: 5 percent**Geomorphic position: Ledges****Major Uses***

Livestock grazing, wildlife habitat

## **307—Adaboi-Meclo complex, 4 to 15 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,400 to 3,700 feet  
*Mean annual precipitation:* 15 to 16 inches  
*Mean annual air temperature:* 49 to 50 degrees F  
*Frost-free period:* 130 to 140 days

### **Map Unit Composition**

*Adaboi and similar soils:* 65 percent  
*Meclo and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Adaboi**

#### **Setting**

*Landform:* Fan remnants  
*Geomorphic position:* Concave footslopes  
*Parent material:* Loamy slope alluvium over silty lacustrine deposits

#### **Properties and qualities**

*Slope:* 4 to 15 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Very slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 11.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

A1—0 to 2 inches; silt loam  
 A2—2 to 9 inches; silt loam  
 Bt1—9 to 13 inches; silty clay loam  
 Bt2—13 to 20 inches; silty clay loam  
 Bt/E—20 to 25 inches; silty clay loam  
 Btb1—25 to 43 inches; silty clay  
 Btb2—43 to 66 inches; clay

#### **Meclo**

#### **Setting**

*Landform:* Fan remnants  
*Geomorphic position:* Convex footslopes  
*Parent material:* Silty lacustrine deposits

**Properties and qualities**

*Slope:* 4 to 15 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Typical profile**

A—0 to 4 inches; silt loam

AB—4 to 8 inches; silty clay loam

Bt1—8 to 13 inches; silty clay loam

Bt2—13 to 22 inches; silty clay loam

Btk—22 to 31 inches; clay loam

Crkq—31 to 41 inches; weathered bedrock

***Dissimilar Minor Components*****Crawley, silt loam**

*Composition:* 10 percent

*Geomorphic position:* Convex knolls and low-lying ridges

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Eroded knolls and low-lying ridges

***Major Use***

Livestock grazing

***308—Breadloaf-Crawley-Doubledia complex, 25 to 65 percent slopes******Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,810 to 4,120 feet

*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 49 to 51 degrees F

*Frost-free period:* 130 to 150 days

***Map Unit Composition***

*Breadloaf and similar soils:* 40 percent

*Crawley and similar soils:* 30 percent

*Doubledia and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

## **Major Components**

### **Breadloaf**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, north-facing backslopes

*Parent material:* Clayey lacustrine deposits

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Typical profile**

A—0 to 2 inches; clay loam

Bt—2 to 6 inches; clay

Btss1—6 to 12 inches; clay

Btss2—12 to 17 inches; clay

Btss3—17 to 23 inches; paragravelly clay

Crk—23 to 33 inches; weathered bedrock

### **Crawley, Silt Loam**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes

*Parent material:* Silty lacustrine deposits

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

#### **Typical profile**

A—0 to 4 inches; silt loam

Bt1—4 to 7 inches; silty clay loam

Bt2—7 to 13 inches; paragravelly silty clay loam

Crkq—13 to 23 inches; weathered bedrock

***Doubledia, Clay Loam*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave, south-facing backslopes and footslopes

*Parent material:* Clayey lacustrine deposits

**Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Typical profile**

A—0 to 3 inches; clay loam

Bt—3 to 7 inches; clay

Btss1—7 to 12 inches; clay

Btss2—12 to 24 inches; clay

B'tss1—24 to 37 inches; clay

B'tss2—37 to 55 inches; clay

Crk—55 to 65 inches; weathered bedrock

***Dissimilar Minor Components*****Ayette**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave, south-facing backslopes

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders

***Major Use***

Livestock grazing

***309—Hullsgulch-Solarview complex, 35 to 65 percent slopes******Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,680 to 3,700 feet

*Mean annual precipitation:* 13 to 15 inches

*Mean annual air temperature:* 50 to 51 degrees F

*Frost-free period:* 140 to 150 days

### **Map Unit Composition**

*Hullsgulch and similar soils:* 65 percent  
*Solarview and similar soils:* 25 percent  
*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Hullsgulch, Sandy Loam**

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly concave, south-facing backslopes  
*Parent material:* Loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6  
 (R011XY025ID)

#### **Typical profile**

A—0 to 2 inches; sandy loam  
 AB—2 to 11 inches; sandy loam  
 Bt1—11 to 18 inches; coarse sandy loam  
 Bt2—18 to 32 inches; sandy clay loam  
 E&Bt1—32 to 48 inches; fine gravelly coarse sandy loam  
 E&Bt2—48 to 60 inches; fine gravelly coarse sandy loam

#### **Solarview**

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Convex, south-facing backslopes  
*Parent material:* Sandy lacustrine deposits

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 14 to 20 inches to bedrock (paralithic)  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SAND 8-12 ARTRT/ACHY (R011XY011ID)

**Typical profile**

A—0 to 2 inches; coarse sandy loam  
 AC—2 to 12 inches; loamy coarse sand  
 C—12 to 16 inches; fine gravelly coarse sand  
 Cr—16 to 26 inches; weathered bedrock

***Dissimilar Minor Components*****Boise**

*Composition:* 5 percent  
*Geomorphic position:* Toeslopes  
*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

**Rock outcrop**

*Composition:* 5 percent  
*Geomorphic position:* Steep escarpments

***Major Uses***

Livestock grazing, wildlife habitat

***311—Meclo-Crawley-Adaboi complex, 15 to 50 percent slopes******Map Unit Setting***

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,350 to 3,800 feet  
*Mean annual precipitation:* 14 to 16 inches  
*Mean annual air temperature:* 49 to 51 degrees F  
*Frost-free period:* 130 to 150 days

***Map Unit Composition***

*Meclo and similar soils:* 35 percent  
*Crawley and similar soils:* 30 percent  
*Adaboi and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

***Major Components******Meclo*****Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly convex, south-facing backslopes  
*Parent material:* Silty lacustrine deposits

**Properties and qualities**

*Slope:* 15 to 50 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5.5 inches

**Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)***Typical profile**

A—0 to 4 inches; silt loam

AB—4 to 8 inches; silty clay loam

Bt1—8 to 13 inches; silty clay loam

Bt2—13 to 22 inches; silty clay loam

Btk—22 to 31 inches; clay loam

Crkq—31 to 41 inches; weathered bedrock

***Crawley, Silt Loam*****Setting***Landform: Hillslopes**Geomorphic position: Convex, south-facing backslopes**Parent material: Silty lacustrine deposits***Properties and qualities***Slope: 15 to 50 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: Moderate**Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)**Drainage class: Well drained**Permeability class (slowest): Moderately slow**Flooding frequency: None**Seasonal high water table (minimum depth): More than 72 inches**Available water capacity (entire profile): About 2.5 inches***Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)***Typical profile**

A—0 to 4 inches; silt loam

Bt1—4 to 7 inches; silty clay loam

Bt2—7 to 13 inches; paragravelly silty clay loam

Crkq—13 to 23 inches; weathered bedrock

***Adaboi*****Setting***Landform: Hillslopes**Geomorphic position: Concave, south-facing backslopes**Parent material: Loamy slope alluvium over silty lacustrine deposits***Properties and qualities***Slope: 15 to 35 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: High**Depth to restrictive feature: None within a depth of 60 inches**Drainage class: Well drained**Permeability class (slowest): Very slow**Flooding frequency: None**Seasonal high water table (minimum depth): More than 72 inches**Available water capacity (entire profile): About 11.3 inches*

**Interpretive groups***Land capability subclass (nonirrigated): 6e**Ecological site: LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)***Typical profile**

A1—0 to 2 inches; silt loam

A2—2 to 9 inches; silt loam

Bt1—9 to 13 inches; silty clay loam

Bt2—13 to 20 inches; silty clay loam

Bt/E—20 to 25 inches; silty clay loam

Btb1—25 to 43 inches; silty clay

Btb2—43 to 66 inches; clay

***Dissimilar Minor Components*****Meclo, strongly sloping***Composition: 5 percent**Geomorphic position: Slightly convex areas that have slopes of 4 to 15 percent**Ecological site: LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)***Van Dusen, loam***Composition: 5 percent**Geomorphic position: North-facing backslopes**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Pachic Argixerolls, moderately well drained***Composition: 5 percent**Geomorphic position: Fluves**Ecological site: LOAMY BOTTOM 8-14 ARTRT/LEC14 (R011XY015ID)****Major Use***

Livestock grazing

**328—Gacey stony loam, 3 to 8 percent slopes*****Map Unit Setting****General landscape: Foothills**Major land resource area (MLRA): 10**Elevation: 2,810 to 3,370 feet**Mean annual precipitation: 14 to 15 inches**Mean annual air temperature: 49 to 50 degrees F**Frost-free period: 130 to 140 days****Map Unit Composition****Gacey and similar soils: 75 percent**Dissimilar minor components: 25 percent****Major Component******Gacey, Extremely Stony Surface*****Setting***Landform: Fan remnants**Geomorphic position: Smooth and slightly convex areas**Parent material: Clayey alluvium over sandy and gravelly alluvium*

**Properties and qualities**

*Slope:* 3 to 8 percent

*Percentage of surface area covered by stones and boulders:* 3 to 15 percent

*Shrink-swell potential:* High

*Depth to restrictive feature:* 10 to 20 inches to a duripan

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

**Typical profile**

A—0 to 3 inches; stony loam

Bt1—3 to 7 inches; cobbly clay loam

Bt2—7 to 10 inches; very cobbly clay loam

Bt3—10 to 15 inches; very cobbly clay

2Bqm—15 to 20 inches; cemented material

2C—20 to 60 inches; extremely stony sandy loam

***Dissimilar Minor Components*****Argiduridic Durixerolls, moderately deep, rubbly surface**

*Composition:* 10 percent

*Geomorphic position:* Convex areas

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

**Typic Durixerolls, moist, very stony surface**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave areas

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

**Rubble land**

*Composition:* 5 percent

*Geomorphic position:* Fluves

***Major Use***

Livestock grazing

**329—Ayetle-Duco complex, 25 to 65 percent slopes*****Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,630 to 4,770 feet

*Mean annual precipitation:* 13 to 17 inches

*Mean annual air temperature:* 47 to 51 degrees F

*Frost-free period:* 110 to 150 days

***Map Unit Composition***

*Ayetle and similar soils:* 55 percent

*Duco and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

## **Major Components**

### **Ayette**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave, south-facing backslopes

*Parent material:* Clayey lacustrine deposits

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

A—0 to 4 inches; loam

Bt1—4 to 8 inches; clay loam

Bt2—8 to 12 inches; clay loam

Btss1—12 to 30 inches; clay

Btss2—30 to 43 inches; clay

Cr—43 to 53 inches; weathered bedrock

### **Duco, Stony Loam, Very Stony Surface**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

#### **Typical profile**

A—0 to 3 inches; stony loam

Bt—3 to 15 inches; extremely stony clay loam

R—15 to 25 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Breadloaf**

*Composition:* 10 percent

*Geomorphic position:* Concave footslopes and south-facing backslopes

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Immig, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex, south-facing backslopes

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

#### **Hann**

*Composition:* 5 percent

*Geomorphic position:* Toeslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

### ***Major Use***

Livestock grazing

## ***330—Breadloaf-Ayette-Immig complex, 4 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,870 to 4,340 feet

*Mean annual precipitation:* 14 to 18 inches

*Mean annual air temperature:* 47 to 50 degrees F

*Frost-free period:* 110 to 140 days

### ***Map Unit Composition***

*Breadloaf and similar soils:* 35 percent

*Ayette and similar soils:* 30 percent

*Immig and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### ***Major Components***

#### ***Breadloaf***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Smooth and slightly convex backslopes and footslopes

*Parent material:* Clayey lacustrine deposits

#### **Properties and qualities**

*Slope:* 4 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Typical profile**

A—0 to 2 inches; clay loam

Bt—2 to 6 inches; clay

Btss1—6 to 12 inches; clay

Btss2—12 to 17 inches; clay

Btss3—17 to 23 inches; paragravelly clay

Crk—23 to 33 inches; weathered bedrock

***Ayette, Moist*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave backslopes and footslopes

*Parent material:* Clayey lacustrine deposits

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Typical profile**

A1—0 to 4 inches; loam

A2—4 to 9 inches; loam

Bt—9 to 15 inches; clay loam

Btss1—15 to 27 inches; clay

Btss2—27 to 36 inches; clay

Btss3—36 to 55 inches; clay loam

Cr—55 to 65 inches; weathered bedrock

***Immig, Rubbly Surface*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex backslopes, shoulders, and summits

*Parent material:* Colluvium derived from basalt

**Properties and qualities**

*Slope:* 4 to 35 percent

*Percentage of surface area covered by stones and boulders:* 15 to 50 percent

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6s

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

#### **Typical profile**

A—0 to 4 inches; very stony loam

Bt1—4 to 7 inches; very cobbly clay loam

Bt2—7 to 17 inches; very cobbly silty clay

Bt3—17 to 25 inches; extremely cobbly silty clay

R—25 to 35 inches; unweathered bedrock

#### ***Dissimilar Minor Components***

##### **Gwin, very stony loam, extremely stony surface**

*Composition:* 5 percent

*Geomorphic position:* Convex shoulders and summits

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE  
(R010XY018ID)

##### **Leptic Haploxerepts, shallow**

*Composition:* 5 percent

*Geomorphic position:* Eroded areas of backslopes and footslopes

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

##### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, summits

#### ***Major Use***

Livestock grazing

### **331—Ayette-Yad complex, 8 to 25 percent slopes**

#### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,640 to 4,350 feet

*Mean annual precipitation:* 14 to 18 inches

*Mean annual air temperature:* 47 to 50 degrees F

*Frost-free period:* 110 to 140 days

#### ***Map Unit Composition***

*Ayette and similar soils:* 50 percent

*Yad and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

#### ***Major Components***

##### ***Ayette, Moist***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex backslopes and summits

*Parent material:* Clayey lacustrine deposits

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6  
(R010XY010ID)

**Typical profile**

A1—0 to 4 inches; loam

A2—4 to 9 inches; loam

Bt—9 to 15 inches; clay loam

Btss1—15 to 27 inches; clay

Btss2—27 to 36 inches; clay

Btss3—36 to 55 inches; clay loam

Cr—55 to 65 inches; weathered bedrock

**Yad****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave backslopes and footslopes

*Parent material:* Clayey alluvium over loamy lacustrine deposits

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6s

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6  
(R010XY006ID)

**Typical profile**

A—0 to 2 inches; clay loam

BA—2 to 6 inches; clay loam

Btss1—6 to 14 inches; clay loam

Btss2—14 to 25 inches; clay

2Bt1—25 to 41 inches; clay loam

2Bt2—41 to 52 inches; gravelly sandy clay loam

2Bt3—52 to 60 inches; clay loam

### ***Dissimilar Minor Components***

#### **Hann**

*Composition:* 10 percent

*Geomorphic position:* Foothslopes, toeslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Leptic Haploxerepts, shallow**

*Composition:* 5 percent

*Geomorphic position:* Convex saddles and summits

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Vertic Argixerolls, moderately well drained**

*Composition:* 5 percent

*Geomorphic position:* Fluves

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

### ***Major Use***

Livestock grazing

## ***332—Hann-Ayette-Picketpin complex, 25 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,680 to 4,430 feet

*Mean annual precipitation:* 14 to 20 inches

*Mean annual air temperature:* 46 to 48 degrees F

*Frost-free period:* 100 to 120 days

### ***Map Unit Composition***

*Hann and similar soils:* 35 percent

*Ayette and similar soils:* 30 percent

*Picketpin and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### ***Major Components***

#### ***Hann***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Smooth and slightly concave, north-facing backslopes

*Parent material:* Clayey alluvium

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 13.5 inches

**Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A—0 to 3 inches; silt loam

Bt1—3 to 6 inches; silty clay loam

Bt2—6 to 13 inches; silty clay

Bt3—13 to 25 inches; silty clay

Bt4—25 to 44 inches; silty clay loam

Bt5—44 to 72 inches; silty clay loam

***Ayette, Moist*****Setting***Landform: Hillslopes**Geomorphic position: Slightly convex, north-facing backslopes and shoulders**Parent material: Clayey lacustrine deposits***Properties and qualities***Slope: 25 to 50 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: High**Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)**Drainage class: Well drained**Permeability class (slowest): Slow**Flooding frequency: None**Seasonal high water table (minimum depth): More than 72 inches**Available water capacity (entire profile): About 9.4 inches***Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A1—0 to 4 inches; loam

A2—4 to 9 inches; loam

Bt—9 to 15 inches; clay loam

Btss1—15 to 27 inches; clay

Btss2—27 to 36 inches; clay

Btss3—36 to 55 inches; clay loam

Cr—55 to 65 inches; weathered bedrock

***Picketpin*****Setting***Landform: Hillslopes**Geomorphic position: Upper, convex, north-facing backslopes**Parent material: Loamy alluvium***Properties and qualities***Slope: 25 to 65 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: Low**Depth to restrictive feature: None within a depth of 60 inches**Drainage class: Well drained**Permeability class (slowest): Moderate**Flooding frequency: None*

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A—0 to 5 inches; loam

Bt1—5 to 11 inches; sandy clay loam

Bt2—11 to 17 inches; clay loam

Bt3—17 to 35 inches; sandy clay loam

E&Bt—35 to 60 inches; fine gravelly coarse sandy loam

#### ***Dissimilar Minor Components***

#### **Van Dusen**

*Composition:* 10 percent

*Geomorphic position:* Concave backslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Yad**

*Composition:* 5 percent

*Geomorphic position:* Footslopes

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### ***Major Use***

Livestock grazing

### **333—Ayette-Crawley-Hullsgulch complex, 25 to 65 percent slopes**

#### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,670 to 3,730 feet

*Mean annual precipitation:* 13 to 16 inches

*Mean annual air temperature:* 49 to 51 degrees F

*Frost-free period:* 130 to 150 days

#### ***Map Unit Composition***

*Ayette and similar soils:* 50 percent

*Crawley and similar soils:* 15 percent

*Hullsgulch and similar soils:* 15 percent

*Dissimilar minor components:* 20 percent

#### ***Major Components***

#### ***Ayette***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Smooth and slightly concave, south-facing backslopes

*Parent material:* Clayey lacustrine deposits

**Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Typical profile**

A—0 to 4 inches; loam

Bt1—4 to 8 inches; clay loam

Bt2—8 to 12 inches; clay loam

Btss1—12 to 30 inches; clay

Btss2—30 to 43 inches; clay

Cr—43 to 53 inches; weathered bedrock

***Crawley, Loam*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Silty lacustrine deposits

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6  
(R010XY011ID)

**Typical profile**

A—0 to 6 inches; loam

Bt—6 to 14 inches; clay loam

Crkq—14 to 24 inches; weathered bedrock

***Hullsgulch, Loam*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, south-facing backslopes

*Parent material:* Loamy lacustrine deposits

**Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

**Typical profile**

A1—0 to 2 inches; loam

A2—2 to 9 inches; loam

BA—9 to 15 inches; loam

Bt1—15 to 29 inches; sandy clay loam

Bt2—29 to 46 inches; sandy clay loam

E&Bt1—46 to 58 inches; fine gravelly coarse sandy loam

E&Bt2—58 to 66 inches; fine gravelly loamy coarse sand

***Dissimilar Minor Components*****Siphonlake**

*Composition:* 10 percent

*Geomorphic position:* Foothills; slightly concave, north-facing backslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Piercepark, coarse sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Slumps, small draws

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

**Leptic Haploxerepts, shallow**

*Composition:* 5 percent

*Geomorphic position:* Convex saddles and summits

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

***Major Use***

Livestock grazing

***335—Gimmi-Ayette-Doubledia complex, 4 to 35 percent slopes******Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,710 to 3,540 feet

*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 49 to 50 degrees F

*Frost-free period:* 130 to 140 days

### **Map Unit Composition**

*Gimmi and similar soils:* 30 percent  
*Ayette and similar soils:* 25 percent  
*Doubledia and similar soils:* 25 percent  
*Dissimilar minor components:* 20 percent

### **Major Components**

#### ***Gimmi, Very Stony Surface***

#### **Setting**

*Landform:* Landslides  
*Geomorphic position:* Knobs, convex backslopes and footslopes  
*Parent material:* Colluvium derived from basalt and silty lacustrine deposits

#### **Properties and qualities**

*Slope:* 5 to 35 percent  
*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4s  
*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

#### **Typical profile**

A—0 to 3 inches; very gravelly loam  
 BA—3 to 6 inches; very gravelly loam  
 Bt1—6 to 10 inches; gravelly clay loam  
 Bt2—10 to 15 inches; gravelly clay  
 Bt3—15 to 23 inches; gravelly clay  
 2CBt—23 to 31 inches; extremely paragravelly silty clay loam  
 2Cr—31 to 41 inches; weathered bedrock

#### ***Ayette, Moist***

#### **Setting**

*Landform:* Hillslopes, landslides  
*Geomorphic position:* Slightly convex backslopes and summits  
*Parent material:* Lacustrine deposits

#### **Properties and qualities**

*Slope:* 8 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 9.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Typical profile**

A1—0 to 4 inches; loam

A2—4 to 9 inches; loam

Bt—9 to 15 inches; clay loam

Btss1—15 to 27 inches; clay

Btss2—27 to 36 inches; clay

Btss3—36 to 55 inches; clay loam

Cr—55 to 65 inches; weathered bedrock

***Doubledia, Silty Clay Loam*****Setting**

*Landform:* Hillslopes, landslides

*Geomorphic position:* Concave backslopes and footslopes

*Parent material:* Clayey lacustrine deposits

**Properties and qualities**

*Slope:* 4 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Typical profile**

A—0 to 3 inches; silty clay loam

Bt—3 to 6 inches; clay

Btss1—6 to 11 inches; clay

Btss2—11 to 21 inches; clay

B't—21 to 25 inches; clay loam

B'tss1—25 to 34 inches; paragravelly clay

B'tss2—34 to 41 inches; very paragravelly clay

Crk—41 to 51 inches; weathered bedrock

***Dissimilar Minor Components*****Hann**

*Composition:* 10 percent

*Geomorphic position:* Toeslopes, north-facing backslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Leptic Haploxerepts, shallow**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes and saddles

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Aridic Argixerolls, shallow, rubbly surface***Composition:* 5 percent*Geomorphic position:* Shoulders, summits*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)**Major Use**

Livestock grazing

**400—Ralsen-Foxlane-Pay complex, 0 to 2 percent slopes****Map Unit Setting***General landscape:* Mountain valleys and canyons*Major land resource area (MLRA):* 43B*Elevation:* 2,940 to 3,720 feet*Mean annual precipitation:* 20 to 26 inches*Mean annual air temperature:* 45 to 48 degrees F*Frost-free period:* 90 to 120 days**Map Unit Composition***Ralsen and similar soils:* 35 percent*Foxlane and similar soils:* 30 percent*Pay and similar soils:* 20 percent*Dissimilar minor components:* 15 percent**Major Components****Ralsen****Setting***Landform:* Flood-plain steps*Geomorphic position:* Smooth and slightly concave, lower lying areas*Parent material:* Coarse-loamy alluvium**Properties and qualities***Slope:* 0 to 1 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Poorly drained*Permeability class (slowest):* Moderate*Flooding frequency:* Occasional (see Water Features table)*Seasonal high water table (minimum depth):* At the surface to a depth of about 20 inches (see Water Features table)*Available water capacity (entire profile):* About 8.3 inches**Interpretive groups***Land capability subclass (nonirrigated):* 4w*Ecological site:* WET MEADOW (R043AY007ID)**Typical profile**

A1—0 to 2 inches; fine sandy loam

A2—2 to 10 inches; fine sandy loam

Bg1—10 to 17 inches; fine sandy loam  
 Bg2—17 to 19 inches; loamy fine sand  
 Bg3—19 to 24 inches; fine sandy loam  
 2C—24 to 60 inches; stratified coarse sand to fine sandy loam

### ***Foxlane***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Slightly convex, higher lying areas

*Parent material:* Sandy and gravelly alluvium

#### **Properties and qualities**

*Slope:* 0 to 2 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 21 inches to strongly contrasting textural stratification

*Drainage class:* Moderately well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)

*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4s

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; gravelly fine sandy loam

A2—4 to 10 inches; gravelly fine sandy loam

AC—10 to 13 inches; gravelly loamy fine sand

2C1—13 to 47 inches; very gravelly coarse sand

2C2—47 to 60 inches; extremely gravelly coarse sand

### ***Pay***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Smooth and slightly convex, lower lying areas

*Parent material:* Sandy alluvium

#### **Properties and qualities**

*Slope:* 0 to 1 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Poorly drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* At the surface to a depth of about 20 inches (see Water Features table)

*Available water capacity (entire profile):* About 3.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* WET MEADOW (R043AY0071D)

**Typical profile**

A1—0 to 3 inches; loamy fine sand  
 A2—3 to 7 inches; loamy fine sand  
 AC—7 to 11 inches; loamy fine sand  
 C1—11 to 26 inches; loamy fine sand  
 C2—26 to 41 inches; fine gravelly coarse sand  
 C3—41 to 60 inches; very gravelly coarse sand

***Dissimilar Minor Components*****Entic Ultic Haploxerolls, somewhat poorly drained**

*Composition:* 5 percent  
*Geomorphic position:* Intermediate areas  
*Ecological site:* SEMIWET MEADOW (R043AY008ID)

**Histic Endoaquolls, mucky surface**

*Composition:* 5 percent  
*Geomorphic position:* Sloughs and lower lying areas adjacent to streams  
*Ecological site:* WET MEADOW (R043AY007ID)

**Riverwash**

*Composition:* 5 percent  
*Geomorphic position:* Channels

***Major Uses***

Wildlife habitat, recreation

***401—Staircase sandy loam, 0 to 2 percent slopes******Map Unit Setting***

*General landscape:* Mountain valleys and canyons  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,020 to 4,520 feet  
*Mean annual precipitation:* 20 to 26 inches  
*Mean annual air temperature:* 45 to 48 degrees F  
*Frost-free period:* 90 to 120 days

***Map Unit Composition***

*Staircase and similar soils:* 85 percent  
*Dissimilar minor components:* 15 percent

***Major Component******Staircase*****Setting**

*Landform:* Flood-plain steps  
*Geomorphic position:* Smooth and slightly convex areas  
*Parent material:* Coarse-loamy alluvium

**Properties and qualities**

*Slope:* 0 to 2 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Moderately well drained  
*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)

*Available water capacity (entire profile):* About 6.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3c

*Land capability subclass (irrigated):* 3c

*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

#### **Typical profile**

Ap—0 to 4 inches; sandy loam

A1—4 to 14 inches; fine gravelly sandy loam

A2—14 to 22 inches; fine gravelly sandy loam

A3—22 to 32 inches; fine gravelly sandy loam

A4—32 to 42 inches; fine gravelly sandy loam

AB—42 to 50 inches; fine gravelly sandy loam

Bw1—50 to 58 inches; fine gravelly sandy loam

Bw2—58 to 72 inches; gravelly loamy sand

#### ***Dissimilar Minor Components***

#### **Crossbow**

*Composition:* 10 percent

*Geomorphic position:* Concave areas

*Ecological site:* SEMIWET MEADOW (R043AY008ID)

#### **Ralsen**

*Composition:* 5 percent

*Geomorphic position:* Swales

*Ecological site:* WET MEADOW (R043AY007ID)

#### ***Major Use***

Irrigated hay and pasture

### ***402—Crossbow-Foxlane complex, 1 to 4 percent slopes***

#### ***Map Unit Setting***

*General landscape:* Mountain valleys, canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,020 to 3,490 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

#### ***Map Unit Composition***

*Crossbow and similar soils:* 60 percent

*Foxlane and similar soils:* 20 percent

*Dissimilar minor components:* 20 percent

#### ***Major Components***

##### ***Crossbow***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Smooth and intermediate, slightly concave areas

*Parent material:* Coarse-loamy alluvium

**Properties and qualities**

*Slope:* 1 to 3 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* About 20 to 30 inches (see Water Features table)

*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3w

*Land capability subclass (irrigated):* 3w

*Ecological site:* SEMIWET MEADOW (R043AY008ID)

**Typical profile**

A1—0 to 4 inches; fine sandy loam

A2—4 to 11 inches; fine sandy loam

A3—11 to 21 inches; fine sandy loam

A4—21 to 36 inches; fine sandy loam

C1—36 to 42 inches; loamy fine sand

C2—42 to 60 inches; gravelly coarse sand

***Foxlane*****Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Smooth and slightly convex, higher lying areas

*Parent material:* Sandy and gravelly alluvium

**Properties and qualities**

*Slope:* 1 to 4 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 21 inches to strongly contrasting textural stratification

*Drainage class:* Moderately well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)

*Available water capacity (entire profile):* About 3.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4s

*Land capability subclass (irrigated):* 4s

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; gravelly fine sandy loam

A2—4 to 10 inches; gravelly fine sandy loam

AC—10 to 13 inches; gravelly loamy fine sand

2C1—13 to 47 inches; very gravelly coarse sand

2C2—47 to 60 inches; extremely gravelly coarse sand

### ***Dissimilar Minor Components***

#### **Ralsen**

*Composition:* 10 percent

*Geomorphic position:* Lower areas adjacent to streams

*Ecological site:* WET MEADOW (R043AY007ID)

#### **Pay**

*Composition:* 5 percent

*Geomorphic position:* Swales

*Ecological site:* WET MEADOW (R043AY007ID)

#### **Staircase**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex, higher lying areas

*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

### ***Major Uses***

Irrigated hay and pasture, wildlife habitat, recreation

## ***403—Ralsen-Pay-Crossbow complex, 0 to 2 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountain valleys, canyons (fig. 5)

*Major land resource area (MLRA):* 43B

*Elevation:* 3,000 to 3,170 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### ***Map Unit Composition***

*Ralsen and similar soils:* 40 percent

*Pay and similar soils:* 25 percent

*Crossbow and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### ***Major Components***

#### ***Ralsen***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Smooth and slightly concave, lower lying areas

*Parent material:* Coarse-loamy alluvium

#### **Properties and qualities**

*Slope:* 0 to 1 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Poorly drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* At the surface to a depth of about 20 inches (see Water Features table)

*Available water capacity (entire profile):* About 8.3 inches



Figure 5.—Mountain wet meadow in an area of Ralsen-Pay-Crossbow complex, 0 to 2 percent slopes.

**Interpretive groups**

*Land capability subclass (nonirrigated): 4w*

*Land capability subclass (irrigated): 4w*

*Ecological site: WET MEADOW (R043AY0071D)*

**Typical profile**

A1—0 to 2 inches; fine sandy loam

A2—2 to 10 inches; fine sandy loam

Bg1—10 to 17 inches; fine sandy loam

Bg2—17 to 19 inches; loamy fine sand

Bg3—19 to 24 inches; fine sandy loam

2C—24 to 60 inches; stratified coarse sand to fine sandy loam

**Pay****Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Smooth and slightly convex, lower lying areas

*Parent material:* Sandy alluvium

**Properties and qualities**

*Slope:* 0 to 1 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Poorly drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* At the surface to a depth of about 20 inches (see Water Features table)

*Available water capacity (entire profile):* About 3.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Land capability subclass (irrigated):* 4w

*Ecological site:* WET MEADOW (R043AY007ID)

**Typical profile**

A1—0 to 3 inches; loamy fine sand

A2—3 to 7 inches; loamy fine sand

AC—7 to 11 inches; loamy fine sand

C1—11 to 26 inches; loamy fine sand

C2—26 to 41 inches; fine gravelly coarse sand

C3—41 to 60 inches; very gravelly coarse sand

**Crossbow****Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Slightly convex, intermediate areas

*Parent material:* Coarse-loamy alluvium

**Properties and qualities**

*Slope:* 0 to 2 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* About 20 to 30 inches (see Water Features table)

*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3w

*Land capability subclass (irrigated):* 3w

*Ecological site:* SEMIWET MEADOW (R043AY008ID)

**Typical profile**

A1—0 to 4 inches; fine sandy loam

A2—4 to 11 inches; fine sandy loam

A3—11 to 21 inches; fine sandy loam

A4—21 to 36 inches; fine sandy loam

C1—36 to 42 inches; loamy fine sand

C2—42 to 60 inches; gravelly coarse sand

### ***Dissimilar Minor Components***

#### **Foxlane**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex, higher lying areas

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Histic Endoaquolls, mucky surface**

*Composition:* 5 percent

*Geomorphic position:* Sloughs, lower lying areas adjacent to streams

*Ecological site:* WET MEADOW (R043AY0071D)

#### **Riverwash**

*Composition:* 5 percent

*Geomorphic position:* Channels

### ***Major Uses***

Irrigated and nonirrigated hay and pasture, wildlife habitat, recreation

## ***404—Riverpoint-Hellake complex, 2 to 25 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountain valleys, canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 2,990 to 3,440 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### ***Map Unit Composition***

*Riverpoint and similar soils:* 55 percent

*Hellake and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Riverpoint***

#### **Setting**

*Landform:* Relict lakebeds

*Geomorphic position:* Risers, shoulders, convex areas

*Parent material:* Loamy lacustrine deposits over gravelly alluvium

#### **Properties and qualities**

*Slope:* 2 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 15 to 40 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.5 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Land capability subclass (irrigated):* 6e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### **Typical profile**

A—0 to 6 inches; loam

AB—6 to 11 inches; loam

Bt1—11 to 14 inches; clay loam

Bt2—14 to 19 inches; very gravelly clay loam

2Bt3—19 to 31 inches; very gravelly coarse sandy loam

2CBt—31 to 41 inches; very gravelly coarse sandy loam

2C—41 to 60 inches; extremely gravelly loamy coarse sand

## ***Hellake***

### **Setting**

*Landform:* Relict lakebeds

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy lacustrine deposits over gravelly alluvium

### **Properties and qualities**

*Slope:* 2 to 8 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 30 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.3 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Land capability subclass (irrigated):* 3e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### **Typical profile**

A—0 to 3 inches; loam

AB—3 to 10 inches; loam

Bt1—10 to 22 inches; clay loam

Bt2—22 to 36 inches; clay loam

Bt3—36 to 43 inches; clay loam

2BC—43 to 53 inches; very gravelly loam

2C1—53 to 60 inches; very gravelly sandy loam

2C2—60 to 66 inches; extremely gravelly loamy sand

## ***Dissimilar Minor Components***

### **Huston, very stony surface**

*Composition:* 10 percent

*Geomorphic position:* Steep, south-facing risers

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Foxlane**

*Composition:* 5 percent

*Geomorphic position:* Fluves

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Middlefork**

*Composition:* 5 percent

*Geomorphic position:* North-facing risers

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

**Major Uses**

Irrigated hay and pasture, livestock grazing

**405—Hellake-Staircase complex, 0 to 2 percent slopes****Map Unit Setting**

*General landscape:* Mountain valleys, canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,020 to 3,510 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

**Map Unit Composition**

*Hellake and similar soils:* 65 percent

*Staircase and similar soils:* 15 percent

*Dissimilar minor components:* 20 percent

**Major Components****Hellake****Setting**

*Landform:* Relict lakebeds

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy lacustrine deposits over gravelly alluvium

**Properties and qualities**

*Slope:* 0 to 2 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 30 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3c

*Land capability subclass (irrigated):* 3c

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Typical profile**

A—0 to 3 inches; loam  
 AB—3 to 10 inches; loam  
 Bt1—10 to 22 inches; clay loam  
 Bt2—22 to 36 inches; clay loam  
 Bt3—36 to 43 inches; clay loam  
 2BC—43 to 53 inches; very gravelly loam  
 2C1—53 to 60 inches; very gravelly sandy loam  
 2C2—60 to 66 inches; extremely gravelly loamy sand

**Staircase****Setting**

*Landform:* Relict lakebeds  
*Geomorphic position:* Fluves, swales  
*Parent material:* Coarse-loamy alluvium

**Properties and qualities**

*Slope:* 0 to 2 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Moderately well drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* Rare (see Water Features table)  
*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)  
*Available water capacity (entire profile):* About 6.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3c  
*Land capability subclass (irrigated):* 3c  
*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

**Typical profile**

Ap—0 to 4 inches; sandy loam  
 A1—4 to 14 inches; fine gravelly sandy loam  
 A2—14 to 22 inches; fine gravelly sandy loam  
 A3—22 to 32 inches; fine gravelly sandy loam  
 A4—32 to 42 inches; fine gravelly sandy loam  
 AB—42 to 50 inches; fine gravelly sandy loam  
 Bw1—50 to 58 inches; fine gravelly sandy loam  
 Bw2—58 to 72 inches; gravelly loamy sand

**Dissimilar Minor Components****Typic Epiaquolls, very poorly drained**

*Composition:* 10 percent  
*Geomorphic position:* Seeps, fluves  
*Ecological site:* WET MEADOW (R043AY0071D)

**Riverpoint**

*Composition:* 5 percent  
*Geomorphic position:* Risers, shoulders, convex areas  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Stardust**

*Composition:* 5 percent  
*Geomorphic position:* Toeslopes of adjacent alluvial fans

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### **Major Uses**

Irrigated hay and pasture, homesites

## **406—Hellake loam, 2 to 8 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountain valleys and canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,050 to 4,140 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### **Map Unit Composition**

*Hellake and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

### **Major Component**

#### **Hellake**

#### **Setting**

*Landform:* Relict lakebeds

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy lacustrine deposits over gravelly alluvium

#### **Properties and qualities**

*Slope:* 2 to 8 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 30 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Land capability subclass (irrigated):* 3e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

A—0 to 3 inches; loam

AB—3 to 10 inches; loam

Bt1—10 to 22 inches; clay loam

Bt2—22 to 36 inches; clay loam

Bt3—36 to 43 inches; clay loam

2BC—43 to 53 inches; very gravelly loam

2C1—53 to 60 inches; very gravelly sandy loam

2C2—60 to 66 inches; extremely gravelly loamy sand

### ***Dissimilar Minor Components***

#### **Riverpoint**

*Composition:* 10 percent

*Geomorphic position:* Risers, shoulders, convex areas

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Staircase**

*Composition:* 10 percent

*Geomorphic position:* Fluves

*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

#### **Stardust**

*Composition:* 5 percent

*Geomorphic position:* Toeslopes of adjacent alluvial fans

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### ***Major Uses***

Irrigated hay and pasture, homesites

## ***407—Hellake loam, 8 to 25 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountain valleys, canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,050 to 4,120 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### ***Map Unit Composition***

*Hellake and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

### ***Major Component***

#### ***Hellake***

#### **Setting**

*Landform:* Relict lakebeds

*Geomorphic position:* Slightly convex areas

*Parent material:* Loamy lacustrine deposits over gravelly alluvium

#### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 30 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Land capability subclass (irrigated):* 6e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Typical profile**

A—0 to 3 inches; loam

AB—3 to 10 inches; loam

Bt1—10 to 22 inches; clay loam

Bt2—22 to 36 inches; clay loam

Bt3—36 to 43 inches; clay loam

2BC—43 to 53 inches; very gravelly loam

2C1—53 to 60 inches; very gravelly sandy loam

2C2—60 to 66 inches; extremely gravelly loamy sand

***Dissimilar Minor Components***

**Riverpoint**

*Composition:* 10 percent

*Geomorphic position:* Risers, shoulders, convex areas

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Huston, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* South-facing risers

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Stardust**

*Composition:* 5 percent

*Geomorphic position:* Footslopes of adjacent alluvial fans

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Middlefork**

*Composition:* 5 percent

*Geomorphic position:* North-facing risers

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

***Major Uses***

Irrigated hay and pasture, homesites

***408—Stardust fine gravelly loam, 1 to 3 percent slopes***

***Map Unit Setting***

*General landscape:* Mountain valleys, canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,020 to 3,150 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

***Map Unit Composition***

*Stardust and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

***Major Component***

***Stardust***

**Setting**

*Landform:* Fan remnants

*Geomorphic position:* Slightly convex areas

*Parent material:* Loamy alluvium

**Properties and qualities**

*Slope:* 1 to 3 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3c

*Land capability subclass (irrigated):* 3c

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 3 inches; fine gravelly loam

A2—3 to 9 inches; fine gravelly loam

Bt1—9 to 18 inches; fine gravelly loam

Bt2—18 to 38 inches; fine gravelly sandy clay loam

Bt3—38 to 54 inches; gravelly sandy clay loam

BC—54 to 67 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Crossbow**

*Composition:* 10 percent

*Geomorphic position:* Fluves

*Ecological site:* SEMIWET MEADOW (R043AY008ID)

**Staircase**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave areas

*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

**Riverpoint**

*Composition:* 5 percent

*Geomorphic position:* Convex areas

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

***Major Uses***

Timber production, irrigated hay and pasture, livestock grazing, homesites

***409—Stardust fine gravelly loam, 3 to 8 percent slopes***

***Map Unit Setting***

*General landscape:* Mountain valleys, canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,020 to 3,640 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### **Map Unit Composition**

*Stardust and similar soils: 75 percent*  
*Dissimilar minor components: 25 percent*

#### **Major Component**

##### **Stardust**

#### **Setting**

*Landform: Fan remnants*  
*Geomorphic position: Slightly convex areas*  
*Parent material: Loamy alluvium*

#### **Properties and qualities**

*Slope: 3 to 8 percent*  
*Percentage of surface area covered by stones and boulders: None*  
*Shrink-swell potential: Low*  
*Depth to restrictive feature: None within a depth of 60 inches*  
*Drainage class: Well drained*  
*Permeability class (slowest): Moderate*  
*Flooding frequency: None*  
*Seasonal high water table (minimum depth): More than 72 inches*  
*Available water capacity (entire profile): About 8.5 inches*

#### **Interpretive groups**

*Land capability subclass (nonirrigated): 3e*  
*Land capability subclass (irrigated): 3e*  
*Forest habitat type: Ponderosa pine/common snowberry (CPS526)*

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 3 inches; fine gravelly loam  
 A2—3 to 9 inches; fine gravelly loam  
 Bt1—9 to 18 inches; fine gravelly loam  
 Bt2—18 to 38 inches; fine gravelly sandy clay loam  
 Bt3—38 to 54 inches; gravelly sandy clay loam  
 BC—54 to 67 inches; gravelly sandy loam

### **Dissimilar Minor Components**

#### **Crossbow**

*Composition: 10 percent*  
*Geomorphic position: Fluves*  
*Ecological site: SEMIWET MEADOW (R043AY008ID)*

#### **Riverpoint**

*Composition: 10 percent*  
*Geomorphic position: Convex areas*  
*Forest habitat type: Ponderosa pine/common snowberry (CPS526)*

#### **Stardust, nearly level**

*Composition: 5 percent*  
*Geomorphic position: Areas that have slopes of 1 to 3 percent*  
*Forest habitat type: Ponderosa pine/common snowberry (CPS526)*

### **Major Uses**

Timber production, irrigated hay and pasture, livestock grazing, homesites

## **410—Stardust-Riverpoint complex, 8 to 25 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountain valleys and canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 2,970 to 3,890 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### **Map Unit Composition**

*Stardust and similar soils:* 65 percent

*Riverpoint and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Stardust**

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Slightly convex areas

*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Land capability subclass (irrigated):* 6e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 3 inches; fine gravelly loam

A2—3 to 9 inches; fine gravelly loam

Bt1—9 to 18 inches; fine gravelly loam

Bt2—18 to 38 inches; fine gravelly sandy clay loam

Bt3—38 to 54 inches; gravelly sandy clay loam

BC—54 to 67 inches; gravelly sandy loam

#### **Riverpoint, Very Stony Surface**

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Convex areas and mouths of adjacent canyons

*Parent material:* Gravelly alluvium

#### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6s

*Land capability subclass (irrigated):* 6s

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 7 inches; gravelly loam

Bt1—7 to 12 inches; very gravelly loam

Bt2—12 to 24 inches; very gravelly loam

Bt3—24 to 40 inches; extremely stony clay loam

2C—40 to 60 inches; extremely stony sandy loam

#### ***Dissimilar Minor Components***

##### **Cloudyway**

*Composition:* 5 percent

*Geomorphic position:* Swales

*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

##### **Crossbow**

*Composition:* 5 percent

*Geomorphic position:* Fluves

*Ecological site:* SEMIWET MEADOW (R043AY008ID)

##### **Stardust, gently sloping**

*Composition:* 5 percent

*Geomorphic position:* Areas that have slopes of 3 to 8 percent

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### ***Major Uses***

Timber production, irrigated hay and pasture, livestock grazing, homesites

## ***411—Huston-Zeb association, 25 to 65 percent slopes***

#### ***Map Unit Setting***

*General landscape:* Mountain valleys and canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,070 to 4,130 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 44 to 48 degrees F

*Frost-free period:* 75 to 120 days

#### ***Map Unit Composition***

*Huston and similar soils:* 45 percent

*Zeb and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

## **Major Components**

### **Huston, Very Stony Surface**

#### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* South-facing side slopes and nose slopes

*Parent material:* Gravelly alluvium

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; gravelly coarse sandy loam

A2—6 to 13 inches; gravelly coarse sandy loam

BA—13 to 26 inches; very gravelly coarse sandy loam

Bw—26 to 46 inches; very gravelly coarse sandy loam

C—46 to 60 inches; stratified very gravelly coarse sandy loam to very gravelly fine sandy loam

### **Zeb, Gravelly Sandy Loam**

#### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* North-facing side slopes

*Parent material:* Gravelly alluvium

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 8 inches; gravelly sandy loam

A2—8 to 13 inches; gravelly sandy loam  
 Bw—13 to 23 inches; very gravelly coarse sandy loam  
 C1—23 to 43 inches; extremely gravelly loamy coarse sand  
 C2—43 to 60 inches; extremely gravelly sand

### ***Dissimilar Minor Components***

#### **Stardust**

*Composition:* 10 percent  
*Geomorphic position:* Footslopes, head slopes  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Middlefork**

*Composition:* 5 percent  
*Geomorphic position:* Lower, concave side slopes  
*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

#### **Northfork, fine gravelly sandy loam**

*Composition:* 5 percent  
*Geomorphic position:* Concave, north-facing side slopes  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### ***Major Uses***

Timber production, wildlife habitat

## ***412—Huston-Stardust association, 8 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountain valleys and canyons  
*Major land resource area (MLRA):* 43B  
*Elevation:* 2,720 to 4,990 feet  
*Mean annual precipitation:* 20 to 26 inches  
*Mean annual air temperature:* 45 to 48 degrees F  
*Frost-free period:* 90 to 120 days

### ***Map Unit Composition***

*Huston and similar soils:* 50 percent  
*Stardust and similar soils:* 30 percent  
*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Huston, Very Stony Surface***

#### **Setting**

*Landform:* Fan remnants  
*Geomorphic position:* South-facing side slopes and nose slopes  
*Parent material:* Gravelly alluvium

#### **Properties and qualities**

*Slope:* 25 to 65 percent  
*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; gravelly coarse sandy loam

A2—6 to 13 inches; gravelly coarse sandy loam

BA—13 to 26 inches; very gravelly coarse sandy loam

Bw—26 to 46 inches; very gravelly coarse sandy loam

C—46 to 60 inches; stratified very gravelly coarse sandy loam to very gravelly fine sandy loam

### ***Stardust***

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Land capability subclass (irrigated):* 6e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 3 inches; fine gravelly loam

A2—3 to 9 inches; fine gravelly loam

Bt1—9 to 18 inches; fine gravelly loam

Bt2—18 to 38 inches; fine gravelly sandy clay loam

Bt3—38 to 54 inches; gravelly sandy clay loam

BC—54 to 67 inches; gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Cloudyway**

*Composition:* 10 percent

*Geomorphic position:* Concave areas and toeslopes of adjacent hills

*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

#### **Ultic Haploxerolls, sandy loam, south slope**

*Composition:* 5 percent

*Geomorphic position:* South-facing side slopes and head slopes

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Zeb, fine gravelly sandy loam***Composition:* 5 percent*Geomorphic position:* North-facing side slopes and head slopes*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)**Major Uses**

Timber production, irrigated hay and pasture, livestock grazing, homesites

**413—Cloudyway fine gravelly sandy loam, 4 to 15 percent slopes****Map Unit Setting***General landscape:* Mountain valleys and canyons*Major land resource area (MLRA):* 43B*Elevation:* 2,750 to 3,670 feet*Mean annual precipitation:* 20 to 26 inches*Mean annual air temperature:* 45 to 48 degrees F*Frost-free period:* 90 to 120 days**Map Unit Composition***Cloudyway and similar soils:* 75 percent*Dissimilar minor components:* 25 percent**Major Component****Cloudyway****Setting***Landform:* Alluvial fans*Geomorphic position:* Slightly convex areas*Parent material:* Coarse-loamy alluvium**Properties and qualities***Slope:* 4 to 15 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Well drained*Permeability class (slowest):* Moderately rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 5.2 inches**Interpretive groups***Land capability subclass (nonirrigated):* 3e*Land capability subclass (irrigated):* 4e*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 9 inches; fine gravelly sandy loam

A3—9 to 18 inches; gravelly sandy loam

AC—18 to 24 inches; gravelly sandy loam

C1—24 to 43 inches; gravelly sandy loam

C2—43 to 60 inches; gravelly loamy sand

### ***Dissimilar Minor Components***

#### **Huston, very stony surface**

*Composition:* 10 percent

*Geomorphic position:* Convex areas

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Fluventic Haploxerolls, occasionally flooded, very stony surface**

*Composition:* 10 percent

*Geomorphic position:* Fluves

*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

#### **Staircase**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave toeslopes

*Forest habitat type:* Ponderosa pine/Lemmon's needlegrass (CPG124)

### ***Major Uses***

Irrigated hay and pasture, livestock grazing, homesites

## ***414—Hellake-Middlefork complex, 8 to 50 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountain valleys and canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,050 to 3,730 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 44 to 48 degrees F

*Frost-free period:* 75 to 120 days

### ***Map Unit Composition***

*Hellake and similar soils:* 40 percent

*Middlefork and similar soils:* 40 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Hellake***

#### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* South-facing side slopes

*Parent material:* Loamy lacustrine deposits over gravelly alluvium

#### **Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 30 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.3 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### **Typical profile**

A—0 to 3 inches; loam

AB—3 to 10 inches; loam

Bt1—10 to 22 inches; clay loam

Bt2—22 to 36 inches; clay loam

Bt3—36 to 43 inches; clay loam

2BC—43 to 53 inches; very gravelly loam

2C1—53 to 60 inches; very gravelly sandy loam

2C2—60 to 66 inches; extremely gravelly loamy sand

## ***Middlefork***

### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* North-facing side slopes

*Parent material:* Loamy lacustrine deposits

### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.4 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; loam

A2—4 to 12 inches; loam

BA—12 to 15 inches; loam

Bt1—15 to 32 inches; loam

Bt2—32 to 47 inches; clay loam

Bt3—47 to 61 inches; sandy clay loam

## ***Dissimilar Minor Components***

### **Ultic Haploxerolls, sandy loam, south slope, very bouldery surface**

*Composition:* 10 percent

*Geomorphic position:* Convex summits

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

### **Huston, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* Steep, south-facing side slopes

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Pinney**

*Composition:* 5 percent

*Geomorphic position:* Concave, north-facing side slopes

*Forest habitat type:* Grand fir/white spirea (CWS323)

**Major Use**

Timber production

**415—Middlefork-Pinney complex, 8 to 50 percent slopes**

**Map Unit Setting**

*General landscape:* Mountain valleys and canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,070 to 3,520 feet

*Mean annual precipitation:* 26 to 28 inches

*Mean annual air temperature:* 44 to 45 degrees F

*Frost-free period:* 75 to 90 days

**Map Unit Composition**

*Middlefork and similar soils:* 55 percent

*Pinney and similar soils:* 20 percent

*Dissimilar minor components:* 25 percent

**Major Components**

**Middlefork**

**Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* Slightly convex areas

*Parent material:* Loamy lacustrine deposits

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; loam

A2—4 to 12 inches; loam

BA—12 to 15 inches; loam

Bt1—15 to 32 inches; loam

Bt2—32 to 47 inches; clay loam  
 Bt3—47 to 61 inches; sandy clay loam

### ***Pinney***

#### **Setting**

*Landform:* Dissected fan remnants  
*Geomorphic position:* Concave, north-facing side slopes  
*Parent material:* Volcanic ash over loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 15 to 50 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 12.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Grand fir/white spirea (CWS323)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A1—2 to 5 inches; ashy silt loam  
 A2—5 to 13 inches; ashy silt loam  
 2Bt1—13 to 23 inches; loam  
 2Bt2—23 to 30 inches; clay loam  
 2Bt3—30 to 49 inches; clay loam  
 2Bt4—49 to 60 inches; loam

### ***Dissimilar Minor Components***

#### **Ultic Haploxerolls, coarse sandy loam, south slope**

*Composition:* 10 percent  
*Geomorphic position:* Steep, south-facing side slopes  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Pioneervil**

*Composition:* 5 percent  
*Geomorphic position:* Drainageways  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Ultic Haploxerolls, gravelly loam**

*Composition:* 5 percent  
*Geomorphic position:* Convex shoulders  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Vitrandic Haploxerolls, ashy very fine sandy loam**

*Composition:* 5 percent  
*Geomorphic position:* Saddles, shoulders, nose slopes  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### ***Major Uses***

Timber production, livestock grazing, homesites, recreation

## **416—Pinney-Middlefork-Zeb complex, 15 to 50 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountain valleys and canyons  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,260 to 4,820 feet  
*Mean annual precipitation:* 28 to 30 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Pinney and similar soils:* 35 percent  
*Middlefork and similar soils:* 30 percent  
*Zeb and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Pinney, Moist**

#### **Setting**

*Landform:* Dissected fan remnants, terraces  
*Geomorphic position:* North-facing side slopes  
*Parent material:* Volcanic ash over loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 15 to 50 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 10.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 4 inches; ashy silt loam  
 A2—4 to 10 inches; ashy silt loam  
 A3—10 to 21 inches; ashy silt loam  
 2Bt1—21 to 32 inches; sandy clay loam  
 2Bt2—32 to 45 inches; sandy clay loam  
 2Bt3—45 to 60 inches; gravelly clay loam

#### **Middlefork, Moist**

#### **Setting**

*Landform:* Dissected fan remnants, terraces  
*Geomorphic position:* South-facing side slopes  
*Parent material:* Loamy lacustrine deposits

**Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 5 inches; loam

A2—5 to 13 inches; loam

BA—13 to 28 inches; loam

Bt1—28 to 36 inches; sandy clay loam

Bt2—36 to 47 inches; gravelly sandy clay loam

Bt3—47 to 62 inches; clay loam

***Zeb, Gravelly Sandy Loam*****Setting**

*Landform:* Dissected fan remnants, terraces

*Geomorphic position:* Summits, shoulders, nose slopes

*Parent material:* Gravelly alluvium

**Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 8 inches; gravelly sandy loam

A2—8 to 13 inches; gravelly sandy loam

Bw—13 to 23 inches; very gravelly coarse sandy loam

C1—23 to 43 inches; extremely gravelly loamy coarse sand

C2—43 to 60 inches; extremely gravelly sand

### ***Dissimilar Minor Components***

#### **Fluventic Haploxerolls, rarely flooded, bouldery surface, moist**

*Composition:* 10 percent

*Geomorphic position:* Drainageways

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

#### **Ultic Haploxerolls, bouldery sandy loam, bouldery surface**

*Composition:* 5 percent

*Geomorphic position:* Convex knolls and nose slopes

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase  
(CDS635)

### ***Major Uses***

Timber production, livestock grazing, homesites

## ***417—Middlefork-Zeb complex, 8 to 25 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountain valleys and canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,270 to 4,840 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Middlefork and similar soils:* 60 percent

*Zeb and similar soils:* 20 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Middlefork***

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Land capability subclass (irrigated):* 6e

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase  
(CDS627)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 4 inches; loam  
 A2—4 to 12 inches; loam  
 BA—12 to 15 inches; loam  
 Bt1—15 to 32 inches; loam  
 Bt2—32 to 47 inches; clay loam  
 Bt3—47 to 61 inches; sandy clay loam

***Zeb, Fine Gravelly Sandy Loam*****Setting**

*Landform:* Fan remnants  
*Geomorphic position:* North-facing side slopes and shoulders  
*Parent material:* Gravelly alluvium

**Properties and qualities**

*Slope:* 8 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Land capability subclass (irrigated):* 6e  
*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 4 inches; fine gravelly sandy loam  
 A2—4 to 11 inches; fine gravelly sandy loam  
 Bw—11 to 21 inches; fine gravelly sandy loam  
 C1—21 to 43 inches; very gravelly sandy loam  
 C2—43 to 60 inches; very gravelly loamy sand

***Dissimilar Minor Components*****Huston, very stony surface**

*Composition:* 10 percent  
*Geomorphic position:* South-facing side slopes and shoulders  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Charters, fine gravelly sandy loam**

*Composition:* 5 percent  
*Geomorphic position:* North-facing side slopes  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Pinney, moist**

*Composition:* 5 percent  
*Geomorphic position:* Concave areas  
*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

### **Major Uses**

Livestock grazing, timber production, irrigated hay and pasture, homesites

## **418—Middlefork-Zeb complex, 25 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountain valleys and canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,510 to 4,530 feet

*Mean annual precipitation:* 24 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Middlefork and similar soils:* 55 percent

*Zeb and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

### **Major Components**

#### **Middlefork**

#### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* Smooth side slopes and head slopes

*Parent material:* Loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; loam

A2—4 to 12 inches; loam

BA—12 to 15 inches; loam

Bt1—15 to 32 inches; loam

Bt2—32 to 47 inches; clay loam

Bt3—47 to 61 inches; sandy clay loam

#### **Zeb, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* Convex side slopes and nose slopes

*Parent material:* Gravelly alluvium

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 11 inches; fine gravelly sandy loam

Bw—11 to 21 inches; fine gravelly sandy loam

C1—21 to 43 inches; very gravelly sandy loam

C2—43 to 60 inches; very gravelly loamy sand

***Dissimilar Minor Components*****Pinney, moist**

*Composition:* 10 percent

*Geomorphic position:* Concave, north-facing side slopes

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

**Huston, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* Convex, south-facing side slopes

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Fluventic Haploxerolls, rarely flooded, bouldery surface, dry**

*Composition:* 5 percent

*Geomorphic position:* Drainageways

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

***Major Use***

Timber production

***419—Charters-Zeb complex, 15 to 50 percent slopes******Map Unit Setting***

*General landscape:* Mountain valleys and canyons

*Major land resource area (MLRA):* 43B

*Elevation:* 3,040 to 5,660 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Charters and similar soils:* 50 percent

*Zeb and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Charters, Fine Gravelly Sandy Loam, Dry**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* North-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 11 inches; fine gravelly sandy loam

A2—11 to 16 inches; fine gravelly sandy loam

Bw1—16 to 33 inches; fine gravelly sandy loam

Bw2—33 to 41 inches; fine gravelly sandy loam

Bw3—41 to 60 inches; fine gravelly sandy loam

#### **Zeb, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* South-facing backslopes and head slopes

*Parent material:* Gravelly alluvium

#### **Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 4 inches; fine gravelly sandy loam  
 A2—4 to 11 inches; fine gravelly sandy loam  
 Bw—11 to 21 inches; fine gravelly sandy loam  
 C1—21 to 43 inches; very gravelly sandy loam  
 C2—43 to 60 inches; very gravelly loamy sand

***Dissimilar Minor Components*****Pinney**

*Composition:* 10 percent

*Geomorphic position:* Concave, north-facing backslopes

*Forest habitat type:* Grand fir/white spirea (CWS323)

**Fluventic Haploxerolls, rarely flooded, bouldery surface, dry**

*Composition:* 5 percent

*Geomorphic position:* Drainageways

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

***Major Use***

Timber production

***420—Pioneervil-Grimescreek complex, 0 to 3 percent slopes******Map Unit Setting***

*General landscape:* Mountain valleys and canyons, intermontane basins

*Major land resource area (MLRA):* 43B

*Elevation:* 3,390 to 4,640 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Pioneervil and similar soils:* 40 percent

*Grimescreek and similar soils:* 35 percent

*Dissimilar minor components:* 25 percent

***Major Components******Pioneervil*****Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Upper areas

*Parent material:* Coarse-loamy alluvium

**Properties and qualities**

*Slope:* 0 to 3 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* About 40 to 60 inches (see Water Features table)

*Available water capacity (entire profile):* About 7.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4c

*Land capability subclass (irrigated):* 4c

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; sandy loam

A2—6 to 12 inches; fine gravelly sandy loam

Bw1—12 to 19 inches; sandy loam

Bw2—19 to 25 inches; fine gravelly sandy loam

BC—25 to 31 inches; very fine sandy loam

Ab—31 to 35 inches; sandy loam

C—35 to 75 inches; stratified fine sandy loam to fine gravelly coarse sand

### ***Grimescreek***

#### **Setting**

*Landform:* Flood-plain steps

*Geomorphic position:* Intermediate areas

*Parent material:* Coarse-loamy alluvium

#### **Properties and qualities**

*Slope:* 0 to 2 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* About 20 to 30 inches (see Water Features table)

*Available water capacity (entire profile):* About 7.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4c

*Land capability subclass (irrigated):* 4c

*Ecological site:* SEMIWET MEADOW (R043AY008ID)

#### **Typical profile**

A1—0 to 6 inches; sandy loam

A2—6 to 11 inches; sandy loam

AC—11 to 21 inches; sandy loam

Ab1—21 to 23 inches; coarse sandy loam

Ab2—23 to 36 inches; coarse sandy loam

ACb—36 to 58 inches; fine gravelly sandy loam

C—58 to 72 inches; loamy sand

### ***Dissimilar Minor Components***

#### **Aeric Endoaquents, very poorly drained**

*Composition:* 10 percent

*Geomorphic position:* Lower areas

*Ecological site:* WET MEADOW (R043AY007ID)

**Typic Fluvaquents, very poorly drained***Composition:* 10 percent*Geomorphic position:* Lower areas adjacent to streams*Ecological site:* WET MEADOW (R043AY007ID)**Fluvaquentic Haploxerolls, somewhat poorly drained***Composition:* 5 percent*Geomorphic position:* Intermediate areas*Ecological site:* SEMIWET MEADOW (R043AY008ID)**Major Uses**

Irrigated hay and pasture, wildlife habitat, recreation

**421—Dumps-Oxyaquic Xerorthents complex,  
undulating****Map Unit Setting***General landscape:* Intermontane basins, mountain valleys and canyons*Major land resource area (MLRA):* 43B*Elevation:* 3,620 to 5,170 feet*Mean annual precipitation:* 22 to 28 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 60 to 90 days**Map Unit Composition***Dumps:* 50 percent*Oxyaquic Xerorthents and similar soils:* 25 percent*Dissimilar minor components:* 25 percent**Major Components****Dumps, Dredge Tailings****Setting***Landform:* Drainageways*Geomorphic position:* Areas of hummocky spoil*Parent material:* Igneous rock**Properties and qualities***Slope:* 0 to 35 percent*Percentage of surface area covered by stones and boulders:* 0 to 25 percent*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Somewhat poorly drained*Permeability class (slowest):* Very rapid to moderately rapid*Flooding frequency:* Occasional (see Water Features table)*Seasonal high water table (minimum depth):* About 20 to 60 inches (see Water Features table)*Available water capacity (entire profile):* Unspecified**Interpretive groups***Land capability subclass (nonirrigated):* 8**Typical profile**

0 to 60 inches; fragmental material (fig. 6)



Figure 6.—Tailings from historic dredge mining in an area of Dumps-Oxyaquic Xerorthents complex, undulating.

### ***Oxyaquic Xerorthents, Very Stony Surface***

#### **Setting**

*Landform:* Drainageways

*Geomorphic position:* Smooth and slightly concave areas

*Parent material:* Sandy and gravelly alluvium

#### **Properties and qualities**

*Slope:* 0 to 3 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* Rare (see Water Features table)

*Seasonal high water table (minimum depth):* About 20 to 60 inches (see Water Features table)

*Available water capacity (entire profile):* About 0.8 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecoclass habitat type:* Riparian mixed conifer subseries (CDHX)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 11 inches; extremely cobbly loamy coarse sand  
 C1—11 to 22 inches; extremely cobbly loamy sand  
 C2—22 to 60 inches; fragmental material

***Dissimilar Minor Components*****Fluvaquentic Endoaquolls**

*Composition:* 10 percent  
*Geomorphic position:* Depressions, sloughs  
*Ecoclass habitat type:* Moist meadow series (MM)

**Oxyaquic Xeropsamments**

*Composition:* 10 percent  
*Geomorphic position:* Lower stream terraces  
*Ecoclass habitat type:* Riparian cottonwood/willow subseries (HCSX)

**Typic Xerofluvents**

*Composition:* 5 percent  
*Geomorphic position:* Higher stream terraces  
*Ecoclass habitat type:* Riparian mixed conifer subseries (CDHX)

***Major Uses***

Wildlife habitat, recreation

***422—Lithic Xerorthents-Dumps-Dystric Xeropsamments complex, gently rolling******Map Unit Setting***

*General landscape:* Intermontane basins, mountain valleys and canyons  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,790 to 4,990 feet  
*Mean annual precipitation:* 22 to 28 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Lithic Xerorthents and similar soils:* 30 percent  
*Dumps:* 25 percent  
*Dystric Xeropsamments and similar soils:* 20 percent  
*Dissimilar minor components:* 25 percent

***Major Components******Lithic Xerorthents, Very Stony Surface*****Setting**

*Landform:* Benches  
*Geomorphic position:* Smooth and slightly convex areas  
*Parent material:* Residuum derived from granodiorite

**Properties and qualities**

*Slope:* 2 to 8 percent  
*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 5 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 0.7 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7s  
*Ecoclass habitat type:* Upland shrub/bunchgrass subseries (SMGX)

**Typical profile**

O<sub>i</sub>—0 to 1 inch; slightly decomposed plant material  
 A—1 to 3 inches; extremely cobbly loamy coarse sand  
 C—3 to 11 inches; extremely cobbly loamy coarse sand  
 2R—11 to 24 inches; unweathered bedrock

***Dumps, Placer Tailings***

**Setting**

*Landform:* Benches  
*Geomorphic position:* Hummocky spoils  
*Parent material:* Igneous rock

**Properties and qualities**

*Slope:* 2 to 15 percent  
*Percentage of surface area covered by stones and boulders:* 3 to 50 percent  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 60 inches to bedrock (paralithic), 22 to 60 inches to bedrock (lithic)  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Very rapid or rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* Unspecified

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8

**Typical profile**

0 to 24 inches; fragmental material  
 24 to 50 inches; weathered bedrock  
 50 to 60 inches; unweathered bedrock

***Dystric Xeropsamments, Very Stony Surface***

**Setting**

*Landform:* Benches  
*Geomorphic position:* Smooth and slightly convex areas  
*Parent material:* Residuum derived from granodiorite

**Properties and qualities**

*Slope:* 2 to 8 percent  
*Percentage of surface area covered by stones and boulders:* Less than 0.1 to 3.0 percent  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 60 inches to bedrock (paralithic), 22 to 60 inches to bedrock (lithic)

*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s  
*Ecoclass habitat type:* Upland mixed conifer subseries (CDSX)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 4 inches; loamy sand  
 C1—4 to 15 inches; loamy coarse sand  
 C2—15 to 24 inches; coarse sand  
 Cr—24 to 50 inches; weathered bedrock  
 R—50 to 60 inches; unweathered bedrock

#### ***Dissimilar Minor Components***

#### **Typic Xerofluvents**

*Composition:* 10 percent  
*Geomorphic position:* Alluvial fans  
*Ecoclass habitat type:* Upland mixed conifer subseries (CDSX)

#### **Gullied land**

*Composition:* 10 percent  
*Geomorphic position:* Dissected fluvies

#### **Aeric Epiaquents**

*Composition:* 5 percent  
*Geomorphic position:* Shallow depressions  
*Ecoclass habitat type:* Moist meadow series (MM)

#### ***Major Uses***

Wildlife habitat, livestock grazing, homesites, recreation

### ***423—Dystric Xeropsamments-Ultic Haploxeralfs-Lithic Xerorthents complex, hilly***

#### ***Map Unit Setting***

*General landscape:* Intermontane basins, mountain valleys and canyons  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,690 to 5,200 feet  
*Mean annual precipitation:* 22 to 28 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 60 to 90 days

#### ***Map Unit Composition***

*Dystric Xeropsamments and similar soils:* 35 percent  
*Ultic Haploxeralfs and similar soils:* 35 percent  
*Lithic Xerorthents and similar soils:* 15 percent  
*Dissimilar minor components:* 15 percent

## **Major Components**

### ***Dystric Xeropsamments, Very Stony Surface***

#### **Setting**

*Landform:* Benches

*Geomorphic position:* Mined areas

*Parent material:* Residuum derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* Less than 0.1 to 3.0 percent

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 60 inches to bedrock (paralithic), 22 to 60 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecoclass habitat type:* Upland mixed conifer subseries (CDSX)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; loamy sand

C1—4 to 15 inches; loamy coarse sand

C2—15 to 24 inches; coarse sand

Cr—24 to 50 inches; weathered bedrock

R—50 to 60 inches; unweathered bedrock

### ***Ultic Haploxeralfs***

#### **Setting**

*Landform:* Terraces

*Geomorphic position:* Eroded treads

*Parent material:* Loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 30 to 80 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecoclass habitat type:* Upland mixed conifer subseries (CDSX)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; gravelly loam

Bt1—5 to 11 inches; gravelly loam

Bt2—11 to 15 inches; gravelly sandy clay loam  
 Bt3—15 to 25 inches; fine gravelly sandy clay loam  
 CBt—25 to 34 inches; fine gravelly sandy clay loam  
 C—34 to 60 inches; stratified loam to fine gravelly sandy clay loam

### ***Lithic Xerorthents***

#### **Setting**

*Landform:* Benches  
*Geomorphic position:* Mined areas  
*Parent material:* Residuum derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 15 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 5 to 20 inches to bedrock (lithic)  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s  
*Ecoclass habitat type:* Upland shrub/bunchgrass subseries (SMGX)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 5 inches; gravelly sandy loam  
 AC—5 to 10 inches; very gravelly loamy coarse sand  
 C—10 to 18 inches; extremely gravelly loamy coarse sand  
 2R—18 to 30 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Gullied land**

*Composition:* 10 percent  
*Geomorphic position:* Mining escarpments (fig. 7), dissected fluves

#### **Ultic Argixerolls**

*Composition:* 5 percent  
*Geomorphic position:* Non-eroded areas of treads  
*Ecoclass habitat type:* Upland mixed conifer subseries (CDSX)

### ***Major Uses***

Wildlife habitat, livestock grazing, recreation

## ***424—Middlefork-Charters complex, 8 to 25 percent slopes***

### ***Map Unit Setting***

*General landscape:* Intermontane basins, mountain valleys and canyons  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,520 to 4,980 feet  
*Mean annual precipitation:* 24 to 28 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 60 to 90 days



Figure 7.—Gullied areas in an area of Dystric Xeropsamments-Ultic Haploxeralfs-Lithic Xerorthents complex, hilly, are a result of historic hydraulic placer mining.

### ***Map Unit Composition***

*Middlefork and similar soils: 50 percent*

*Charters and similar soils: 35 percent*

*Dissimilar minor components: 15 percent*

### ***Major Components***

#### ***Middlefork***

#### **Setting**

*Landform: Terraces*

*Geomorphic position: Smooth and slightly concave areas*

*Parent material: Loamy lacustrine deposits*

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Land capability subclass (irrigated):* 6e

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; loam

A2—4 to 12 inches; loam

BA—12 to 15 inches; loam

Bt1—15 to 32 inches; loam

Bt2—32 to 47 inches; clay loam

Bt3—47 to 61 inches; sandy clay loam

***Charters, Coarse Sandy Loam*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Land capability subclass (irrigated):* 6e

*Forest habitat type:* Douglas-fir/elk sedge-ponderosa pine phase (CDG142)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; coarse sandy loam

BA—4 to 8 inches; coarse sandy loam

Bw1—8 to 15 inches; fine gravelly coarse sandy loam

Bw2—15 to 32 inches; fine gravelly coarse sandy loam

Bw3—32 to 48 inches; fine gravelly coarse sandy loam

Bw4—48 to 60 inches; gravelly coarse sandy loam

### ***Dissimilar Minor Components***

#### **Zimmer, warm**

*Composition:* 10 percent

*Geomorphic position:* Spurs, shoulders

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Ultic Argixerolls, cool**

*Composition:* 5 percent

*Geomorphic position:* Swales, north-facing footslopes

*Forest habitat type:* Douglas-fir/dwarf bilberry (huckleberry) (CDS815)

### ***Major Uses***

Timber production, irrigated hay and pasture, livestock grazing, homesites, recreation

## ***425—Middlefork-Brassey complex, 3 to 15 percent slopes***

### ***Map Unit Setting***

*General landscape:* Intermontane basins

*Major land resource area (MLRA):* 43B

*Elevation:* 4,040 to 5,090 feet

*Mean annual precipitation:* 24 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Middlefork and similar soils:* 55 percent

*Brassey and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Middlefork***

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 3 to 8 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Land capability subclass (irrigated):* 3e

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; loam

A2—4 to 12 inches; loam  
 BA—12 to 15 inches; loam  
 Bt1—15 to 32 inches; loam  
 Bt2—32 to 47 inches; clay loam  
 Bt3—47 to 61 inches; sandy clay loam

### ***Brassey***

#### **Setting**

*Landform:* Fan remnants  
*Geomorphic position:* Slightly concave areas, shoulders  
*Parent material:* Gravelly alluvium

#### **Properties and qualities**

*Slope:* 3 to 15 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 40 to 60 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 4.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e  
*Land capability subclass (irrigated):* 3e  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 4 inches; gravelly loam  
 A2—4 to 11 inches; gravelly loam  
 Bt1—11 to 21 inches; very gravelly loam  
 Bt2—21 to 37 inches; very gravelly sandy clay loam  
 Bt3—37 to 49 inches; extremely gravelly sandy loam  
 C—49 to 60 inches; extremely gravelly coarse sand

### ***Dissimilar Minor Components***

#### **Ultic Haploxeralfs, eroded**

*Composition:* 10 percent  
*Geomorphic position:* Eroded areas adjacent to mining areas  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Fluvaquentic Haploxerolls, somewhat poorly drained**

*Composition:* 5 percent  
*Geomorphic position:* Swales, fluves  
*Ecological site:* SEMIWET MEADOW (R043AY008ID)

#### **Ultic Argixerolls, moderately steep**

*Composition:* 5 percent  
*Geomorphic position:* Toeslopes of adjacent hills  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### ***Major Uses***

Timber production, livestock grazing, homesites, recreation

## **426—Middlefork loam, 8 to 25 percent slopes**

### **Map Unit Setting**

*General landscape:* Intermontane basins  
*Major land resource area (MLRA):* 43B  
*Elevation:* 4,170 to 5,270 feet  
*Mean annual precipitation:* 24 to 28 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Middlefork and similar soils:* 85 percent  
*Dissimilar minor components:* 15 percent

### **Major Component**

#### **Middlefork, Moist**

#### **Setting**

*Landform:* Fan remnants  
*Geomorphic position:* Smooth and slightly convex areas  
*Parent material:* Loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 8 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 10.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A1—2 to 5 inches; loam  
 A2—5 to 13 inches; loam  
 BA—13 to 28 inches; loam  
 Bt1—28 to 36 inches; sandy clay loam  
 Bt2—36 to 47 inches; gravelly sandy clay loam  
 Bt3—47 to 62 inches; clay loam

### **Dissimilar Minor Components**

#### **Pinney, moist**

*Composition:* 5 percent  
*Geomorphic position:* Swales  
*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

**Vitrandic Dystrocrepts, gravelly ashy sandy loam, very deep***Composition:* 5 percent*Geomorphic position:* Steep, north-facing side slopes*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)**Ultic Argixerolls, steep, stony surface***Composition:* 5 percent*Geomorphic position:* Steep, south-facing side slopes*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Major Uses**

Timber production, livestock grazing

**427—Middlefork loam, 25 to 50 percent slopes****Map Unit Setting***General landscape:* Intermontane basins*Major land resource area (MLRA):* 43B*Elevation:* 4,650 to 5,180 feet*Mean annual precipitation:* 26 to 28 inches*Mean annual air temperature:* 42 to 44 degrees F*Frost-free period:* 60 to 75 days**Map Unit Composition***Middlefork and similar soils:* 85 percent*Dissimilar minor components:* 15 percent**Major Component****Middlefork, Moist****Setting***Landform:* Dissected fan remnants*Geomorphic position:* Smooth and slightly convex areas*Parent material:* Loamy lacustrine deposits**Properties and qualities***Slope:* 25 to 50 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Well drained*Permeability class (slowest):* Moderately slow*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 10.5 inches**Interpretive groups***Land capability subclass (nonirrigated):* 7e*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 5 inches; loam  
 A2—5 to 13 inches; loam  
 BA—13 to 28 inches; loam  
 Bt1—28 to 36 inches; sandy clay loam  
 Bt2—36 to 47 inches; gravelly sandy clay loam  
 Bt3—47 to 62 inches; clay loam

### ***Dissimilar Minor Components***

#### **Ultic Argixerolls, moderately deep**

*Composition:* 10 percent

*Geomorphic position:* Convex areas; steep, upper side slopes

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Ultic Argixerolls, gravelly sandy loam, stony surface**

*Composition:* 5 percent

*Geomorphic position:* Steep, lower side slopes

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### ***Major Use***

Timber production

## ***428—Zeb-Republic complex, 25 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Intermontane basins

*Major land resource area (MLRA):* 43B

*Elevation:* 4,480 to 5,070 feet

*Mean annual precipitation:* 26 to 28 inches

*Mean annual air temperature:* 42 to 44 degrees F

*Frost-free period:* 60 to 75 days

### ***Map Unit Composition***

*Zeb and similar soils:* 45 percent

*Republic and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Zeb, Gravelly Sandy Loam***

#### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* South-facing side slopes and nose slopes

*Parent material:* Gravelly alluvium

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 8 inches; gravelly sandy loam

A2—8 to 13 inches; gravelly sandy loam

Bw—13 to 23 inches; very gravelly coarse sandy loam

C1—23 to 43 inches; extremely gravelly loamy coarse sand

C2—43 to 60 inches; extremely gravelly sand

## ***Republic***

### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* North-facing side slopes and head slopes

*Parent material:* Volcanic ash and coarse-loamy lacustrine deposits

### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 7 inches; ashy sandy loam

A2—7 to 14 inches; ashy sandy loam

Bw1—14 to 23 inches; sandy loam

Bw2—23 to 42 inches; sandy loam

C—42 to 60 inches; sandy loam

## ***Dissimilar Minor Components***

### **Typic Haploxerepts, eroded**

*Composition:* 10 percent

*Geomorphic position:* Summits, shoulders

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### **Charters, sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Concave, south-facing side slopes

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Middlefork, moist***Composition:* 5 percent*Geomorphic position:* Toeslopes*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Major Uses**

Timber production, wildlife habitat

**429—Huston gravelly coarse sandy loam, 8 to 25 percent slopes****Map Unit Setting***General landscape:* Mountain valleys and canyons*Major land resource area (MLRA):* 43B*Elevation:* 4,010 to 4,240 feet*Mean annual precipitation:* 20 to 26 inches*Mean annual air temperature:* 45 to 46 degrees F*Frost-free period:* 90 to 100 days**Map Unit Composition***Huston and similar soils:* 85 percent*Dissimilar minor components:* 15 percent**Major Component****Huston, Very Stony Surface****Setting***Landform:* Fan remnants*Geomorphic position:* Convex areas*Parent material:* Gravelly alluvium**Properties and qualities***Slope:* 8 to 25 percent*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Somewhat excessively drained*Permeability class (slowest):* Moderately rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 4.1 inches**Interpretive groups***Land capability subclass (nonirrigated):* 6s*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; gravelly coarse sandy loam

A2—6 to 13 inches; gravelly coarse sandy loam

BA—13 to 26 inches; very gravelly coarse sandy loam

Bw—26 to 46 inches; very gravelly coarse sandy loam

C—46 to 60 inches; stratified very gravelly coarse sandy loam to very gravelly fine sandy loam

### ***Dissimilar Minor Components***

#### **Middlefork**

*Composition:* 5 percent

*Geomorphic position:* Smooth and slightly concave areas

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

#### **Zeb, fine gravelly sandy loam**

*Composition:* 5 percent

*Geomorphic position:* North-facing side slopes

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

#### **Typic Xerorthents, eroded, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* Convex nose slopes

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

### ***Major Use***

Livestock grazing

## ***503—Cartwright loam, 3 to 8 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,060 to 4,110 feet

*Mean annual precipitation:* 14 to 17 inches

*Mean annual air temperature:* 48 to 50 degrees F

*Frost-free period:* 120 to 140 days

### ***Map Unit Composition***

*Cartwright and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### ***Major Component***

#### ***Cartwright, Dry***

#### **Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 3 to 8 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Typical profile**

A—0 to 5 inches; loam

BA—5 to 20 inches; fine gravelly loam

Bt1—20 to 24 inches; fine gravelly sandy clay loam

Bt2—24 to 60 inches; fine gravelly sandy clay loam

***Dissimilar Minor Components*****Pachic Ultic Haploxerolls, strongly sloping**

*Composition:* 10 percent

*Geomorphic position:* Upper slightly convex areas

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

**Pachic Ultic Haploxerolls, gravelly coarse sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Convex areas

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

***Major Use***

Livestock grazing

**504—Cartwright loam, 8 to 25 percent slopes*****Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,130 to 5,610 feet

*Mean annual precipitation:* 14 to 20 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 90 to 140 days

***Map Unit Composition***

*Cartwright and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Major Component******Cartwright, Dry*****Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Loamy alluvium

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Typical profile**

A—0 to 5 inches; loam

BA—5 to 20 inches; fine gravelly loam

Bt1—20 to 24 inches; fine gravelly sandy clay loam

Bt2—24 to 60 inches; fine gravelly sandy clay loam

***Dissimilar Minor Components*****Pachic Ultic Haploxerolls, fine gravelly coarse sandy loam***Composition:* 10 percent*Geomorphic position:* Upper slightly convex areas*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)**Pachic Ultic Haploxerolls, gravelly coarse sandy loam***Composition:* 5 percent*Geomorphic position:* Convex areas*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)***Major Use***

Livestock grazing

***505—Brownlee loam, 4 to 15 percent slopes******Map Unit Setting****General landscape:* Foothills*Major land resource area (MLRA):* 10*Elevation:* 3,670 to 3,880 feet*Mean annual precipitation:* 16 to 17 inches*Mean annual air temperature:* 48 to 49 degrees F*Frost-free period:* 120 to 130 days***Map Unit Composition****Brownlee and similar soils:* 85 percent*Dissimilar minor components:* 15 percent***Major Component******Brownlee*****Setting***Landform:* Hillslopes*Geomorphic position:* Backslopes, summits*Parent material:* Colluvium derived from granodiorite**Properties and qualities***Slope:* 4 to 15 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* 40 to 50 inches to bedrock (paralithic), 43 to 60 inches to bedrock (lithic)*Drainage class:* Well drained*Permeability class (slowest):* Moderately slow*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 5.8 inches**Interpretive groups***Land capability subclass (nonirrigated):* 3e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Typical profile**

Ap—0 to 4 inches; loam

A—4 to 9 inches; loam

Bt1—9 to 16 inches; loam

Bt2—16 to 21 inches; sandy clay loam

Bt3—21 to 27 inches; sandy clay loam

BC—27 to 45 inches; fine gravelly sandy loam

Cr—45 to 50 inches; weathered bedrock

R—50 to 60 inches; unweathered bedrock

***Dissimilar Minor Components***

**Cartwright, dry**

*Composition:* 10 percent

*Geomorphic position:* Toeslopes, swales

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Aradaran**

*Composition:* 5 percent

*Geomorphic position:* Footslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

***Major Use***

Livestock grazing

***506—Brownlee-Robbscreek-Whisk complex, 8 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,210 to 5,110 feet

*Mean annual precipitation:* 15 to 20 inches

*Mean annual air temperature:* 45 to 49 degrees F

*Frost-free period:* 90 to 130 days

***Map Unit Composition***

*Brownlee and similar soils:* 45 percent

*Robbscreek and similar soils:* 20 percent

*Whisk and similar soils:* 15 percent

*Dissimilar minor components:* 20 percent

***Major Components***

***Brownlee***

**Setting**

*Landform:* Hillslopes

*Geomorphic position:* Smooth and slightly concave backslopes and summits

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 50 inches to bedrock (paralithic), 43 to 60 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.8 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

### **Typical profile**

Ap—0 to 4 inches; loam

A—4 to 9 inches; loam

Bt1—9 to 16 inches; loam

Bt2—16 to 21 inches; sandy clay loam

Bt3—21 to 27 inches; sandy clay loam

BC—27 to 45 inches; fine gravelly sandy loam

Cr—45 to 50 inches; weathered bedrock

R—50 to 60 inches; unweathered bedrock

### ***Robbscreek***

### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex backslopes, shoulders, and summits

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.3 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

### **Typical profile**

A1—0 to 2 inches; fine gravelly coarse sandy loam

A2—2 to 6 inches; fine gravelly coarse sandy loam

BA—6 to 13 inches; fine gravelly coarse sandy loam

Bt1—13 to 19 inches; fine gravelly sandy clay loam

Bt2—19 to 26 inches; fine gravelly sandy clay loam

Bt3—26 to 30 inches; fine gravelly sandy clay loam

R—30 to 40 inches; unweathered bedrock

### ***Whisk***

### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex shoulders and summits

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

**Typical profile**

A—0 to 3 inches; fine gravelly sandy loam

Bw1—3 to 11 inches; fine gravelly sandy loam

Bw2—11 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

***Dissimilar Minor Components*****Aradaran**

*Composition:* 5 percent

*Geomorphic position:* Footslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Roney, dry**

*Composition:* 5 percent

*Geomorphic position:* Convex, south-facing backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6  
(R010XY012ID)

**Staircase, dry**

*Composition:* 5 percent

*Geomorphic position:* Fluves

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Summits, shoulders

***Major Use***

Livestock grazing

***507—Shoebend-Dobson-Jerusalem complex, 25 to 65 percent slopes******Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,600 to 4,000 feet

*Mean annual precipitation:* 12 to 15 inches

*Mean annual air temperature:* 50 to 52 degrees F

*Frost-free period:* 140 to 155 days

### **Map Unit Composition**

*Shoebend and similar soils:* 35 percent

*Dobson and similar soils:* 30 percent

*Jerusalem and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Shoebend**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic), 30 to 60 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Typical profile**

A—0 to 7 inches; loam

AB—7 to 14 inches; loam

Bt1—14 to 20 inches; clay loam

Bt2—20 to 28 inches; clay loam

Cr—28 to 34 inches; weathered bedrock

R—34 to 44 inches; unweathered bedrock

#### **Dobson**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6  
(R011XY018ID)

#### **Typical profile**

A—0 to 2 inches; fine gravelly coarse sandy loam

Bw—2 to 12 inches; fine gravelly coarse sandy loam

BC—12 to 14 inches; fine gravelly loamy coarse sand

R—14 to 24 inches; unweathered bedrock

### ***Jerusalem***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave, south-facing backslopes and footslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Typical profile**

A—0 to 3 inches; loam

AB—3 to 12 inches; loam

Bt1—12 to 23 inches; sandy clay loam

Bt2—23 to 38 inches; sandy clay loam

Bt3—38 to 60 inches; fine gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Aradaran**

*Composition:* 10 percent

*Geomorphic position:* Footslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Porter**

*Composition:* 5 percent

*Geomorphic position:* Drainageways

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LEC14 (R011XY015ID)

### ***Major Use***

Livestock grazing

## **509—Arrowrock-Borid-Rock outcrop complex, 35 to 90 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills, canyonland  
*Major land resource area (MLRA):* 10  
*Elevation:* 2,520 to 4,830 feet  
*Mean annual precipitation:* 12 to 16 inches  
*Mean annual air temperature:* 48 to 52 degrees F  
*Frost-free period:* 120 to 155 days

### **Map Unit Composition**

*Arrowrock and similar soils:* 35 percent  
*Borid and similar soils:* 25 percent  
*Rock outcrop:* 25 percent  
*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Arrowrock**

#### **Setting**

*Landform:* Hillslopes, canyon walls  
*Geomorphic position:* South-facing backslopes  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 10 to 18 inches to bedrock (paralithic), 15 to 20 inches to bedrock (lithic)  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 0.7 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SAND 8-12 ARTRT/ACHY (R011XY011ID)

#### **Typical profile**

A1—0 to 2 inches; fine gravelly loamy sand  
A2—2 to 7 inches; fine gravelly loamy sand  
C—7 to 12 inches; fine gravelly loamy sand  
Cr—12 to 15 inches; weathered bedrock  
R—15 to 25 inches; unweathered bedrock

#### **Borid**

#### **Setting**

*Landform:* Hillslopes, canyon walls  
*Geomorphic position:* South-facing backslopes  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)

**Typical profile**

A—0 to 3 inches; fine gravelly sandy loam

AB—3 to 7 inches; very gravelly sandy loam

Bw—7 to 15 inches; very gravelly sandy loam

R—15 to 25 inches; unweathered bedrock

**Rock Outcrop**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Shoulders, backslopes

*Land capability subclass (nonirrigated):* 8

**Dissimilar Minor Components****Painter**

*Composition:* 10 percent

*Geomorphic position:* Concave backslopes

*Ecological site:* SAND 8-12 ARTRT/ACHY (R011XY011ID)

**Cumulic Ultic Haploxerolls, very bouldery surface**

*Composition:* 5 percent

*Geomorphic position:* Foothills, toeslopes

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

**Major Uses**

Livestock grazing, wildlife habitat

**511—Olaton-Roney complex, moist, 35 to 90 percent slopes****Map Unit Setting**

*General landscape:* Foothills, canyonland

*Major land resource area (MLRA):* 10

*Elevation:* 2,720 to 5,700 feet

*Mean annual precipitation:* 14 to 22 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

**Map Unit Composition**

*Olaton and similar soils:* 50 percent

*Roney and similar soils:* 25 percent

*Dissimilar minor components:* 25 percent

## **Major Components**

### **Olaton, North Slope, Moist**

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Slightly concave, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE BRUSH 16-20 PREM/ELGLG (R010XY027ID)

#### **Typical profile**

A—0 to 7 inches; coarse sandy loam

AB—7 to 29 inches; coarse sandy loam

Bw—29 to 42 inches; coarse sandy loam

C—42 to 60 inches; fine gravelly coarse sandy loam

### **Roney, Moist**

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Slightly convex, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)

#### **Typical profile**

A1—0 to 5 inches; fine gravelly coarse sandy loam

A2—5 to 17 inches; fine gravelly coarse sandy loam

Bw—17 to 32 inches; fine gravelly coarse sandy loam

C—32 to 38 inches; fine gravelly coarse sandy loam

R—38 to 48 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Whisk**

*Composition:* 10 percent

*Geomorphic position:* Shoulders, convex backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Pachic Ultic Haploxerolls, gravelly coarse sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Lower, concave backslopes and footslopes

*Ecological site:* NORTH SLOPE BRUSH 16-20 PREM/ELGLG (R010XY027ID)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, backslopes

### ***Major Uses***

Livestock grazing, wildlife habitat

## ***513—Shimo-Cartwright-Robbscreek complex, 35 to 90 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills, canyonland

*Major land resource area (MLRA):* 10

*Elevation:* 2,520 to 5,040 feet

*Mean annual precipitation:* 14 to 22 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### ***Map Unit Composition***

*Shimo and similar soils:* 30 percent

*Cartwright and similar soils:* 25 percent

*Robbscreek and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Shimo, Fine Gravelly Loamy Sand, North Slope***

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)*

**Typical profile**

A1—0 to 7 inches; fine gravelly loamy sand

A2—7 to 14 inches; fine gravelly loamy sand

C—14 to 30 inches; very cobbly loamy sand

R—30 to 40 inches; unweathered bedrock

***Cartwright*****Setting**

*Landform: Hillslopes, canyon walls*

*Geomorphic position: Concave, north-facing backslopes*

*Parent material: Loamy alluvium*

**Properties and qualities**

*Slope: 35 to 65 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Moderate*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Well drained*

*Permeability class (slowest): Moderate*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 9.6 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)*

**Typical profile**

A1—0 to 2 inches; loam

A2—2 to 8 inches; loam

A3—8 to 21 inches; loam

BA—21 to 33 inches; loam

Bt1—33 to 48 inches; loam

Bt2—48 to 60 inches; loam

***Robbscreek, Moist*****Setting**

*Landform: Hillslopes, canyon walls*

*Geomorphic position: Slightly convex, north-facing backslopes*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 65 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Moderate*

*Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)*

*Drainage class: Well drained*

*Permeability class (slowest): Moderate*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 3.5 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID  
(R010XY014ID)

**Typical profile**

A—0 to 10 inches; fine gravelly coarse sandy loam

Bt1—10 to 22 inches; fine gravelly sandy clay loam

Bt2—22 to 30 inches; fine gravelly sandy clay loam

R—30 to 40 inches; unweathered bedrock

***Dissimilar Minor Components*****Kisky, fine gravelly loamy sand**

*Composition:* 10 percent

*Geomorphic position:* Shoulders, summits

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID  
(R010XY014ID)

**Schiller, north slope**

*Composition:* 5 percent

*Geomorphic position:* Lower, concave backslopes and footslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Staircase, dry**

*Composition:* 5 percent

*Geomorphic position:* Drainageways

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LEC14 (R011XY015ID)

***Major Uses***

Livestock grazing, wildlife habitat

***516—Shimo-Olaton-Schiller complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape:* Foothills, canyonland

*Major land resource area (MLRA):* 10

*Elevation:* 2,890 to 5,990 feet

*Mean annual precipitation:* 13 to 20 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

***Map Unit Composition***

*Shimo and similar soils:* 35 percent

*Olaton and similar soils:* 30 percent

*Schiller and similar soils:* 25 percent

*Dissimilar minor components:* 10 percent

***Major Components******Shimo, Extremely Stony Surface*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* About 9 percent

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.7 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6  
(R010XY012ID)

**Typical profile**

A1—0 to 4 inches; very stony loamy sand

A2—4 to 12 inches; cobbly loamy sand

C1—12 to 20 inches; very cobbly loamy sand

C2—20 to 24 inches; very cobbly loamy sand

R—24 to 34 inches; unweathered bedrock

***Olaton, South Slope*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Concave, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.8 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6  
(R010XY028ID)

**Typical profile**

A—0 to 9 inches; fine gravelly coarse sandy loam

Bw1—9 to 25 inches; fine gravelly coarse sandy loam

Bw2—25 to 40 inches; fine gravelly coarse sandy loam

Bw3—40 to 60 inches; fine gravelly coarse sandy loam

***Schiller, South Slope*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Concave, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6  
(R010XY028ID)

**Typical profile**

A1—0 to 6 inches; gravelly coarse sandy loam

A2—6 to 18 inches; gravelly coarse sandy loam

Bw1—18 to 30 inches; very gravelly coarse sandy loam

Bw2—30 to 45 inches; very cobbly coarse sandy loam

C—45 to 60 inches; very cobbly coarse sandy loam

***Dissimilar Minor Components*****Whisk**

*Composition:* 5 percent

*Geomorphic position:* Convex shoulders and backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6  
(R010XY012ID)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, backslopes

***Major Uses***

Livestock grazing, wildlife habitat

***525—Robbscreek-Dobson-Brownlee complex, 25 to 65 percent slopes******Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,660 to 5,820 feet

*Mean annual precipitation:* 13 to 20 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

***Map Unit Composition***

*Robbscreek and similar soils:* 35 percent

*Dobson and similar soils:* 30 percent

*Brownlee and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

## **Major Components**

### **Robbscreek**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Typical profile**

A1—0 to 2 inches; fine gravelly coarse sandy loam

A2—2 to 6 inches; fine gravelly coarse sandy loam

BA—6 to 13 inches; fine gravelly coarse sandy loam

Bt1—13 to 19 inches; fine gravelly sandy clay loam

Bt2—19 to 26 inches; fine gravelly sandy clay loam

Bt3—26 to 30 inches; fine gravelly sandy clay loam

R—30 to 40 inches; unweathered bedrock

### **Dobson**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)

#### **Typical profile**

A—0 to 2 inches; fine gravelly coarse sandy loam

Bw—2 to 12 inches; fine gravelly coarse sandy loam

BC—12 to 14 inches; fine gravelly loamy coarse sand  
 R—14 to 24 inches; unweathered bedrock

### ***Brownlee***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave, south-facing backslopes and footslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 50 inches to bedrock (paralithic), 43 to 60 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

Ap—0 to 4 inches; loam

A—4 to 9 inches; loam

Bt1—9 to 16 inches; loam

Bt2—16 to 21 inches; sandy clay loam

Bt3—21 to 27 inches; sandy clay loam

BC—27 to 45 inches; fine gravelly sandy loam

Cr—45 to 50 inches; weathered bedrock

R—50 to 60 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Cartwright, dry**

*Composition:* 10 percent

*Geomorphic position:* Footslopes

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Shimo, fine gravelly loamy sand**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes, shoulders, and summits

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

### ***Major Use***

Livestock grazing (fig. 8)

## ***526—Cartwright-Brownlee-Robbscreek complex, 25 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10



**Figure 8.**—Rangeland in an area of Robbscreek-Dobson-Brownlee complex, 25 to 65 percent slopes, on south-facing hillslopes on left and in an area of Cartwright-Brownlee- Robbscreek complex, 25 to 65 percent slopes, on north-facing hillslopes on right.

*Elevation:* 2,600 to 5,220 feet

*Mean annual precipitation:* 14 to 22 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### **Map Unit Composition**

*Cartwright and similar soils:* 35 percent

*Brownlee and similar soils:* 30 percent

*Robbscreek and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Cartwright**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave, north-facing backslopes

*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.6 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

### **Typical profile**

A1—0 to 2 inches; loam

A2—2 to 8 inches; loam

A3—8 to 21 inches; loam

BA—21 to 33 inches; loam

Bt1—33 to 48 inches; loam

Bt2—48 to 60 inches; loam

### ***Brownlee, Moist***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Smooth and slightly concave, north-facing backslopes and footslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 40 to 60 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.7 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

### **Typical profile**

A—0 to 10 inches; loam

Bt—10 to 31 inches; sandy clay loam

BC—31 to 46 inches; fine gravelly sandy loam

Cr—46 to 60 inches; weathered bedrock

### ***Robbscreek, Moist***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)

#### **Typical profile**

A—0 to 10 inches; fine gravelly coarse sandy loam

Bt1—10 to 22 inches; fine gravelly sandy clay loam

Bt2—22 to 30 inches; fine gravelly sandy clay loam

R—30 to 40 inches; unweathered bedrock

#### ***Dissimilar Minor Components***

##### **Olaton, north slope, dry**

*Composition:* 5 percent

*Geomorphic position:* Toeslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

##### **Shimo, fine gravelly sandy loam, north slope**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes and shoulders

*Ecological site:* NORTH SLOPE BRUSH 16-20 PREM/ELGLG (R010XY027ID)

##### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Summits, shoulders

#### ***Major Use***

Livestock grazing

## ***527—Dobson-Roney complex, 35 to 90 percent slopes***

#### ***Map Unit Setting***

*General landscape:* Foothills, canyonland

*Major land resource area (MLRA):* 10

*Elevation:* 2,660 to 5,490 feet

*Mean annual precipitation:* 13 to 17 inches

*Mean annual air temperature:* 46 to 51 degrees F

*Frost-free period:* 100 to 150 days

#### ***Map Unit Composition***

*Dobson and similar soils:* 50 percent

*Roney and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

#### ***Major Components***

##### ***Dobson***

##### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6  
(R011XY018ID)

**Typical profile**

A—0 to 2 inches; fine gravelly coarse sandy loam

Bw—2 to 12 inches; fine gravelly coarse sandy loam

BC—12 to 14 inches; fine gravelly loamy coarse sand

R—14 to 24 inches; unweathered bedrock

***Roney, Dry*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Slightly concave, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6  
(R010XY012ID)

**Typical profile**

A1—0 to 2 inches; fine gravelly coarse sandy loam

A2—2 to 12 inches; fine gravelly coarse sandy loam

AB—12 to 17 inches; fine gravelly coarse sandy loam

Bw—17 to 30 inches; fine gravelly coarse sandy loam

R—30 to 40 inches; unweathered bedrock

***Dissimilar Minor Components*****Rock outcrop**

*Composition:* 10 percent

*Geomorphic position:* Shoulders, summits

**Shimo, fine gravelly loamy sand***Composition:* 5 percent*Geomorphic position:* Slightly convex backslopes*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)**Major Uses**

Livestock grazing, wildlife habitat

**528—Roney-Dobson-Olaton complex, 25 to 65 percent slopes****Map Unit Setting***General landscape:* Foothills*Major land resource area (MLRA):* 10*Elevation:* 2,800 to 5,140 feet*Mean annual precipitation:* 13 to 17 inches*Mean annual air temperature:* 47 to 51 degrees F*Frost-free period:* 110 to 150 days**Map Unit Composition***Roney and similar soils:* 40 percent*Dobson and similar soils:* 30 percent*Olaton and similar soils:* 15 percent*Dissimilar minor components:* 15 percent**Major Components****Roney, Dry****Setting***Landform:* Hillslopes*Geomorphic position:* Slightly convex, south-facing backslopes*Parent material:* Colluvium derived from granodiorite**Properties and qualities***Slope:* 25 to 65 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)*Drainage class:* Somewhat excessively drained*Permeability class (slowest):* Moderately rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 2.7 inches**Interpretive groups***Land capability subclass (nonirrigated):* 7e*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)**Typical profile**

A1—0 to 2 inches; fine gravelly coarse sandy loam

A2—2 to 12 inches; fine gravelly coarse sandy loam

AB—12 to 17 inches; fine gravelly coarse sandy loam

Bw—17 to 30 inches; fine gravelly coarse sandy loam  
 R—30 to 40 inches; unweathered bedrock

### ***Dobson***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)

#### **Typical profile**

A—0 to 2 inches; fine gravelly coarse sandy loam

Bw—2 to 12 inches; fine gravelly coarse sandy loam

BC—12 to 14 inches; fine gravelly loamy coarse sand

R—14 to 24 inches; unweathered bedrock

### ***Olaton, South Slope***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave, south-facing backslopes and footslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)

#### **Typical profile**

A—0 to 9 inches; fine gravelly coarse sandy loam

Bw1—9 to 25 inches; fine gravelly coarse sandy loam

Bw2—25 to 40 inches; fine gravelly coarse sandy loam

Bw3—40 to 60 inches; fine gravelly coarse sandy loam

### ***Dissimilar Minor Components***

#### **Robbscreek, fine gravelly coarse sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Shimo, fine gravelly loamy sand**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, summits

### ***Major Use***

Livestock grazing

## ***529—Roney-Kisky-Olaton complex, 25 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,780 to 6,420 feet

*Mean annual precipitation:* 13 to 20 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

### ***Map Unit Composition***

*Roney and similar soils:* 40 percent

*Kisky and similar soils:* 35 percent

*Olaton and similar soils:* 15 percent

*Dissimilar minor components:* 10 percent

### ***Major Components***

#### ***Roney***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.8 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)*

**Typical profile**

A—0 to 10 inches; fine gravelly coarse sandy loam

Bw—10 to 24 inches; fine gravelly coarse sandy loam

C—24 to 30 inches; fine gravelly loamy coarse sand

R—30 to 40 inches; unweathered bedrock

***Kisky, Fine Gravelly Sandy Loam*****Setting**

*Landform: Hillslopes*

*Geomorphic position: Convex, south-facing backslopes and shoulders*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 25 to 65 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)*

*Drainage class: Excessively drained*

*Permeability class (slowest): Rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 0.8 inch*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)*

**Typical profile**

A—0 to 7 inches; fine gravelly sandy loam

C—7 to 12 inches; very gravelly loamy sand

R—12 to 22 inches; unweathered bedrock

***Olaton, South Slope*****Setting**

*Landform: Hillslopes*

*Geomorphic position: Concave, south-facing backslopes and footslopes*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 25 to 65 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest): Moderately rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 4.8 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)*

**Typical profile**

A—0 to 9 inches; fine gravelly coarse sandy loam

Bw1—9 to 25 inches; fine gravelly coarse sandy loam

Bw2—25 to 40 inches; fine gravelly coarse sandy loam

Bw3—40 to 60 inches; fine gravelly coarse sandy loam

***Dissimilar Minor Components*****Lithic Ultic Haploxerolls, very shallow**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes, shoulders, and summits

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, summits

***Major Use***

Livestock grazing

**532—Schiller-Shimo complex, 25 to 65 percent slopes*****Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 4,330 to 5,860 feet

*Mean annual precipitation:* 18 to 22 inches

*Mean annual air temperature:* 45 to 46 degrees F

*Frost-free period:* 90 to 100 days

***Map Unit Composition***

*Schiller and similar soils:* 55 percent

*Shimo and similar soils:* 30 percent

*Dissimilar minor components:* 15 percent

***Major Components******Schiller, North Slope*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.3 inches

**Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A1—0 to 6 inches; gravelly coarse sandy loam

A2—6 to 18 inches; gravelly coarse sandy loam

Bw—18 to 36 inches; very gravelly coarse sandy loam

C—36 to 60 inches; very cobbly coarse sandy loam

***Shimo, Fine Gravelly Loamy Sand, North Slope*****Setting***Landform: Hillslopes**Geomorphic position: Convex, north-facing backslopes**Parent material: Colluvium derived from granodiorite and rhyolite***Properties and qualities***Slope: 25 to 65 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: Low**Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)**Drainage class: Excessively drained**Permeability class (slowest): Rapid**Flooding frequency: None**Seasonal high water table (minimum depth): More than 72 inches**Available water capacity (entire profile): About 1.2 inches***Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)***Typical profile**

A1—0 to 7 inches; fine gravelly loamy sand

A2—7 to 14 inches; fine gravelly loamy sand

C—14 to 30 inches; very cobbly loamy sand

R—30 to 40 inches; unweathered bedrock

***Dissimilar Minor Components*****Olaton, north slope, dry***Composition: 10 percent**Geomorphic position: Concave backslopes**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Kisky, fine gravelly loamy sand***Composition: 5 percent**Geomorphic position: Convex backslopes, shoulders, and summits**Ecological site: NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)****Major Use***

Livestock grazing

***533—Olaton-Roney complex, 35 to 90 percent slopes******Map Unit Setting****General landscape: Foothills, canyonland**Major land resource area (MLRA): 10*

*Elevation:* 2,640 to 5,560 feet  
*Mean annual precipitation:* 14 to 22 inches  
*Mean annual air temperature:* 45 to 48 degrees F  
*Frost-free period:* 90 to 120 days

### **Map Unit Composition**

*Olaton and similar soils:* 60 percent  
*Roney and similar soils:* 20 percent  
*Dissimilar minor components:* 20 percent

### **Major Components**

#### ***Olaton, North Slope, Dry***

#### **Setting**

*Landform:* Hillslopes, canyon walls  
*Geomorphic position:* Slightly concave, north-facing backslopes  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A—0 to 5 inches; fine gravelly coarse sandy loam  
 AB—5 to 22 inches; fine gravelly coarse sandy loam  
 Bw1—22 to 38 inches; fine gravelly coarse sandy loam  
 Bw2—38 to 55 inches; fine gravelly loamy coarse sand  
 C—55 to 65 inches; very gravelly loamy coarse sand

#### ***Roney, Moist***

#### **Setting**

*Landform:* Hillslopes, canyon walls  
*Geomorphic position:* Slightly convex, north-facing backslopes  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.5 inches

**Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)***Typical profile**

A1—0 to 5 inches; fine gravelly coarse sandy loam

A2—5 to 17 inches; fine gravelly coarse sandy loam

Bw—17 to 32 inches; fine gravelly coarse sandy loam

C—32 to 38 inches; fine gravelly coarse sandy loam

R—38 to 48 inches; unweathered bedrock

***Dissimilar Minor Components*****Schiller, north slope***Composition: 10 percent**Geomorphic position: Concave backslopes and footslopes**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Cartwright***Composition: 5 percent**Geomorphic position: Footslopes, toeslopes**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Kisky, fine gravelly loamy sand***Composition: 5 percent**Geomorphic position: Convex backslopes, shoulders, and summits**Ecological site: NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)****Major Uses***

Livestock grazing, wildlife habitat

***534—Shimo-Kisky-Schiller complex, 35 to 90 percent slopes******Map Unit Setting****General landscape: Foothills, canyonland**Major land resource area (MLRA): 10**Elevation: 2,710 to 5,900 feet**Mean annual precipitation: 13 to 20 inches**Mean annual air temperature: 45 to 51 degrees F**Frost-free period: 90 to 150 days****Map Unit Composition****Shimo and similar soils: 50 percent**Kisky and similar soils: 25 percent**Schiller and similar soils: 15 percent**Dissimilar minor components: 10 percent****Major Components******Shimo, Fine Gravelly Loamy Sand*****Setting***Landform: Hillslopes, canyon walls**Geomorphic position: Convex, south-facing backslopes**Parent material: Colluvium derived from granodiorite and rhyolite*

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

**Typical profile**

A1—0 to 3 inches; fine gravelly loamy sand

A2—3 to 12 inches; fine gravelly loamy sand

C—12 to 25 inches; very cobbly loamy sand

R—25 to 35 inches; unweathered bedrock

***Kisky, Fine Gravelly Sandy Loam*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.8 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

**Typical profile**

A—0 to 7 inches; fine gravelly sandy loam

C—7 to 12 inches; very gravelly loamy sand

R—12 to 22 inches; unweathered bedrock

***Schiller*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Concave, south-facing backslopes and footslopes

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 2.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Typical profile**

A—0 to 3 inches; gravelly coarse sandy loam  
 AB—3 to 13 inches; gravelly coarse sandy loam  
 Bw1—13 to 21 inches; very gravelly coarse sandy loam  
 Bw2—21 to 27 inches; very gravelly coarse sandy loam  
 Bw3—27 to 46 inches; extremely cobbly coarse sandy loam  
 BC—46 to 60 inches; extremely cobbly loamy coarse sand

#### ***Dissimilar Minor Components***

#### **Olaton, south slope**

*Composition:* 5 percent  
*Geomorphic position:* Concave backslopes  
*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)

#### **Robbscreek**

*Composition:* 5 percent  
*Geomorphic position:* Smooth and slightly concave backslopes  
*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### ***Major Uses***

Livestock grazing, wildlife habitat

### ***538—Borid-Shimo complex, 35 to 90 percent slopes***

#### ***Map Unit Setting***

*General landscape:* Foothills, canyonland  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,580 to 5,280 feet  
*Mean annual precipitation:* 15 to 17 inches  
*Mean annual air temperature:* 47 to 51 degrees F  
*Frost-free period:* 110 to 150 days

#### ***Map Unit Composition***

*Borid and similar soils:* 65 percent  
*Shimo and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

#### ***Major Components***

##### ***Borid***

#### **Setting**

*Landform:* Hillslopes, canyon walls  
*Geomorphic position:* Convex, south-facing backslopes and shoulders  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)

**Typical profile**

A—0 to 3 inches; fine gravelly sandy loam

AB—3 to 7 inches; very gravelly sandy loam

Bw—7 to 15 inches; very gravelly sandy loam

R—15 to 25 inches; unweathered bedrock

***Shimo, Fine Gravelly Loamy Sand*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

**Typical profile**

A1—0 to 3 inches; fine gravelly loamy sand

A2—3 to 12 inches; fine gravelly loamy sand

C—12 to 25 inches; very cobbly loamy sand

R—25 to 35 inches; unweathered bedrock

***Dissimilar Minor Components*****Lithic Ultic Haploxerolls, very shallow**

*Composition:* 10 percent

*Geomorphic position:* Summits

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)

**Schiller**

*Composition:* 5 percent

*Geomorphic position:* Footslopes

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

### **Major Uses**

Livestock grazing, wildlife habitat

## **541—Roney-Kisky complex, 8 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 4,690 to 6,330 feet

*Mean annual precipitation:* 18 to 20 inches

*Mean annual air temperature:* 45 to 46 degrees F

*Frost-free period:* 90 to 100 days

### **Map Unit Composition**

*Roney and similar soils:* 55 percent

*Kisky and similar soils:* 35 percent

*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Roney**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)

#### **Typical profile**

A—0 to 10 inches; fine gravelly coarse sandy loam

Bw—10 to 24 inches; fine gravelly coarse sandy loam

C—24 to 30 inches; fine gravelly loamy coarse sand

R—30 to 40 inches; unweathered bedrock

#### **Kisky, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex shoulders and summits

*Parent material:* Residuum and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.8 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

**Typical profile**

A—0 to 7 inches; fine gravelly sandy loam

C—7 to 12 inches; very gravelly loamy sand

R—12 to 22 inches; unweathered bedrock

***Dissimilar Minor Components*****Olaton, South Slope**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)

***Major Use***

Livestock grazing

***544—Arrowrock-Borid-Painter complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape:* Foothills, canyonland

*Major land resource area (MLRA):* 10

*Elevation:* 2,580 to 4,540 feet

*Mean annual precipitation:* 12 to 16 inches

*Mean annual air temperature:* 49 to 52 degrees F

*Frost-free period:* 130 to 155 days

***Map Unit Composition***

*Arrowrock and similar soils:* 40 percent

*Borid and similar soils:* 30 percent

*Painter and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

***Major Components******Arrowrock*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 18 inches to bedrock (paralithic), 15 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.7 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SAND 8-12 ARTRT/ACHY (R011XY011ID)

**Typical profile**

A1—0 to 2 inches; fine gravelly loamy sand

A2—2 to 7 inches; fine gravelly loamy sand

C—7 to 12 inches; fine gravelly loamy sand

Cr—12 to 15 inches; weathered bedrock

R—15 to 25 inches; unweathered bedrock

***Borid*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)

**Typical profile**

A—0 to 3 inches; fine gravelly sandy loam

AB—3 to 7 inches; very gravelly sandy loam

Bw—7 to 15 inches; very gravelly sandy loam

R—15 to 25 inches; unweathered bedrock

***Painter*****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Slightly concave, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 30 inches to bedrock (paralithic), 24 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.8 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SAND 8-12 ARTRT/ACHY (R011XY011ID)

**Typical profile**

A—0 to 2 inches; sandy loam

Bw—2 to 18 inches; loamy sand

C—18 to 24 inches; loamy sand

Cr—24 to 36 inches; weathered bedrock

R—36 to 46 inches; unweathered bedrock

***Dissimilar Minor Components*****Pachic Ultic Haploxerolls, coarse sandy loam, very deep**

*Composition:* 5 percent

*Geomorphic position:* Footslopes

*Ecological site:* SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)

**Aridic Haploxerolls, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Concave backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)

***Major Uses***

Livestock grazing, wildlife habitat

***551—Shimo-Kisky complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape:* Foothills, canyonland

*Major land resource area (MLRA):* 10

*Elevation:* 2,640 to 5,830 feet

*Mean annual precipitation:* 14 to 22 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

***Map Unit Composition***

*Shimo and similar soils:* 45 percent

*Kisky and similar soils:* 30 percent

*Dissimilar minor components:* 25 percent

## **Major Components**

### ***Shimo, Fine Gravelly Loamy Sand, North Slope***

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Slightly convex, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID  
(R010XY014ID)

#### **Typical profile**

A1—0 to 7 inches; fine gravelly loamy sand

A2—7 to 14 inches; fine gravelly loamy sand

C—14 to 30 inches; very cobbly loamy sand

R—30 to 40 inches; unweathered bedrock

### ***Kisky, Fine Gravelly Loamy Sand***

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, north-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.7 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID  
(R010XY014ID)

#### **Typical profile**

A—0 to 10 inches; fine gravelly loamy sand

C—10 to 16 inches; very gravelly loamy sand

R—16 to 26 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Roney, moist**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex backslopes

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID  
(R010XY014ID)

#### **Olaton, north slope, moist**

*Composition:* 10 percent

*Geomorphic position:* Concave backslopes and footslopes

*Ecological site:* NORTH SLOPE BRUSH 16-20 PREM/ELGLG  
(R010XY027ID)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, summits

### ***Major Uses***

Livestock grazing, wildlife habitat

## ***555—Brownlee-Schiller complex, 8 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,060 to 4,230 feet

*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 49 to 50 degrees F

*Frost-free period:* 130 to 140 days

### ***Map Unit Composition***

*Brownlee and similar soils:* 50 percent

*Schiller and similar soils:* 40 percent

*Dissimilar minor components:* 10 percent

### ***Major Components***

#### ***Brownlee***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 50 inches to bedrock (paralithic), 43 to 60 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.8 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

### **Typical profile**

Ap—0 to 4 inches; loam

A—4 to 9 inches; loam

Bt1—9 to 16 inches; loam

Bt2—16 to 21 inches; sandy clay loam

Bt3—21 to 27 inches; sandy clay loam

BC—27 to 45 inches; fine gravelly sandy loam

Cr—45 to 50 inches; weathered bedrock

R—50 to 60 inches; unweathered bedrock

## **Schiller**

### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex areas

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 15 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.9 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

### **Typical profile**

A—0 to 3 inches; gravelly coarse sandy loam

AB—3 to 13 inches; gravelly coarse sandy loam

Bw1—13 to 21 inches; very gravelly coarse sandy loam

Bw2—21 to 27 inches; very gravelly coarse sandy loam

Bw3—27 to 46 inches; extremely cobbly coarse sandy loam

BC—46 to 60 inches; extremely cobbly loamy coarse sand

## **Dissimilar Minor Component**

### **Staircase, dry**

*Composition:* 10 percent

*Geomorphic position:* Fluves

*Ecological site:* LOAMY BOTTOM 8-14 ARTRT/LEC14 (R011XY015ID)

## **Major Use**

Livestock grazing

## **556—Kisky-Shimo-Brownlee complex, 35 to 90 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills, canyonland  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,190 to 5,650 feet  
*Mean annual precipitation:* 14 to 20 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 90 to 140 days

### **Map Unit Composition**

*Kisky and similar soils:* 40 percent  
*Shimo and similar soils:* 30 percent  
*Brownlee and similar soils:* 20 percent  
*Dissimilar minor components:* 10 percent

### **Major Components**

#### ***Kisky, Fine Gravelly Sandy Loam***

#### **Setting**

*Landform:* Hillslopes, canyon walls  
*Geomorphic position:* Convex, south-facing backslopes and shoulders  
*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 0.8 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Typical profile**

A—0 to 7 inches; fine gravelly sandy loam  
 C—7 to 12 inches; very gravelly loamy sand  
 R—12 to 22 inches; unweathered bedrock

#### ***Shimo, Fine Gravelly Loamy Sand***

#### **Setting**

*Landform:* Hillslopes, canyon walls  
*Geomorphic position:* Slightly convex, south-facing backslopes  
*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Typical profile**

A1—0 to 3 inches; fine gravelly loamy sand

A2—3 to 12 inches; fine gravelly loamy sand

C—12 to 25 inches; very cobbly loamy sand

R—25 to 35 inches; unweathered bedrock

### ***Brownlee***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave, south-facing backslopes and footslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 50 inches to bedrock (paralithic), 43 to 60 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

Ap—0 to 4 inches; loam

A—4 to 9 inches; loam

Bt1—9 to 16 inches; loam

Bt2—16 to 21 inches; sandy clay loam

Bt3—21 to 27 inches; sandy clay loam

BC—27 to 45 inches; fine gravelly sandy loam

Cr—45 to 50 inches; weathered bedrock

R—50 to 60 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Cartwright, dry**

*Composition:* 5 percent

*Geomorphic position:* Footslopes, toeslopes

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Robbscreek***Composition:* 5 percent*Geomorphic position:* Slightly concave backslopes*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)**Major Uses**

Livestock grazing, wildlife habitat

**558—Kisky-Whisk-Roney complex, 35 to 90 percent slopes****Map Unit Setting***General landscape:* Foothills, canyonland*Major land resource area (MLRA):* 10*Elevation:* 3,090 to 5,630 feet*Mean annual precipitation:* 14 to 20 inches*Mean annual air temperature:* 45 to 50 degrees F*Frost-free period:* 90 to 140 days**Map Unit Composition***Kisky and similar soils:* 35 percent*Whisk and similar soils:* 30 percent*Roney and similar soils:* 25 percent*Dissimilar minor components:* 10 percent**Major Components****Kisky, Fine Gravelly Sandy Loam****Setting***Landform:* Hillslopes, canyon walls*Geomorphic position:* Convex, south-facing backslopes and shoulders*Parent material:* Colluvium derived from granodiorite**Properties and qualities***Slope:* 35 to 90 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)*Drainage class:* Excessively drained*Permeability class (slowest):* Rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 0.8 inch**Interpretive groups***Land capability subclass (nonirrigated):* 7e*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)**Typical profile**

A—0 to 7 inches; fine gravelly sandy loam

C—7 to 12 inches; very gravelly loamy sand

R—12 to 22 inches; unweathered bedrock

### **Whisk**

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Slightly convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6  
(R010XY012ID)

#### **Typical profile**

A—0 to 3 inches; fine gravelly sandy loam

Bw1—3 to 11 inches; fine gravelly sandy loam

Bw2—11 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

### **Roney, Dry**

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Slightly concave, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6  
(R010XY012ID)

#### **Typical profile**

A1—0 to 2 inches; fine gravelly coarse sandy loam

A2—2 to 12 inches; fine gravelly coarse sandy loam

AB—12 to 17 inches; fine gravelly coarse sandy loam

Bw—17 to 30 inches; fine gravelly coarse sandy loam

R—30 to 40 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Olaton, south slope**

*Composition:* 5 percent

*Geomorphic position:* Concave backslopes and footslopes

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)

#### **Shimo, fine gravelly loamy sand**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

### ***Major Uses***

Livestock grazing, wildlife habitat

## ***560—Robbscreek-Hellake-Shimo complex, 25 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,170 to 4,460 feet

*Mean annual precipitation:* 20 to 22 inches

*Mean annual air temperature:* 46 to 48 degrees F

*Frost-free period:* 100 to 120 days

### ***Map Unit Composition***

*Robbscreek and similar soils:* 30 percent

*Hellake and similar soils:* 25 percent

*Shimo and similar soils:* 20 percent

*Dissimilar minor components:* 25 percent

### ***Major Components***

#### ***Robbscreek, Moist***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)

**Typical profile**

A—0 to 10 inches; fine gravelly coarse sandy loam  
 Bt1—10 to 22 inches; fine gravelly sandy clay loam  
 Bt2—22 to 30 inches; fine gravelly sandy clay loam  
 R—30 to 40 inches; unweathered bedrock

***Hellake*****Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly concave, north-facing backslopes  
*Parent material:* Loamy lacustrine deposits over gravelly alluvium

**Properties and qualities**

*Slope:* 25 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 30 to 60 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 9.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Typical profile**

A—0 to 3 inches; loam  
 AB—3 to 10 inches; loam  
 Bt1—10 to 22 inches; clay loam  
 Bt2—22 to 36 inches; clay loam  
 Bt3—36 to 43 inches; clay loam  
 2BC—43 to 53 inches; very gravelly loam  
 2C1—53 to 60 inches; very gravelly sandy loam  
 2C2—60 to 66 inches; extremely gravelly loamy sand

***Shimo, Fine Gravelly Loamy Sand, North Slope*****Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Convex, north-facing backslopes  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: NORTH SLOPE GRANITIC 12-16 ARTRX/FEID  
(R010XY014ID)*

**Typical profile**

A1—0 to 7 inches; fine gravelly loamy sand

A2—7 to 14 inches; fine gravelly loamy sand

C—14 to 30 inches; very cobbly loamy sand

R—30 to 40 inches; unweathered bedrock

***Dissimilar Minor Components*****Whisk**

*Composition: 10 percent*

*Geomorphic position: Shoulders, summits*

*Ecological site: SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6  
(R010XY012ID)*

**Brownlee**

*Composition: 5 percent*

*Geomorphic position: Footslopes*

*Ecological site: LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)*

**Middlefork, moist**

*Composition: 5 percent*

*Geomorphic position: Smooth, north-facing backslopes*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase  
(CDS717-PIPO)*

**Schiller, south slope**

*Composition: 5 percent*

*Geomorphic position: Concave, north-facing backslopes*

*Ecological site: SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6  
(R010XY028ID)*

***Major Uses***

Livestock grazing, homesites

***561—Shimo-Kisky-Olaton complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape: Foothills, canyonland*

*Major land resource area (MLRA): 10*

*Elevation: 3,080 to 5,750 feet*

*Mean annual precipitation: 16 to 22 inches*

*Mean annual air temperature: 45 to 47 degrees F*

*Frost-free period: 90 to 110 days*

***Map Unit Composition***

*Shimo and similar soils: 35 percent*

*Kisky and similar soils: 30 percent*

*Olaton and similar soils: 25 percent*

*Dissimilar minor components: 10 percent*

### **Major Components**

#### ***Shimo, Fine Gravelly Sandy Loam, North Slope***

##### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite and rhyolite

##### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

##### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE BRUSH 16-20 PREM/ELGLG  
(R010XY027ID)

##### **Typical profile**

A—0 to 11 inches; fine gravelly sandy loam

C1—11 to 16 inches; extremely gravelly loamy sand

C2—16 to 32 inches; very gravelly loamy sand

R—32 to 42 inches; unweathered bedrock

#### ***Kisky, Fine Gravelly Loamy Sand***

##### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, north-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite and rhyolite

##### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.7 inch

##### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID  
(R010XY014ID)

##### **Typical profile**

A—0 to 10 inches; fine gravelly loamy sand

C—10 to 16 inches; very gravelly loamy sand

R—16 to 26 inches; unweathered bedrock

**Olaton, North Slope, Moist****Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Concave, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE BRUSH 16-20 PREM/ELGLG (R010XY027ID)

**Typical profile**

A—0 to 7 inches; coarse sandy loam

AB—7 to 29 inches; coarse sandy loam

Bw—29 to 42 inches; coarse sandy loam

C—42 to 60 inches; fine gravelly coarse sandy loam

***Dissimilar Minor Component*****Roney**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)

***Major Uses***

Livestock grazing, wildlife habitat

**562—Kisky-Shimo-Roney complex, 35 to 90 percent slopes*****Map Unit Setting***

*General landscape:* Foothills, canyonland

*Major land resource area (MLRA):* 10

*Elevation:* 3,580 to 6,290 feet

*Mean annual precipitation:* 15 to 20 inches

*Mean annual air temperature:* 45 to 49 degrees F

*Frost-free period:* 90 to 130 days

***Map Unit Composition***

*Kisky and similar soils:* 30 percent

*Shimo and similar soils:* 30 percent

*Roney and similar soils:* 25 percent

*Dissimilar minor components:* 15 percent

## **Major Components**

### ***Kisky, Fine Gravelly Sandy Loam***

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.8 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6  
(R010XY012ID)

#### **Typical profile**

A—0 to 7 inches; fine gravelly sandy loam

C—7 to 12 inches; very gravelly loamy sand

R—12 to 22 inches; unweathered bedrock

### ***Shimo, Fine Gravelly Sandy Loam***

#### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Convex, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6  
(R010XY028ID)

#### **Typical profile**

A—0 to 8 inches; fine gravelly sandy loam

C—8 to 32 inches; extremely cobbly loamy sand

R—32 to 42 inches; unweathered bedrock

## **Roney**

### **Setting**

*Landform:* Hillslopes, canyon walls

*Geomorphic position:* Slightly concave, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.8 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6  
(R010XY028ID)

### **Typical profile**

A—0 to 10 inches; fine gravelly coarse sandy loam

Bw—10 to 24 inches; fine gravelly coarse sandy loam

C—24 to 30 inches; fine gravelly loamy coarse sand

R—30 to 40 inches; unweathered bedrock

## **Dissimilar Minor Components**

### **Olaton, south slope**

*Composition:* 10 percent

*Geomorphic position:* Concave backslopes

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6  
(R010XY028ID)

### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, summits

## **Major Uses**

Livestock grazing, wildlife habitat

## **600—McDesh-Immig-Gwin complex, 4 to 25 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,140 to 5,540 feet

*Mean annual precipitation:* 15 to 20 inches

*Mean annual air temperature:* 45 to 49 degrees F

*Frost-free period:* 90 to 130 days

### **Map Unit Composition**

*McDesh and similar soils:* 50 percent  
*Immig and similar soils:* 25 percent  
*Gwin and similar soils:* 15 percent  
*Dissimilar minor component:* 10 percent

### **Major Components**

#### **McDesh**

#### **Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Smooth and concave areas  
*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 4 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 4.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A—0 to 3 inches; loam  
 Bt1—3 to 11 inches; clay loam  
 Bt2—11 to 21 inches; clay  
 Bt3—21 to 24 inches; clay  
 R—24 to 34 inches; unweathered bedrock

#### **Immig, Rubbly Surface**

#### **Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Slightly convex areas  
*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 4 to 25 percent  
*Percentage of surface area covered by stones and boulders:* 15 to 50 percent  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6s  
*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

**Typical profile**

A—0 to 4 inches; very stony loam  
 Bt1—4 to 7 inches; very cobbly clay loam  
 Bt2—7 to 17 inches; very cobbly silty clay  
 Bt3—17 to 25 inches; extremely cobbly silty clay  
 R—25 to 35 inches; unweathered bedrock

***Gwin, Very Stony Loam, Extremely Stony Surface*****Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Convex areas  
*Parent material:* Residuum and colluvium derived from basalt

**Properties and qualities**

*Slope:* 4 to 25 percent  
*Percentage of surface area covered by stones and boulders:* 3 to 15 percent  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 0.9 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6s  
*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

**Typical profile**

A—0 to 4 inches; very stony loam  
 BA—4 to 7 inches; very stony loam  
 Bt—7 to 13 inches; extremely cobbly clay loam  
 R—13 to 22 inches; unweathered bedrock

**Dissimilar Minor Component****Hann**

*Composition:* 10 percent  
*Geomorphic position:* Fluves  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

***Major Use***

Livestock grazing

***601—Hann-Gwin-Shafer complex, 2 to 25 percent slopes******Map Unit Setting***

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,700 to 4,960 feet  
*Mean annual precipitation:* 16 to 19 inches  
*Mean annual air temperature:* 46 to 48 degrees F  
*Frost-free period:* 100 to 120 days

### **Map Unit Composition**

*Hann and similar soils:* 45 percent  
*Gwin and similar soils:* 25 percent  
*Shafer and similar soils:* 20 percent  
*Dissimilar minor component:* 10 percent

### **Major Components**

#### **Hann**

#### **Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Concave areas  
*Parent material:* Clayey alluvium

#### **Properties and qualities**

*Slope:* 2 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 13.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A—0 to 3 inches; silt loam  
 Bt1—3 to 6 inches; silty clay loam  
 Bt2—6 to 13 inches; silty clay  
 Bt3—13 to 25 inches; silty clay  
 Bt4—25 to 44 inches; silty clay loam  
 Bt5—44 to 72 inches; silty clay loam

#### **Gwin, Very Stony Loam, Extremely Stony Surface**

#### **Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Convex areas  
*Parent material:* Residuum and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 4 to 25 percent  
*Percentage of surface area covered by stones and boulders:* 3 to 15 percent  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 0.9 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

**Typical profile**

A—0 to 4 inches; very stony loam  
 BA—4 to 7 inches; very stony loam  
 Bt—7 to 13 inches; extremely cobbly clay loam  
 R—13 to 22 inches; unweathered bedrock

**Shafer****Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Smooth areas  
*Parent material:* Clayey lacustrine deposits and colluvium derived from basalt and welded tuff

**Properties and qualities**

*Slope:* 4 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 38 inches to bedrock (paralithic), 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Very slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Typical profile**

A—0 to 1 inch; clay loam  
 BA—1 to 7 inches; clay  
 Btss1—7 to 18 inches; clay  
 Btss2—18 to 22 inches; clay loam  
 Crt—22 to 25 inches; weathered bedrock  
 R—25 to 35 inches; unweathered bedrock

**Dissimilar Minor Component****McDesh**

*Composition:* 10 percent  
*Geomorphic position:* Slightly concave areas  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Major Use**

Livestock grazing

**602—Hillcreek-Hovelton-Hann complex, 25 to 65 percent slopes****Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 2,670 to 5,240 feet  
*Mean annual precipitation:* 14 to 22 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

### **Map Unit Composition**

*Hillcreek and similar soils:* 35 percent

*Hovelton and similar soils:* 30 percent

*Hann and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Hillcreek**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave, north-facing backslopes

*Parent material:* Volcanic ash and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 12.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A1—0 to 2 inches; ashy loam

A2—2 to 10 inches; ashy loam

AB—10 to 27 inches; ashy loam

2Bt1—27 to 43 inches; clay loam

2Bt2—43 to 59 inches; clay loam

2Bt3—59 to 66 inches; gravelly clay loam

#### **Hovelton, Cobbly Ashy Loam, Moist, Very Stony Surface**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, north-facing backslopes

*Parent material:* Volcanic ash and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7s*

*Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)*

**Typical profile**

A—0 to 12 inches; cobbly ashy loam

Bt—12 to 22 inches; very cobbly clay loam

R—22 to 32 inches; unweathered bedrock

**Hann****Setting**

*Landform: Hillslopes*

*Geomorphic position: Concave, north-facing backslopes and footslopes*

*Parent material: Clayey alluvium*

**Properties and qualities**

*Slope: 25 to 50 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Moderate*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Well drained*

*Permeability class (slowest): Slow*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 13.5 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)*

**Typical profile**

A—0 to 3 inches; silt loam

Bt1—3 to 6 inches; silty clay loam

Bt2—6 to 13 inches; silty clay

Bt3—13 to 25 inches; silty clay

Bt4—25 to 44 inches; silty clay loam

Bt5—44 to 72 inches; silty clay loam

**Dissimilar Minor Components****Gwin, gravelly loam, stony surface**

*Composition: 5 percent*

*Geomorphic position: Convex shoulders and summits*

*Ecological site: SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)*

**Hovelton, gravelly ashy loam**

*Composition: 5 percent*

*Geomorphic position: South-facing backslopes*

*Ecological site: LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)*

**Olaton, north slope, dry**

*Composition: 5 percent*

*Geomorphic position: Concave backslopes*

*Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)*

**Major Use**

Livestock grazing

## **604—Shafer-Hann complex, 2 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,000 to 5,240 feet  
*Mean annual precipitation:* 15 to 20 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 90 to 140 days

### **Map Unit Composition**

*Shafer and similar soils:* 55 percent  
*Hann and similar soils:* 25 percent  
*Dissimilar minor components:* 20 percent

### **Major Components**

#### **Shafer**

#### **Setting**

*Landform:* Structural benches  
*Geomorphic position:* Smooth areas  
*Parent material:* Clayey lacustrine deposits and colluvium derived from basalt and welded tuff

#### **Properties and qualities**

*Slope:* 4 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 38 inches to bedrock (paralithic), 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Very slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Typical profile**

A—0 to 1 inch; clay loam  
 BA—1 to 7 inches; clay  
 Btss1—7 to 18 inches; clay  
 Btss2—18 to 22 inches; clay loam  
 Crt—22 to 25 inches; weathered bedrock  
 R—25 to 35 inches; unweathered bedrock

#### **Hann**

#### **Setting**

*Landform:* Structural benches  
*Geomorphic position:* Concave areas  
*Parent material:* Clayey alluvium

#### **Properties and qualities**

*Slope:* 2 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 13.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A—0 to 3 inches; silt loam

Bt1—3 to 6 inches; silty clay loam

Bt2—6 to 13 inches; silty clay

Bt3—13 to 25 inches; silty clay

Bt4—25 to 44 inches; silty clay loam

Bt5—44 to 72 inches; silty clay loam

#### ***Dissimilar Minor Components***

##### **Gwin, gravelly loam, stony surface**

*Composition:* 10 percent

*Geomorphic position:* Convex areas

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

##### **McDesh**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave areas

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### ***Major Use***

Livestock grazing

### **605—Gwin-Flybow complex, 4 to 25 percent slopes**

#### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,610 to 5,410 feet

*Mean annual precipitation:* 16 to 20 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

#### ***Map Unit Composition***

*Gwin and similar soils:* 70 percent

*Flybow and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

#### ***Major Components***

##### ***Gwin, Very Stony Loam, Extremely Stony Surface***

#### **Setting**

*Landform:* Structural benches

*Geomorphic position:* Concave areas

*Parent material:* Residuum and colluvium derived from basalt

**Properties and qualities**

*Slope:* 4 to 25 percent

*Percentage of surface area covered by stones and boulders:* 3 to 15 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.9 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

**Typical profile**

A—0 to 4 inches; very stony loam

BA—4 to 7 inches; very stony loam

Bt—7 to 13 inches; extremely cobbly clay loam

R—13 to 22 inches; unweathered bedrock

***Flybow*****Setting**

*Landform:* Structural benches

*Geomorphic position:* Eroded areas, fluves

*Parent material:* Residuum and colluvium derived from basalt

**Properties and qualities**

*Slope:* 4 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 4 to 10 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.4 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

**Typical profile**

A1—0 to 3 inches; very gravelly loam

A2—3 to 8 inches; extremely gravelly loam

R—8 to 18 inches; unweathered bedrock

***Dissimilar Minor Components*****Hovelton, cobbly ashy loam, moist, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* Steep, north-facing backslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex areas

**Major Use**

Livestock grazing

**606—Hillcreek-Hovelton complex, 35 to 65 percent slopes****Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 2,580 to 5,220 feet  
*Mean annual precipitation:* 14 to 22 inches  
*Mean annual air temperature:* 45 to 48 degrees F  
*Frost-free period:* 90 to 120 days

**Map Unit Composition**

*Hillcreek and similar soils:* 50 percent  
*Hovelton and similar soils:* 40 percent  
*Dissimilar minor components:* 10 percent

**Major Components****Hillcreek****Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly concave, north-facing backslopes  
*Parent material:* Volcanic ash and colluvium derived from basalt

**Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 12.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6  
 (R010XY010ID)

**Typical profile**

A1—0 to 2 inches; ashy loam  
 A2—2 to 10 inches; ashy loam  
 AB—10 to 27 inches; ashy loam  
 2Bt1—27 to 43 inches; clay loam  
 2Bt2—43 to 59 inches; clay loam  
 2Bt3—59 to 66 inches; gravelly clay loam

**Hovelton, Cobbly Ashy Loam, Moist, Very Stony Surface****Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Convex, north-facing backslopes

*Parent material:* Volcanic ash and colluvium derived from basalt

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6  
(R010XY010ID)

**Typical profile**

A—0 to 12 inches; cobbly ashy loam

Bt—12 to 22 inches; very cobbly clay loam

R—22 to 32 inches; unweathered bedrock

***Dissimilar Minor Component***

**Gwin, very stony loam, extremely stony surface**

*Composition:* 10 percent

*Geomorphic position:* Convex shoulders and summits

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

***Major Use***

Livestock grazing

**607—Duco-Immig-Rubble land complex, 25 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,050 to 4,670 feet

*Mean annual precipitation:* 14 to 17 inches

*Mean annual air temperature:* 48 to 50 degrees F

*Frost-free period:* 120 to 140 days

***Map Unit Composition***

*Duco and similar soils:* 35 percent

*Immig and similar soils:* 35 percent

*Rubble land:* 15 percent

*Dissimilar minor components:* 15 percent

***Major Components***

***Duco, Stony Loam, Very Stony Surface***

**Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from basalt

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

**Typical profile**

A—0 to 3 inches; stony loam

Bt—3 to 15 inches; extremely stony clay loam

R—15 to 25 inches; unweathered bedrock

***Immig, Very Stony Surface*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, south-facing backslopes

*Parent material:* Colluvium derived from basalt

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.8 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

**Typical profile**

A—0 to 4 inches; extremely cobbly loam

Bt1—4 to 10 inches; very gravelly silty clay loam

Bt2—10 to 14 inches; very cobbly silty clay

Bt3—14 to 25 inches; extremely gravelly silty clay

R—25 to 35 inches; unweathered bedrock

***Rubble Land***

*Landform:* Hillslopes

*Geomorphic position:* South-facing backslopes

*Land capability subclass (nonirrigated):* 8

***Dissimilar Minor Components*****McDesh**

*Composition:* 10 percent

*Geomorphic position:* Footslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, summits

**Major Use**

Livestock grazing

**608—Duco-Hovelton-McDesh complex, 25 to 65 percent slopes**

**Map Unit Setting**

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,080 to 5,400 feet

*Mean annual precipitation:* 14 to 17 inches

*Mean annual air temperature:* 47 to 51 degrees F

*Frost-free period:* 110 to 150 days

**Map Unit Composition**

*Duco and similar soils:* 40 percent

*Hovelton and similar soils:* 25 percent

*McDesh and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

**Major Components**

**Duco, Very Gravelly Loam, Stony Surface**

**Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes

*Parent material:* Colluvium derived from basalt

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* Less than 0.1 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

**Typical profile**

A—0 to 4 inches; very gravelly loam

Bt1—4 to 13 inches; very gravelly loam

Bt2—13 to 19 inches; extremely gravelly clay loam

R—19 to 29 inches; unweathered bedrock

### ***Hovelton, Gravelly Ashy Loam***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, south-facing backslopes

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

A—0 to 7 inches; gravelly ashy loam

AB—7 to 17 inches; very cobbly ashy loam

Bt—17 to 38 inches; extremely cobbly clay loam

R—38 to 48 inches; unweathered bedrock

### ***McDesh, South Slope***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave, south-facing backslopes and footslopes

*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

A—0 to 3 inches; loam

Bt1—3 to 8 inches; clay

Bt2—8 to 37 inches; clay

R—37 to 47 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Hillcreek, dry**

*Composition:* 5 percent

*Geomorphic position:* Concave backslopes

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Immig, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

#### **Shafer**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex backslopes and footslopes

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

### ***Major Use***

Livestock grazing

## ***610—Hovelton-Duco-McDesh complex, 25 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 2,700 to 5,750 feet

*Mean annual precipitation:* 13 to 18 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

### ***Map Unit Composition***

*Hovelton and similar soils:* 50 percent

*Duco and similar soils:* 20 percent

*McDesh and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

### ***Major Components***

#### ***Hovelton, Cobbly Ashy Loam, Very Stony Surface***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, south-facing backslopes

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)*

**Typical profile**

A—0 to 2 inches; cobbly ashy loam

AB—2 to 6 inches; cobbly ashy loam

Bt1—6 to 13 inches; very cobbly ashy loam

Bt2—13 to 24 inches; extremely stony loam

R—24 to 34 inches; unweathered bedrock

***Duco, Stony Loam, Very Stony Surface*****Setting**

*Landform: Hillslopes*

*Geomorphic position: Convex, south-facing backslopes*

*Parent material: Colluvium derived from basalt*

**Properties and qualities**

*Slope: 25 to 65 percent*

*Percentage of surface area covered by stones and boulders: 0.1 to 3.0 percent*

*Shrink-swell potential: Moderate*

*Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)*

*Drainage class: Well drained*

*Permeability class (slowest): Moderately slow*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 1.1 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7s*

*Ecological site: SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)*

**Typical profile**

A—0 to 3 inches; stony loam

Bt—3 to 15 inches; extremely stony clay loam

R—15 to 25 inches; unweathered bedrock

***McDesh, South Slope*****Setting**

*Landform: Hillslopes*

*Geomorphic position: Concave, south-facing backslopes*

*Parent material: Colluvium derived from basalt*

**Properties and qualities**

*Slope: 25 to 50 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: High*

*Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)*

*Drainage class: Well drained*

*Permeability class (slowest): Slow*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 5.6 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)*

**Typical profile**

A—0 to 3 inches; loam

Bt1—3 to 8 inches; clay

Bt2—8 to 37 inches; clay

R—37 to 47 inches; unweathered bedrock

***Dissimilar Minor Components*****Hann**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave backslopes and footslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Hillcreek**

*Composition:* 5 percent

*Geomorphic position:* Concave backslopes

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

***Major Use***

Livestock grazing

***612—Hann-Hillcreek complex, 4 to 15 percent slopes******Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,210 to 4,790 feet

*Mean annual precipitation:* 15 to 19 inches

*Mean annual air temperature:* 46 to 49 degrees F

*Frost-free period:* 100 to 130 days

***Map Unit Composition***

*Hann and similar soils:* 60 percent

*Hillcreek and similar soils:* 25 percent

*Dissimilar minor components:* 15 percent

***Major Components******Hann*****Setting**

*Landform:* Fan remnants

*Geomorphic position:* Smooth and slightly convex areas

*Parent material:* Clayey alluvium

**Properties and qualities**

*Slope:* 4 to 15 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 13.5 inches

**Interpretive groups***Land capability subclass (nonirrigated): 4e**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Typical profile**

A—0 to 3 inches; silt loam

Bt1—3 to 6 inches; silty clay loam

Bt2—6 to 13 inches; silty clay

Bt3—13 to 25 inches; silty clay

Bt4—25 to 44 inches; silty clay loam

Bt5—44 to 72 inches; silty clay loam

**Hillcreek, Dry****Setting***Landform: Fan remnants**Geomorphic position: Slightly concave areas**Parent material: Volcanic ash and slope alluvium derived from basalt***Properties and qualities***Slope: 4 to 8 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: Moderate**Depth to restrictive feature: None within a depth of 60 inches**Drainage class: Well drained**Permeability class (slowest): Moderately slow**Flooding frequency: None**Seasonal high water table (minimum depth): More than 72 inches**Available water capacity (entire profile): About 10.4 inches***Interpretive groups***Land capability subclass (nonirrigated): 4e**Ecological site: LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)***Typical profile**

Ap—0 to 6 inches; ashy loam

A—6 to 12 inches; ashy loam

AB—12 to 22 inches; ashy loam

2Bt1—22 to 36 inches; clay loam

2Bt2—36 to 60 inches; gravelly loam

**Dissimilar Minor Components****Cumelic Endoaquolls, poorly drained***Composition: 10 percent**Geomorphic position: Fluves**Ecological site: WET MEADOW (R011XY019ID)***Ayette, moist***Composition: 5 percent**Geomorphic position: Slightly convex areas**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Major Uses**

Livestock grazing, nonirrigated pasture

## **613—Duco-Searles-McDesh complex, 25 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 2,590 to 3,810 feet  
*Mean annual precipitation:* 13 to 15 inches  
*Mean annual air temperature:* 50 to 51 degrees F  
*Frost-free period:* 140 to 150 days

### **Map Unit Composition**

*Duco and similar soils:* 40 percent  
*Searles and similar soils:* 25 percent  
*McDesh and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

### **Major Components**

#### ***Duco, Stony Loam, Very Stony Surface***

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Convex, south-facing backslopes and shoulders  
*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 65 percent  
*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

#### **Typical profile**

A—0 to 3 inches; stony loam  
 Bt—3 to 15 inches; extremely stony clay loam  
 R—15 to 25 inches; unweathered bedrock

#### ***Searles, Very Stony Surface***

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Convex, south-facing backslopes  
*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 65 percent  
*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 2.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s  
*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

#### **Typical profile**

A—0 to 3 inches; cobbly loam  
 Bt1—3 to 8 inches; very gravelly clay loam  
 Bt2—8 to 15 inches; extremely gravelly clay loam  
 BC—15 to 25 inches; extremely gravelly loam  
 R—25 to 35 inches; unweathered bedrock

#### ***McDesh, South Slope***

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Smooth and slightly concave, south-facing backslopes  
*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 50 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

A—0 to 3 inches; loam  
 Bt1—3 to 8 inches; clay  
 Bt2—8 to 37 inches; clay  
 R—37 to 47 inches; unweathered bedrock

#### ***Dissimilar Minor Components***

#### **Hann**

*Composition:* 5 percent  
*Geomorphic position:* Footslopes; slightly concave, north-facing backslopes  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Hillcreek**

*Composition:* 5 percent  
*Geomorphic position:* Concave, north-facing backslopes  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Shafer, very stony surface**

*Composition:* 5 percent  
*Geomorphic position:* Slightly convex footslopes and saddles

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Major Use**

Livestock grazing

**618—McDesh-Duco-Shafer complex, 8 to 35 percent slopes**

**Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 2,680 to 3,330 feet  
*Mean annual precipitation:* 14 to 16 inches  
*Mean annual air temperature:* 49 to 50 degrees F  
*Frost-free period:* 130 to 140 days

**Map Unit Composition**

*McDesh and similar soils:* 35 percent  
*Duco and similar soils:* 25 percent  
*Shafer and similar soils:* 20 percent  
*Dissimilar minor components:* 20 percent

**Major Components**

**McDesh, South Slope**

**Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Smooth and slightly concave areas  
*Parent material:* Colluvium derived from basalt

**Properties and qualities**

*Slope:* 8 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Typical profile**

A—0 to 3 inches; loam  
 Bt1—3 to 8 inches; clay  
 Bt2—8 to 37 inches; clay  
 R—37 to 47 inches; unweathered bedrock

**Duco, Very Gravelly Loam, Stony Surface**

**Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Convex areas  
*Parent material:* Colluvium derived from basalt

**Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* Less than 0.1 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

**Typical profile**

A—0 to 4 inches; very gravelly loam

Bt1—4 to 13 inches; very gravelly loam

Bt2—13 to 19 inches; extremely gravelly clay loam

R—19 to 29 inches; unweathered bedrock

**Shafer****Setting**

*Landform:* Hillslopes, structural benches

*Geomorphic position:* Slightly convex areas

*Parent material:* Clayey lacustrine deposits and colluvium derived from basalt and welded tuff

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 38 inches to bedrock (paralithic), 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Typical profile**

A—0 to 1 inch; clay loam

BA—1 to 7 inches; clay

Btss1—7 to 18 inches; clay

Btss2—18 to 22 inches; clay loam

Crt—22 to 25 inches; weathered bedrock

R—25 to 35 inches; unweathered bedrock

**Dissimilar Minor Components****Immig, very stony surface**

*Composition:* 10 percent

*Geomorphic position:* Convex areas

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

**Hann***Composition:* 5 percent*Geomorphic position:* Concave areas*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)**Searles, very stony surface***Composition:* 5 percent*Geomorphic position:* Slightly convex areas*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)**Major Use**

Livestock grazing

**619—McDesh-Gwin-Shafer complex, 8 to 35 percent slopes****Map Unit Setting***General landscape:* Foothills*Major land resource area (MLRA):* 10*Elevation:* 2,990 to 5,010 feet*Mean annual precipitation:* 14 to 19 inches*Mean annual air temperature:* 46 to 50 degrees F*Frost-free period:* 100 to 140 days**Map Unit Composition***McDesh and similar soils:* 35 percent*Gwin and similar soils:* 25 percent*Shafer and similar soils:* 20 percent*Dissimilar minor components:* 20 percent**Major Components****McDesh****Setting***Landform:* Hillslopes, structural benches*Geomorphic position:* Smooth and slightly concave areas*Parent material:* Colluvium derived from basalt**Properties and qualities***Slope:* 4 to 25 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* High*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)*Drainage class:* Well drained*Permeability class (slowest):* Slow*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 4.1 inches**Interpretive groups***Land capability subclass (nonirrigated):* 6e*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)**Typical profile**

A—0 to 3 inches; loam

Bt1—3 to 11 inches; clay loam

Bt2—11 to 21 inches; clay  
 Bt3—21 to 24 inches; clay  
 R—24 to 34 inches; unweathered bedrock

**Gwin, Gravelly Loam, Stony Surface**

**Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Convex areas  
*Parent material:* Residuum and colluvium derived from basalt

**Properties and qualities**

*Slope:* 8 to 35 percent  
*Percentage of surface area covered by stones and boulders:* Less than 0.1 percent  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

**Typical profile**

A—0 to 2 inches; gravelly loam  
 BA—2 to 7 inches; very gravelly loam  
 Bt—7 to 15 inches; extremely gravelly clay loam  
 R—15 to 23 inches; unweathered bedrock

**Shafer**

**Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position:* Slightly convex areas  
*Parent material:* Clayey lacustrine deposits and colluvium derived from basalt and welded tuff

**Properties and qualities**

*Slope:* 8 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 38 inches to bedrock (paralithic), 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Very slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Typical profile**

A—0 to 1 inch; clay loam  
 BA—1 to 7 inches; clay  
 Btss1—7 to 18 inches; clay

Btss2—18 to 22 inches; clay loam  
 Crt—22 to 25 inches; weathered bedrock  
 R—25 to 35 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Immig, very stony surface**

*Composition:* 10 percent  
*Geomorphic position:* Slightly convex areas  
*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

#### **Gwin, very stony loam, extremely stony surface**

*Composition:* 5 percent  
*Geomorphic position:* Convex areas  
*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

#### **Hann**

*Composition:* 5 percent  
*Geomorphic position:* Concave areas  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

### ***Major Use***

Livestock grazing

## ***620—Immig-McDesh-Duco complex, 25 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,160 to 4,590 feet  
*Mean annual precipitation:* 13 to 17 inches  
*Mean annual air temperature:* 47 to 51 degrees F  
*Frost-free period:* 110 to 150 days

### ***Map Unit Composition***

*Immig and similar soils:* 35 percent  
*McDesh and similar soils:* 30 percent  
*Duco and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

### ***Major Components***

#### ***Immig, Very Stony Surface***

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly convex, south-facing backslopes  
*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 65 percent  
*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Slow  
*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.8 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

### **Typical profile**

A—0 to 4 inches; extremely cobbly loam

Bt1—4 to 10 inches; very gravelly silty clay loam

Bt2—10 to 14 inches; very cobbly silty clay

Bt3—14 to 25 inches; extremely gravelly silty clay

R—25 to 35 inches; unweathered bedrock

### ***McDesh, South Slope***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Smooth and slightly concave, south-facing backslopes and footslopes

*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.6 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

### **Typical profile**

A—0 to 3 inches; loam

Bt1—3 to 8 inches; clay

Bt2—8 to 37 inches; clay

R—37 to 47 inches; unweathered bedrock

### ***Duco, Stony Loam, Very Stony Surface***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes and shoulders

*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

**Interpretive groups***Land capability subclass (nonirrigated): 7e**Ecological site: SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)***Typical profile**

A—0 to 3 inches; stony loam

Bt—3 to 15 inches; extremely stony clay loam

R—15 to 25 inches; unweathered bedrock

***Dissimilar Minor Components*****Hann***Composition: 10 percent**Geomorphic position: Toeslopes**Ecological site: NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)***Shafer***Composition: 5 percent**Geomorphic position: Footslopes**Ecological site: CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)****Major Use***

Livestock grazing

***621—McDaniel-Hovelton association, 35 to 65 percent slopes******Map Unit Setting****General landscape: Foothills**Major land resource area (MLRA): 10**Elevation: 3,650 to 4,850 feet**Mean annual precipitation: 15 to 18 inches**Mean annual air temperature: 47 to 49 degrees F**Frost-free period: 110 to 130 days****Map Unit Composition****McDaniel and similar soils: 45 percent**Hovelton and similar soils: 40 percent**Dissimilar minor components: 15 percent****Major Components******McDaniel*****Setting***Landform: Volcanic cones**Geomorphic position: Slightly concave, south-facing backslopes**Parent material: Volcanic ash and colluvium derived from basalt and welded tuff***Properties and qualities***Slope: 35 to 65 percent**Percentage of surface area covered by stones and boulders: None**Shrink-swell potential: Moderate**Depth to restrictive feature: None within a depth of 60 inches**Drainage class: Well drained*

*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A1—0 to 4 inches; very gravelly ashy loam  
 A2—4 to 14 inches; very gravelly ashy loam  
 2BA1—14 to 23 inches; very gravelly silt loam  
 2BA2—23 to 34 inches; very gravelly silt loam  
 2Bt—34 to 60 inches; very gravelly clay loam

#### ***Hovelton, Gravelly Ashy Loam***

#### **Setting**

*Landform:* Volcanic cones  
*Geomorphic position:* Convex, south-facing backslopes  
*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

A—0 to 7 inches; gravelly ashy loam  
 AB—7 to 17 inches; very cobbly ashy loam  
 Bt—17 to 38 inches; extremely cobbly clay loam  
 R—38 to 48 inches; unweathered bedrock

#### ***Dissimilar Minor Components***

#### **Vitrantic Haploxerolls, dry**

*Composition:* 10 percent  
*Geomorphic position:* Concave backslopes  
*Ecological site:* NORTH SLOPE BRUSH 16-20 PREM/ELGLG (R010XY027ID)

#### **Rubble land**

*Composition:* 5 percent  
*Geomorphic position:* Backslopes

#### ***Major Uses***

Livestock grazing, wildlife habitat

## **622—Hovelton-Gwin complex, 15 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,990 to 4,860 feet  
*Mean annual precipitation:* 17 to 20 inches  
*Mean annual air temperature:* 45 to 47 degrees F  
*Frost-free period:* 90 to 110 days

### **Map Unit Composition**

*Hovelton and similar soils:* 50 percent  
*Gwin and similar soils:* 30 percent  
*Dissimilar minor components:* 20 percent

### **Major Components**

#### **Hovelton, Gravelly Ashy Loam**

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly convex, north-facing backslopes  
*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

#### **Properties and qualities**

*Slope:* 25 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Typical profile**

A—0 to 7 inches; gravelly ashy loam  
 AB—7 to 17 inches; very cobbly ashy loam  
 Bt—17 to 38 inches; extremely cobbly clay loam  
 R—38 to 48 inches; unweathered bedrock

#### **Gwin, Very Stony Loam, Extremely Stony Surface**

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Convex, north-facing shoulders and summits  
*Parent material:* Residuum and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 15 to 35 percent  
*Percentage of surface area covered by stones and boulders:* 3 to 15 percent  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 0.9 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE  
 (R010XY018ID)

**Typical profile**

A—0 to 4 inches; very stony loam  
 BA—4 to 7 inches; very stony loam  
 Bt—7 to 13 inches; extremely cobbly clay loam  
 R—13 to 22 inches; unweathered bedrock

***Dissimilar Minor Components***

**Vitrandic Argixerolls, ashy loam, moist**

*Composition:* 10 percent  
*Geomorphic position:* Upper backslopes  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**McDaniel**

*Composition:* 5 percent  
*Geomorphic position:* Footslopes  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6  
 (R010XY010ID)

**Typic Argixerolls, shallow, very stony surface**

*Composition:* 5 percent  
*Geomorphic position:* Shoulders  
*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

***Major Use***

Livestock grazing

**630—Gwin-Flybow-Rock outcrop complex, 35 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 10  
*Elevation:* 4,480 to 6,210 feet  
*Mean annual precipitation:* 17 to 20 inches  
*Mean annual air temperature:* 45 to 47 degrees F  
*Frost-free period:* 90 to 110 days

***Map Unit Composition***

*Gwin and similar soils:* 45 percent  
*Flybow and similar soils:* 25 percent  
*Rock outcrop:* 20 percent  
*Dissimilar minor components:* 10 percent

## **Major Components**

### **Gwin, Very Gravelly Loam**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks

*Parent material:* Residuum and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE  
(R010XY018ID)

#### **Typical profile**

A—0 to 5 inches; very gravelly loam

Bt—5 to 15 inches; very gravelly clay loam

R—15 to 24 inches; unweathered bedrock

### **Flybow**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks

*Parent material:* Residuum and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 4 to 10 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.4 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE  
(R010XY018ID)

#### **Typical profile**

A1—0 to 3 inches; very gravelly loam

A2—3 to 8 inches; extremely gravelly loam

R—8 to 18 inches; unweathered bedrock

**Rock Outcrop**

*Landform:* Mountain slopes  
*Geomorphic position:* Flanks, ridges  
*Land capability subclass (nonirrigated):* 8

**Dissimilar Minor Components****Hovelton, gravelly ashy loam**

*Composition:* 5 percent  
*Geomorphic position:* Concave flanks  
*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Rubble land**

*Composition:* 5 percent  
*Geomorphic position:* Flanks

**Major Uses**

Livestock grazing, wildlife habitat

## **631—Flybow-Rock outcrop-Rubble land complex, 35 to 90 percent slopes**

**Map Unit Setting**

*General landscape:* Canyonland  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,530 to 6,150 feet  
*Mean annual precipitation:* 15 to 20 inches  
*Mean annual air temperature:* 45 to 49 degrees F  
*Frost-free period:* 90 to 130 days

**Map Unit Composition**

*Flybow and similar soils:* 40 percent  
*Rock outcrop:* 30 percent  
*Rubble land:* 20 percent  
*Dissimilar minor components:* 10 percent

**Major Components****Flybow****Setting**

*Landform:* Canyon walls  
*Geomorphic position:* Convex, south-facing backslopes  
*Parent material:* Residuum and colluvium derived from basalt

**Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 4 to 10 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.4 inch

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

### **Typical profile**

A1—0 to 3 inches; very gravelly loam

A2—3 to 8 inches; extremely gravelly loam

R—8 to 18 inches; unweathered bedrock

### **Rock Outcrop**

*Landform:* Canyon walls

*Geomorphic position:* South-facing backslopes

*Land capability subclass (nonirrigated):* 8

### **Rubble Land**

*Landform:* Canyon walls

*Geomorphic position:* South-facing backslopes

*Land capability subclass (nonirrigated):* 8

### **Dissimilar Minor Components**

#### **Gwin, very gravelly loam**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

#### **Vitrandic Argixerolls, ashy loam, moist**

*Composition:* 5 percent

*Geomorphic position:* Footslopes

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### **Major Use**

Wildlife habitat

## **634—Gwin-McDesh-Rock outcrop complex, 4 to 25 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 4,060 to 4,420 feet

*Mean annual precipitation:* 16 to 18 inches

*Mean annual air temperature:* 47 to 48 degrees F

*Frost-free period:* 110 to 120 days

### **Map Unit Composition**

*Gwin and similar soils:* 40 percent

*McDesh and similar soils:* 25 percent

*Rock outcrop:* 25 percent

*Dissimilar minor component:* 10 percent

## **Major Components**

### ***Gwin, Very Stony Loam, Extremely Stony Surface***

#### **Setting**

*Landform:* Structural benches

*Geomorphic position:* Convex summits

*Parent material:* Residuum and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 4 to 25 percent

*Percentage of surface area covered by stones and boulders:* 3 to 15 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.9 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE  
(R010XY018ID)

#### **Typical profile**

A—0 to 4 inches; very stony loam

BA—4 to 7 inches; very stony loam

Bt—7 to 13 inches; extremely cobbly clay loam

R—13 to 22 inches; unweathered bedrock

### ***McDesh, Very Stony Loam, Very Stony Surface***

#### **Setting**

*Landform:* Structural benches

*Geomorphic position:* Concave summits

*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 4 to 25 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

#### **Typical profile**

A—0 to 3 inches; very stony loam

BA—3 to 7 inches; very stony loam

Bt1—7 to 12 inches; clay loam

Bt2—12 to 20 inches; clay  
 Bt3—20 to 24 inches; gravelly clay  
 R—24 to 34 inches; unweathered bedrock

**Rock Outcrop**

*Landform:* Structural benches  
*Geomorphic position:* Summits, rims  
*Land capability subclass (nonirrigated):* 8

**Dissimilar Minor Component**

**Shafer, very stony surface**

*Composition:* 10 percent  
*Geomorphic position:* Concave summits  
*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Major Use**

Livestock grazing

**635—Shafer-Karney-Yad complex, 8 to 35 percent slopes**

**Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,880 to 4,300 feet  
*Mean annual precipitation:* 16 to 18 inches  
*Mean annual air temperature:* 47 to 48 degrees F  
*Frost-free period:* 110 to 120 days

**Map Unit Composition**

*Shafer and similar soils:* 40 percent  
*Karney and similar soils:* 25 percent  
*Yad and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

**Major Components**

**Shafer, Very Stony Surface**

**Setting**

*Landform:* Butte escarpments  
*Geomorphic position:* Slightly convex footslopes  
*Parent material:* Clayey lacustrine deposits and colluvium derived from basalt and welded tuff

**Properties and qualities**

*Slope:* 8 to 35 percent  
*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Very slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Ecological site: CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)*

**Typical profile**

A—0 to 2 inches; very stony clay loam

BA—2 to 6 inches; cobbly clay loam

Bt1—6 to 9 inches; clay

Bt2—9 to 19 inches; clay

Btq—19 to 22 inches; cobbly clay loam

R—22 to 32 inches; unweathered bedrock

**Karney****Setting**

*Landform: Butte escarpments*

*Geomorphic position: Slightly concave footslopes*

*Parent material: Colluvium derived from welded tuff and granodiorite*

**Properties and qualities**

*Slope: 8 to 35 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: High*

*Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic), 40 to 60 inches to bedrock (lithic)*

*Drainage class: Well drained*

*Permeability class (slowest): Slow*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 4.2 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 6e*

*Ecological site: LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)*

**Typical profile**

A—0 to 3 inches; loam

Bt1—3 to 6 inches; clay loam

Bt2—6 to 12 inches; clay

Bt3—12 to 20 inches; clay

Bt4—20 to 31 inches; clay

2Cr—31 to 55 inches; weathered bedrock

2R—55 to 65 inches; unweathered bedrock

**Yad****Setting**

*Landform: Butte escarpments*

*Geomorphic position: Concave footslopes*

*Parent material: Clayey alluvium over loamy lacustrine deposits*

**Properties and qualities**

*Slope: 8 to 35 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Moderate*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Well drained*

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.5 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

### **Typical profile**

A—0 to 2 inches; clay loam

BA—2 to 6 inches; clay loam

Btss1—6 to 14 inches; clay loam

Btss2—14 to 25 inches; clay

2Bt1—25 to 41 inches; clay loam

2Bt2—41 to 52 inches; gravelly sandy clay loam

2Bt3—52 to 60 inches; clay loam

### ***Dissimilar Minor Components***

#### **Cranegulch**

*Composition:* 5 percent

*Geomorphic position:* Concave footslopes

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

#### **Torrertic Argixerolls, dry**

*Composition:* 5 percent

*Geomorphic position:* Convex footslopes

*Ecological site:* LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Knolls

### ***Major Use***

Livestock grazing

## **636—Hann-McDesh-Robbscreek complex, 15 to 50 percent slopes**

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,930 to 4,360 feet

*Mean annual precipitation:* 18 to 20 inches

*Mean annual air temperature:* 46 to 47 degrees F

*Frost-free period:* 100 to 110 days

### ***Map Unit Composition***

*Hann and similar soils:* 30 percent

*McDesh and similar soils:* 30 percent

*Robbscreek and similar soils:* 25 percent

*Dissimilar minor components:* 15 percent

## **Major Components**

### **Hann, Stony Surface**

#### **Setting**

*Landform:* Butte escarpments

*Geomorphic position:* Concave, north-facing backslopes

*Parent material:* Clayey alluvium

#### **Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* Less than 0.1 percent

*Shrink-swell potential:* High

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A1—0 to 4 inches; cobbly silt loam

A2—4 to 11 inches; cobbly silty clay loam

BA—11 to 20 inches; cobbly silty clay loam

Bt1—20 to 27 inches; silty clay

Bt2—27 to 38 inches; silty clay

Bt3—38 to 41 inches; silty clay

Bt4—41 to 52 inches; silty clay

Bt5—52 to 60 inches; clay

### **McDesh, Very Stony Loam, Extremely Bouldery Surface**

#### **Setting**

*Landform:* Butte escarpments

*Geomorphic position:* Smooth and slightly concave, north-facing backslopes

*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 25 to 50 percent

*Percentage of surface area covered by stones and boulders:* 3 to 15 percent

*Shrink-swell potential:* High

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecological site:* STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)

**Typical profile**

A—0 to 3 inches; very stony loam  
 BA—3 to 12 inches; very stony clay loam  
 Bt1—12 to 17 inches; silty clay loam  
 Bt2—17 to 21 inches; silty clay  
 Btss1—21 to 32 inches; silty clay  
 Btss2—32 to 37 inches; clay  
 Bq—37 to 39 inches; clay loam  
 2R—39 to 41 inches; unweathered bedrock

***Robbscreek, Moist*****Setting**

*Landform:* Butte escarpments  
*Geomorphic position:* Convex, north-facing backslopes  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 50 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Ecological site:* NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)

**Typical profile**

A—0 to 10 inches; fine gravelly coarse sandy loam  
 Bt1—10 to 22 inches; fine gravelly sandy clay loam  
 Bt2—22 to 30 inches; fine gravelly sandy clay loam  
 R—30 to 40 inches; unweathered bedrock

***Dissimilar Minor Components*****Aradaran**

*Composition:* 5 percent  
*Geomorphic position:* Concave footslopes  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

**Shafer, very stony surface**

*Composition:* 5 percent  
*Geomorphic position:* Convex footslopes  
*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

**Rock outcrop**

*Composition:* 5 percent  
*Geomorphic position:* Rims

***Major Use***

Livestock grazing

## **638—Yad-Cranegulch-Duco complex, 4 to 15 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 10  
*Elevation:* 3,960 to 4,120 feet  
*Mean annual precipitation:* 16 to 17 inches  
*Mean annual air temperature:* 47 to 48 degrees F  
*Frost-free period:* 110 to 120 days

### **Map Unit Composition**

*Yad and similar soils:* 35 percent  
*Cranegulch and similar soils:* 25 percent  
*Duco and similar soils:* 25 percent  
*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Yad**

#### **Setting**

*Landform:* Structural benches  
*Geomorphic position:* Smooth areas  
*Parent material:* Clayey alluvium over loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 4 to 15 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Very slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 9.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6s  
*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Typical profile**

A—0 to 2 inches; clay loam  
 BA—2 to 6 inches; clay loam  
 Btss1—6 to 14 inches; clay loam  
 Btss2—14 to 25 inches; clay  
 2Bt1—25 to 41 inches; clay loam  
 2Bt2—41 to 52 inches; gravelly sandy clay loam  
 2Bt3—52 to 60 inches; clay loam

#### **Cranegulch**

#### **Setting**

*Landform:* Structural benches  
*Geomorphic position:* Concave areas  
*Parent material:* Loamy alluvium

**Properties and qualities**

*Slope:* 5 to 15 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Typical profile**

A1—0 to 3 inches; loam

A2—3 to 10 inches; loam

Bt1—10 to 14 inches; sandy clay loam

Bt2—14 to 21 inches; sandy clay

Bt3—21 to 33 inches; clay

Bt4—33 to 50 inches; sandy clay

Bt5—50 to 60 inches; clay loam

***Duco, Stony Loam, Very Stony Surface*****Setting**

*Landform:* Structural benches

*Geomorphic position:* Convex areas

*Parent material:* Colluvium derived from basalt

**Properties and qualities**

*Slope:* 4 to 15 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6s

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

**Typical profile**

A—0 to 3 inches; stony loam

Bt—3 to 15 inches; extremely stony clay loam

R—15 to 25 inches; unweathered bedrock

***Dissimilar Minor Components*****McDesh, south slope**

*Composition:* 10 percent

*Geomorphic position:* Smooth and slightly concave areas

*Ecological site:* LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)

**Shafer, very stony surface***Composition:* 5 percent*Geomorphic position:* Slightly convex areas*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)**Major Use**

Livestock grazing

**640—Timberbutte very gravelly ashy silt loam, 35 to 65 percent slopes****Map Unit Setting***General landscape:* Foothills*Major land resource area (MLRA):* 43B*Elevation:* 4,090 to 5,040 feet*Mean annual precipitation:* 26 to 30 inches*Mean annual air temperature:* 43 to 45 degrees F*Frost-free period:* 75 to 90 days**Map Unit Composition***Timberbutte and similar soils:* 85 percent*Dissimilar minor components:* 15 percent**Major Component****Timberbutte****Setting***Landform:* Volcanic cones*Geomorphic position:* North-facing backslopes*Parent material:* Volcanic ash and colluvium derived from welded tuff**Properties and qualities***Slope:* 35 to 65 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Somewhat excessively drained*Permeability class (slowest):* Moderate*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 7.5 inches**Interpretive groups***Land capability subclass (nonirrigated):* 7e*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; very gravelly ashy silt loam

Bw1—12 to 21 inches; very gravelly ashy silt loam

Bw2—21 to 29 inches; very gravelly ashy silt loam

2Bw3—29 to 39 inches; extremely gravelly sandy loam

2C—39 to 60 inches; extremely gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Typic Vitrixerands, thin surface**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex backslopes

*Forest habitat type:* Douglas-fir/elk sedge-ponderosa pine phase (CDG142)

#### **Vitrandic Argixerolls, gravelly ashy loam, shallow**

*Composition:* 5 percent

*Geomorphic position:* Convex backslopes and shoulders

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### ***Major Use***

Timber production

## **641—Aradaran-Yad complex, 4 to 15 percent slopes**

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 10

*Elevation:* 3,880 to 4,180 feet

*Mean annual precipitation:* 16 to 18 inches

*Mean annual air temperature:* 47 to 48 degrees F

*Frost-free period:* 110 to 120 days

### ***Map Unit Composition***

*Aradaran and similar soils:* 45 percent

*Yad and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

### ***Major Components***

#### ***Aradaran***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave areas

*Parent material:* Clayey alluvium

#### **Properties and qualities**

*Slope:* 4 to 15 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Typical profile**

A1—0 to 3 inches; loam

A2—3 to 9 inches; loam

BA—9 to 14 inches; loam  
 Bt1—14 to 23 inches; clay loam  
 Bt2—23 to 29 inches; clay loam  
 Bt3—29 to 42 inches; clay  
 Bt4—42 to 55 inches; fine gravelly clay loam  
 Bt5—55 to 60 inches; fine gravelly sandy clay loam

### ***Yad***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex areas

*Parent material:* Clayey alluvium over loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 4 to 15 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6s

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

#### **Typical profile**

A—0 to 2 inches; clay loam

BA—2 to 6 inches; clay loam

Btss1—6 to 14 inches; clay loam

Btss2—14 to 25 inches; clay

2Bt1—25 to 41 inches; clay loam

2Bt2—41 to 52 inches; gravelly sandy clay loam

2Bt3—52 to 60 inches; clay loam

### ***Dissimilar Minor Components***

#### **Duco, stony loam, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* Convex areas

*Ecological site:* SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)

#### **Hann**

*Composition:* 5 percent

*Geomorphic position:* Concave areas

*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)

#### **Shafer**

*Composition:* 5 percent

*Geomorphic position:* Convex areas

*Ecological site:* CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)

### ***Major Use***

Livestock grazing

## **650—Longs-Highvalley-Hoff complex, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 4,440 to 6,780 feet  
*Mean annual precipitation:* 26 to 36 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Longs and similar soils:* 40 percent  
*Highvalley and similar soils:* 30 percent  
*Hoff and similar soils:* 20 percent  
*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Longs**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Smooth and slightly convex ridges  
*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

#### **Properties and qualities**

*Slope:* 15 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 9 inches; ashy loam  
 AB—9 to 29 inches; gravelly ashy loam  
 2Bt1—29 to 44 inches; extremely gravelly loam  
 2Bt2—44 to 49 inches; extremely gravelly loam  
 2R—49 to 59 inches; unweathered bedrock

#### **Highvalley**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Concave ridges  
*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 12.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

AB—5 to 10 inches; ashy loam

Bw1—10 to 24 inches; ashy loam

Bw2—24 to 48 inches; ashy loam

Bw3—48 to 66 inches; ashy loam

***Hoff*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex ridges

*Parent material:* Volcanic ash and colluvium derived from basalt

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A—0 to 6 inches; gravelly ashy loam

AB—6 to 11 inches; very gravelly ashy loam

Bt—11 to 19 inches; extremely cobbly ashy clay loam

R—19 to 29 inches; unweathered bedrock

***Dissimilar Minor Component*****Vitrandid Haploxerolls, ashy loam**

*Composition:* 10 percent

*Geomorphic position:* Convex ridges

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Major Uses**

Timber production, livestock grazing

## **651—Hess-Lidos-Cleymor complex, 4 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 43B  
*Elevation:* 4,880 to 5,550 feet  
*Mean annual precipitation:* 26 to 30 inches  
*Mean annual air temperature:* 42 to 44 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Hess and similar soils:* 35 percent  
*Lidos and similar soils:* 30 percent  
*Cleymor and similar soils:* 25 percent  
*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Hess**

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly concave areas  
*Parent material:* Volcanic ash and colluvium derived from basalt and tuff

#### **Properties and qualities**

*Slope:* 4 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Moderate  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 4 inches; ashy loam  
 A2—4 to 10 inches; paragravelly ashy loam  
 BA—10 to 15 inches; paragravelly ashy loam  
 2Bt1—15 to 20 inches; paragravelly clay loam  
 2Bt2—20 to 29 inches; paragravelly clay loam  
 2Bt3—29 to 38 inches; very paragravelly clay loam

2Bt4—38 to 44 inches; very paragravelly clay loam  
 2R—44 to 54 inches; unweathered bedrock

### ***Lidos***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex areas

*Parent material:* Volcanic ash and colluvium derived from basalt over clayey alluvium

#### **Properties and qualities**

*Slope:* 4 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; ashy loam

Bt1—9 to 16 inches; gravelly ashy silty clay loam

2Bt2—16 to 22 inches; gravelly silty clay loam

2Bt3—22 to 40 inches; very gravelly silty clay loam

2Bt4—40 to 47 inches; very gravelly silty clay loam

3Eb—47 to 53 inches; gravelly sandy loam

3Btb—53 to 60 inches; silty clay

### ***Cleymor***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave areas

*Parent material:* Clayey alluvium

#### **Properties and qualities**

*Slope:* 4 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; silt loam  
 ABt—4 to 7 inches; silty clay loam  
 Bt1—7 to 11 inches; silty clay loam  
 Bt2—11 to 18 inches; silty clay loam  
 Btss1—18 to 31 inches; silty clay  
 Btss2—31 to 37 inches; silty clay  
 Bt3—37 to 45 inches; cobbly silty clay  
 Bt4—45 to 60 inches; silty clay

### ***Dissimilar Minor Components***

#### **Klicker**

*Composition:* 5 percent

*Geomorphic position:* Convex areas

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Vertic Argixerolls, moderately well drained**

*Composition:* 5 percent

*Geomorphic position:* Fluves

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### ***Major Uses***

Timber production, livestock grazing

## ***652—Hess-Lidos-Klicker complex, 15 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 4,200 to 5,890 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 41 to 45 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Hess and similar soils:* 40 percent

*Lidos and similar soils:* 30 percent

*Klicker and similar soils:* 20 percent

*Dissimilar minor component:* 10 percent

### ***Major Components***

#### ***Hess***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, north-facing flanks and bases

*Parent material:* Volcanic ash and colluvium derived from basalt and tuff

#### **Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; ashy loam

A2—4 to 10 inches; paragravelly ashy loam

BA—10 to 15 inches; paragravelly ashy loam

2Bt1—15 to 20 inches; paragravelly clay loam

2Bt2—20 to 29 inches; paragravelly clay loam

2Bt3—29 to 38 inches; very paragravelly clay loam

2Bt4—38 to 44 inches; very paragravelly clay loam

2R—44 to 54 inches; unweathered bedrock

## ***Lidos***

### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from basalt over clayey alluvium

### **Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8.6 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; ashy loam

Bt1—9 to 16 inches; gravelly ashy silty clay loam

2Bt2—16 to 22 inches; gravelly silty clay loam

2Bt3—22 to 40 inches; very gravelly silty clay loam

2Bt4—40 to 47 inches; very gravelly silty clay loam

3Eb—47 to 53 inches; gravelly sandy loam

3Btb—53 to 60 inches; silty clay

### ***Klicker***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

ABt—8 to 12 inches; gravelly ashy loam

Bt1—12 to 17 inches; gravelly clay loam

Bt2—17 to 26 inches; very gravelly clay loam

R—26 to 36 inches; unweathered bedrock

### ***Dissimilar Minor Component***

#### **Hoff, south slope**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks and ridges

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### ***Major Uses***

Timber production, livestock grazing

## ***653—Lidos-Klicker-Hess complex, 35 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,860 to 5,700 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 41 to 45 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Lidos and similar soils:* 45 percent

*Klicker and similar soils:* 30 percent

*Hess and similar soils: 20 percent*  
*Dissimilar minor components: 5 percent*

### **Major Components**

#### **Lidos**

##### **Setting**

*Landform: Mountain slopes*  
*Geomorphic position: Slightly concave, north-facing flanks*  
*Parent material: Volcanic ash and colluvium derived from basalt over clayey alluvium*

##### **Properties and qualities**

*Slope: 35 to 65 percent*  
*Percentage of surface area covered by stones and boulders: None*  
*Shrink-swell potential: Moderate*  
*Depth to restrictive feature: None within a depth of 60 inches*  
*Drainage class: Well drained*  
*Permeability class (slowest): Slow*  
*Flooding frequency: None*  
*Seasonal high water table (minimum depth): More than 72 inches*  
*Available water capacity (entire profile): About 8.6 inches*

##### **Interpretive groups**

*Land capability subclass (nonirrigated): 7e*  
*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

##### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 9 inches; ashy loam  
 Bt1—9 to 16 inches; gravelly ashy silty clay loam  
 2Bt2—16 to 22 inches; gravelly silty clay loam  
 2Bt3—22 to 40 inches; very gravelly silty clay loam  
 2Bt4—40 to 47 inches; very gravelly silty clay loam  
 3Eb—47 to 53 inches; gravelly sandy loam  
 3Btb—53 to 60 inches; silty clay

#### **Klicker**

##### **Setting**

*Landform: Mountain slopes*  
*Geomorphic position: Slightly convex, north-facing flanks*  
*Parent material: Volcanic ash and colluvium derived from basalt*

##### **Properties and qualities**

*Slope: 35 to 65 percent*  
*Percentage of surface area covered by stones and boulders: None*  
*Shrink-swell potential: Moderate*  
*Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)*  
*Drainage class: Well drained*  
*Permeability class (slowest): Moderately slow*  
*Flooding frequency: None*  
*Seasonal high water table (minimum depth): More than 72 inches*  
*Available water capacity (entire profile): About 3.7 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

ABt—8 to 12 inches; gravelly ashy loam

Bt1—12 to 17 inches; gravelly clay loam

Bt2—17 to 26 inches; very gravelly clay loam

R—26 to 36 inches; unweathered bedrock

**Hess****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Concave, north-facing flanks*

*Parent material: Volcanic ash and colluvium derived from basalt and tuff*

**Properties and qualities**

*Slope: 35 to 65 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Moderate*

*Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)*

*Drainage class: Well drained*

*Permeability class (slowest): Moderately slow*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 8 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; ashy loam

A2—4 to 10 inches; paragravelly ashy loam

BA—10 to 15 inches; paragravelly ashy loam

2Bt1—15 to 20 inches; paragravelly clay loam

2Bt2—20 to 29 inches; paragravelly clay loam

2Bt3—29 to 38 inches; very paragravelly clay loam

2Bt4—38 to 44 inches; very paragravelly clay loam

2R—44 to 54 inches; unweathered bedrock

**Dissimilar Minor Component****Vitrandic Haploxerolls, ashy loam**

*Composition: 5 percent*

*Geomorphic position: Slightly concave flanks*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

**Major Use**

Timber production

## **654—Shilling-Highvalley-Hoff complex, 35 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,820 to 6,710 feet  
*Mean annual precipitation:* 26 to 36 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Shilling and similar soils:* 40 percent  
*Highvalley and similar soils:* 30 percent  
*Hoff and similar soils:* 20 percent  
*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Shilling**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly convex, north-facing flanks  
*Parent material:* Volcanic ash and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 5 inches; gravelly ashy loam  
 AB—5 to 10 inches; gravelly ashy loam  
 Bw1—10 to 19 inches; very gravelly loam  
 Bw2—19 to 35 inches; very gravelly loam  
 Bw3—35 to 54 inches; very gravelly loam  
 Bw4—54 to 60 inches; very gravelly loam

#### **Highvalley**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 12.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

AB—5 to 10 inches; ashy loam

Bw1—10 to 24 inches; ashy loam

Bw2—24 to 48 inches; ashy loam

Bw3—48 to 66 inches; ashy loam

**Hoff**

**Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from basalt

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A—0 to 6 inches; gravelly ashy loam

AB—6 to 11 inches; very gravelly ashy loam

Bt—11 to 19 inches; extremely cobbly ashy clay loam

R—19 to 29 inches; unweathered bedrock

**Dissimilar Minor Components**

**Vitrandic Argixerolls, ashy loam, south slope**

*Composition:* 5 percent

*Geomorphic position:* Bases

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Vitrandic Haploxerolls, ashy loam**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Major Use**

Timber production

**655—Shilling-Highvalley complex, 15 to 35 percent slopes**

**Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 4,870 to 6,320 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

**Map Unit Composition**

*Shilling and similar soils:* 40 percent

*Highvalley and similar soils:* 35 percent

*Dissimilar minor components:* 25 percent

**Major Components**

**Shilling, Moist**

**Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex flanks and ridges

*Parent material:* Volcanic ash and colluvium derived from basalt

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 9 inches; gravelly ashy loam

AB—9 to 15 inches; gravelly ashy loam

Bw1—15 to 25 inches; very gravelly loam

Bw2—25 to 45 inches; very gravelly loam

Bw3—45 to 60 inches; very gravelly loam

### ***Highvalley, Moist***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave flanks and ridges

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

#### **Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 11.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 10 inches; ashy loam

Bw1—10 to 35 inches; ashy loam

Bw2—35 to 60 inches; gravelly ashy loam

### ***Dissimilar Minor Components***

#### **Vertic Argicryolls, cold**

*Composition:* 10 percent

*Geomorphic position:* Fluves

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

#### **Bo**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

#### **Vitrandic Argixerolls, ashy loam, dry**

*Composition:* 5 percent

*Geomorphic position:* Bases

*Forest habitat type:* Grand fir/white spirea (CWS323)

#### **Vitrandic Argixerolls, ashy loam, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

### ***Major Uses***

Timber production, livestock grazing

## **656—Shilling-Highvalley complex, 35 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 4,440 to 6,210 feet  
*Mean annual precipitation:* 26 to 36 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Shilling and similar soils:* 50 percent  
*Highvalley and similar soils:* 40 percent  
*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Shilling, Moist**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly convex, north-facing flanks  
*Parent material:* Volcanic ash and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A—2 to 9 inches; gravelly ashy loam  
 AB—9 to 15 inches; gravelly ashy loam  
 Bw1—15 to 25 inches; very gravelly loam  
 Bw2—25 to 45 inches; very gravelly loam  
 Bw3—45 to 60 inches; very gravelly loam

#### **Highvalley, Moist**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave, north-facing flanks  
*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 11.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 10 inches; ashy loam

Bw1—10 to 35 inches; ashy loam

Bw2—35 to 60 inches; gravelly ashy loam

***Dissimilar Minor Components*****Awley**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Vitrandic Argixerolls, ashy loam, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

***Major Use***

Timber production

***657—Pumpkin stony loam, 8 to 25 percent slopes******Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 43B

*Elevation:* 4,960 to 5,840 feet

*Mean annual precipitation:* 28 to 34 inches

*Mean annual air temperature:* 41 to 44 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Pumpkin and similar soils:* 95 percent

*Dissimilar minor component:* 5 percent

**Major Component**  
**Pumpkin, Stony Surface**

**Setting***Landform:* Stream terraces*Geomorphic position:* Smooth and slightly concave areas*Parent material:* Loamy alluvium**Properties and qualities***Slope:* 8 to 25 percent*Percentage of surface area covered by stones and boulders:* Less than 0.1 percent*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Well drained*Permeability class (slowest):* Moderately slow*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 4.5 inches**Interpretive groups***Land capability subclass (nonirrigated):* 3e*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; stony loam

AB—3 to 9 inches; stony loam

Bt1—9 to 14 inches; gravelly clay loam

Bt2—14 to 22 inches; very gravelly loam

BCt—22 to 44 inches; extremely gravelly sandy loam

C—44 to 60 inches; extremely gravelly sandy loam

**Dissimilar Minor Component**

**Fluventic Haploxerolls, rarely flooded, bouldery surface, moist***Composition:* 5 percent*Geomorphic position:* Drainageways*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

**Major Uses**

Timber production, livestock grazing

**658—Cleymor-Pumpkin complex, 4 to 35 percent slopes**

**Map Unit Setting**

*General landscape:* Foothills*Major land resource area (MLRA):* 43B*Elevation:* 3,670 to 4,600 feet

*Mean annual precipitation:* 24 to 28 inches  
*Mean annual air temperature:* 44 to 45 degrees F  
*Frost-free period:* 75 to 90 days

### **Map Unit Composition**

*Cleymor and similar soils:* 50 percent  
*Pumpkin and similar soils:* 30 percent  
*Dissimilar minor components:* 20 percent

### **Major Components**

#### **Cleymor**

#### **Setting**

*Landform:* Structural benches  
*Geomorphic position:* Slightly concave areas  
*Parent material:* Clayey alluvium

#### **Properties and qualities**

*Slope:* 4 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* High  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Very slow  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 10.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 4 inches; silt loam  
 ABt—4 to 7 inches; silty clay loam  
 Bt1—7 to 11 inches; silty clay loam  
 Bt2—11 to 18 inches; silty clay loam  
 Btss1—18 to 31 inches; silty clay  
 Btss2—31 to 37 inches; silty clay  
 Bt3—37 to 45 inches; cobbly silty clay  
 Bt4—45 to 60 inches; silty clay

#### **Pumpkin, Stony Surface**

#### **Setting**

*Landform:* Structural benches  
*Geomorphic position:* Slightly convex areas  
*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 8 to 25 percent  
*Percentage of surface area covered by stones and boulders:* Less than 0.1 percent  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.5 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; stony loam

AB—3 to 9 inches; stony loam

Bt1—9 to 14 inches; gravelly clay loam

Bt2—14 to 22 inches; very gravelly loam

BCt—22 to 44 inches; extremely gravelly sandy loam

C—44 to 60 inches; extremely gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Lidos**

*Composition:* 10 percent

*Geomorphic position:* North-facing backslopes

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Middlefork, moist**

*Composition:* 5 percent

*Geomorphic position:* Smooth areas of adjacent relict lakebeds

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Vitrantic Argixerolls, gravelly ashy loam, shallow**

*Composition:* 5 percent

*Geomorphic position:* Knolls

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### ***Major Uses***

Timber production, livestock grazing

## **659—Hoff gravelly ashy loam, 8 to 50 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 5,110 to 7,050 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 39 to 45 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Hoff and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Major Component**

#### **Hoff, South Slope**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks and ridges

*Parent material:* Volcanic ash and colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 8 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Typical profile**

A—0 to 7 inches; gravelly ashy loam

Bt—7 to 12 inches; extremely gravelly ashy clay loam

R—12 to 22 inches; unweathered bedrock

### **Dissimilar Minor Components**

#### **Flybow**

*Composition:* 5 percent

*Geomorphic position:* Ridges

*Ecological site:* SHALLOW SOUTH STONY 14-18 PSSP6-POSE (R010XY018ID)

#### **Longs**

*Composition:* 5 percent

*Geomorphic position:* North-facing flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Flanks, ridges

### **Major Use**

Wildlife habitat

## **660—Longs-Highvalley complex, 35 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,780 to 6,070 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Longs and similar soils:* 60 percent

*Highvalley and similar soils:* 30 percent

*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Longs**

##### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

##### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.3 inches

##### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

##### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; ashy loam

AB—9 to 29 inches; gravelly ashy loam

2Bt1—29 to 44 inches; extremely gravelly loam

2Bt2—44 to 49 inches; extremely gravelly loam

2R—49 to 59 inches; unweathered bedrock

#### **Highvalley**

##### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

##### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 12.2 inches

##### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

O<sub>i</sub>—0 to 1 inch; slightly decomposed plant material  
 A—1 to 5 inches; ashy loam  
 AB—5 to 10 inches; ashy loam  
 Bw<sub>1</sub>—10 to 24 inches; ashy loam  
 Bw<sub>2</sub>—24 to 48 inches; ashy loam  
 Bw<sub>3</sub>—48 to 66 inches; ashy loam

***Dissimilar Minor Components*****Hoff**

*Composition:* 5 percent  
*Geomorphic position:* Convex flanks and ridges  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Vitrantic Haploxerolls, ashy loam**

*Composition:* 5 percent  
*Geomorphic position:* Convex flanks  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

***Major Use***

Timber production

***661—Awley-Bo complex, 15 to 35 percent slopes******Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 5,600 to 6,960 feet  
*Mean annual precipitation:* 30 to 36 inches  
*Mean annual air temperature:* 36 to 39 degrees F  
*Frost-free period:* 30 to 60 days

***Map Unit Composition***

*Awley and similar soils:* 50 percent  
*Bo and similar soils:* 35 percent  
*Dissimilar minor components:* 15 percent

***Major Components******Awley*****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Smooth and slightly convex, north-facing flanks and ridges  
*Parent material:* Volcanic ash over colluvium derived from basalt

**Properties and qualities**

*Slope:* 15 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

Bw1—8 to 18 inches; ashy loam

Bw2—18 to 25 inches; gravelly ashy sandy loam

Bw3—25 to 37 inches; very gravelly sandy loam

C1—37 to 45 inches; extremely gravelly sandy loam

C2—45 to 60 inches; extremely gravelly sandy loam

**Bo****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Concave, north-facing flanks and ridges

*Parent material:* Volcanic ash over colluvium derived from basalt

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; ashy loam

A2—4 to 10 inches; ashy loam

Bw1—10 to 16 inches; loam

Bw2—16 to 25 inches; loam

Bw3—25 to 51 inches; loam

2Bw4—51 to 60 inches; very cobbly loam

**Dissimilar Minor Components****Lithic Argicryolls, cold**

*Composition:* 10 percent

*Geomorphic position:* Ridges

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Andic Haplocryolls, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Major Uses**

Timber production, livestock grazing

## **662—Awley-Bo complex, 35 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 4,440 to 7,040 feet  
*Mean annual precipitation:* 28 to 36 inches  
*Mean annual air temperature:* 36 to 39 degrees F  
*Frost-free period:* 30 to 60 days

### **Map Unit Composition**

*Awley and similar soils:* 65 percent  
*Bo and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Awley**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Smooth and slightly convex, north-facing flanks  
*Parent material:* Volcanic ash over colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 8 inches; ashy loam  
 Bw1—8 to 18 inches; ashy loam  
 Bw2—18 to 25 inches; gravelly ashy sandy loam  
 Bw3—25 to 37 inches; very gravelly sandy loam  
 C1—37 to 45 inches; extremely gravelly sandy loam  
 C2—45 to 60 inches; extremely gravelly sandy loam

#### **Bo**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Concave, north-facing flanks  
*Parent material:* Volcanic ash over colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderate

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; ashy loam

A2—4 to 10 inches; ashy loam

Bw1—10 to 16 inches; loam

Bw2—16 to 25 inches; loam

Bw3—25 to 51 inches; loam

2Bw4—51 to 60 inches; very cobbly loam

#### ***Dissimilar Minor Components***

##### **Vitrandic Argicryolls, cold**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

##### **Andic Haplocryolls, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

#### ***Major Use***

Timber production

### **663—Cleymor-Hoff complex, 15 to 50 percent slopes**

#### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 43B

*Elevation:* 3,910 to 4,450 feet

*Mean annual precipitation:* 24 to 28 inches

*Mean annual air temperature:* 43 to 45 degrees F

*Frost-free period:* 75 to 90 days

#### ***Map Unit Composition***

*Cleymor and similar soils:* 65 percent

*Hoff and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

#### ***Major Components***

##### ***Cleymor***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave backslopes and ridges

*Parent material:* Clayey alluvium

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* High

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Very slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; silt loam

ABt—4 to 7 inches; silty clay loam

Bt1—7 to 11 inches; silty clay loam

Bt2—11 to 18 inches; silty clay loam

Btss1—18 to 31 inches; silty clay

Btss2—31 to 37 inches; silty clay

Bt3—37 to 45 inches; cobbly silty clay

Bt4—45 to 60 inches; silty clay

**Hoff****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing backslopes and ridges

*Parent material:* Volcanic ash and colluvium derived from basalt

**Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A—0 to 6 inches; gravelly ashy loam

AB—6 to 11 inches; very gravelly ashy loam

Bt—11 to 19 inches; extremely cobbly ashy clay loam

R—19 to 29 inches; unweathered bedrock

**Dissimilar Minor Components****Ultic Argixerolls, moderately deep**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex, south-facing backslopes

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Middlefork, moist**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave footslopes

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Major Use**

Timber production

**666—Pachic Argixerolls-Rubble land-Typic Haploxerolls complex, very steep**

**Map Unit Setting**

*General landscape:* Canyonland

*Major land resource area (MLRA):* 10, 43

*Elevation:* 3,050 to 3,740 feet

*Mean annual precipitation:* 14 to 24 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 75 to 140 days

**Map Unit Composition**

*Pachic Argixerolls and similar soils:* 40 percent

*Rubble land:* 30 percent

*Typic Haploxerolls and similar soils:* 15 percent

*Dissimilar minor components:* 15 percent

**Major Components**

**Pachic Argixerolls, Very Stony Surface**

**Setting**

*Landform:* Canyon walls

*Geomorphic position:* Concave and protected slopes

*Parent material:* Colluvium derived from basalt

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* 0.1 to 3.0 percent

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 40 to 80 inches to bedrock (lithic)

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecoclass habitat type:* Upland mixed conifer subseries (CDSX)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 11 inches; gravelly loam

AB—11 to 18 inches; gravelly loam

Bt1—18 to 24 inches; gravelly clay loam

Bt2—24 to 30 inches; gravelly clay loam  
 Bt3—30 to 48 inches; very cobbly clay loam  
 Bt4—48 to 60 inches; extremely stony clay loam

### ***Rubble Land***

*Landform:* Canyon walls  
*Geomorphic position:* Talus slopes  
*Land capability subclass (nonirrigated):* 8

### ***Typic Haploxerolls, Extremely Stony Surface***

#### **Setting**

*Landform:* Canyon walls  
*Geomorphic position:* Convex slopes  
*Parent material:* Colluvium derived from basalt

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* 3 to 15 percent  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 30 to 80 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecoclass habitat type:* Upland shrub/bunchgrass subseries (SMGX)

#### **Typical profile**

A1—0 to 8 inches; cobbly sandy loam  
 A2—8 to 18 inches; cobbly sandy loam  
 Bw1—18 to 26 inches; very cobbly sandy loam  
 Bw2—26 to 60 inches; extremely cobbly sandy loam

### ***Dissimilar Minor Components***

#### **Aquic Cumulic Haploxerolls**

*Composition:* 5 percent  
*Geomorphic position:* Drainageways  
*Ecoclass habitat type:* Riparian cottonwood/willow subseries (HCSX)

#### **Typic Argixerolls, very stony surface**

*Composition:* 5 percent  
*Geomorphic position:* Convex, exposed slopes  
*Ecoclass habitat type:* Upland shrub/bunchgrass subseries (SMGX)

#### **Rock outcrop**

*Composition:* 5 percent  
*Geomorphic position:* Rims

### ***Major Uses***

Wildlife habitat, recreation

**700—Drybuck-Whisk complex, 8 to 25 percent slopes****Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,520 to 5,430 feet  
*Mean annual precipitation:* 20 to 24 inches  
*Mean annual air temperature:* 46 to 48 degrees F  
*Frost-free period:* 100 to 125 days

**Map Unit Composition**

*Drybuck and similar soils:* 50 percent  
*Whisk and similar soils:* 30 percent  
*Dissimilar minor components:* 20 percent

**Major Components****Drybuck****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave ridges and spurs  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 7 inches; sandy loam  
 A2—7 to 15 inches; sandy loam  
 AB—15 to 31 inches; sandy loam  
 Bw1—31 to 43 inches; fine gravelly sandy loam  
 Bw2—43 to 53 inches; sandy loam  
 R—53 to 63 inches; unweathered bedrock

**Whisk, Moist****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Convex ridges and spurs  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

**Typical profile**

A—0 to 7 inches; fine gravelly sandy loam

Bw—7 to 15 inches; fine gravelly sandy loam

R—15 to 25 inches; unweathered bedrock

***Dissimilar Minor Components*****Ultic Haploxerolls, sandy loam, moderately deep**

*Composition:* 10 percent

*Geomorphic position:* Concave ridges and spurs

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Stardust**

*Composition:* 5 percent

*Geomorphic position:* Smooth and slightly convex ridges and spurs

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex ridges and spurs

***Major Uses***

Timber production, livestock grazing

***701—Drybuck-Whisk complex, 25 to 65 percent slopes******Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,010 to 5,290 feet

*Mean annual precipitation:* 20 to 24 inches

*Mean annual air temperature:* 46 to 48 degrees F

*Frost-free period:* 100 to 125 days

***Map Unit Composition***

*Drybuck and similar soils:* 55 percent

*Whisk and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

## **Major Components**

### **Drybuck**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 7 inches; sandy loam

A2—7 to 15 inches; sandy loam

AB—15 to 31 inches; sandy loam

Bw1—31 to 43 inches; fine gravelly sandy loam

Bw2—43 to 53 inches; sandy loam

R—53 to 63 inches; unweathered bedrock

### **Whisk, Moist**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks and spurs

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

#### **Typical profile**

A—0 to 7 inches; fine gravelly sandy loam

Bw—7 to 15 inches; fine gravelly sandy loam

R—15 to 25 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Rock outcrop**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks and spurs

#### **Huston, very stony surface**

*Composition:* 5 percent

*Geomorphic position:* Bases

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Ultic Haploxerolls, sandy loam, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex flanks

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### ***Major Use***

Timber production

## ***702—Deerrun-Kisky-Drybuck complex, 35 to 90 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 2,760 to 6,260 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 125 days

### ***Map Unit Composition***

*Deerrun and similar soils:* 40 percent

*Kisky and similar soils:* 40 percent

*Drybuck and similar soils:* 15 percent

*Dissimilar minor component:* 5 percent

### ***Major Components***

#### ***Deerrun***

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 11 inches; sandy loam

Bw—11 to 19 inches; sandy loam

C—19 to 33 inches; fine gravelly coarse sandy loam

R—33 to 43 inches; unweathered bedrock

***Kisky, Fine Gravelly Sandy Loam, Moist*****Setting**

*Landform: Mountain slopes, canyon walls*

*Geomorphic position: Convex, south-facing flanks*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 90 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)*

*Drainage class: Excessively drained*

*Permeability class (slowest): Rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 1.3 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; fine gravelly sandy loam

AC—8 to 14 inches; very gravelly loamy coarse sand

R—14 to 24 inches; unweathered bedrock

***Drybuck, Dry*****Setting**

*Landform: Mountain slopes, canyon walls*

*Geomorphic position: Slightly concave, south-facing flanks*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 90 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest): Moderately rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 7.2 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; sandy loam

AB—6 to 25 inches; sandy loam

Bw—25 to 45 inches; sandy loam

C—45 to 57 inches; sandy loam

R—57 to 67 inches; unweathered bedrock

***Dissimilar Minor Component*****Rock outcrop**

*Composition: 5 percent*

*Geomorphic position: Convex flanks and spurs*

***Major Uses***

Timber production, wildlife habitat

***704—Drybuck-Northfork-Whisk association, 25 to 65 percent slopes******Map Unit Setting***

*General landscape: Mountains*

*Major land resource area (MLRA): 43B*

*Elevation: 3,540 to 5,020 feet*

*Mean annual precipitation: 20 to 28 inches*

*Mean annual air temperature: 43 to 48 degrees F*

*Frost-free period: 75 to 120 days*

***Map Unit Composition***

*Drybuck and similar soils: 35 percent*

*Northfork and similar soils: 30 percent*

*Whisk and similar soils: 20 percent*

*Dissimilar minor components: 15 percent*

***Major Components******Drybuck*****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Smooth and slightly concave, south-facing flanks*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 25 to 65 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest): Moderately rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.1 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 7 inches; sandy loam

A2—7 to 15 inches; sandy loam

AB—15 to 31 inches; sandy loam

Bw1—31 to 43 inches; fine gravelly sandy loam

Bw2—43 to 53 inches; sandy loam

R—53 to 63 inches; unweathered bedrock

### **Northfork, Fine Gravelly Sandy Loam**

### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave, north-facing flanks

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.3 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 14 inches; fine gravelly sandy loam

Bw1—14 to 44 inches; fine gravelly sandy loam

Bw2—44 to 56 inches; fine gravelly sandy loam

Bw3—56 to 60 inches; very gravelly sandy loam

### **Whisk, Moist**

### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks, ridges, and spurs

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.4 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

#### **Typical profile**

A—0 to 7 inches; fine gravelly sandy loam  
 Bw—7 to 15 inches; fine gravelly sandy loam  
 R—15 to 25 inches; unweathered bedrock

#### ***Dissimilar Minor Components***

##### **Zimmer**

*Composition:* 10 percent  
*Geomorphic position:* Convex, north-facing flanks and spurs  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

##### **Rock outcrop**

*Composition:* 5 percent  
*Geomorphic position:* Convex flanks, ridges, and spurs

#### ***Major Use***

Timber production

## **705—Northfork-Shirts complex, 15 to 35 percent slopes**

#### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 4,090 to 5,620 feet  
*Mean annual precipitation:* 24 to 26 inches  
*Mean annual air temperature:* 43 to 45 degrees F  
*Frost-free period:* 75 to 90 days

#### ***Map Unit Composition***

*Northfork and similar soils:* 60 percent  
*Shirts and similar soils:* 20 percent  
*Dissimilar minor components:* 20 percent

#### ***Major Components***

##### ***Northfork, Sandy Loam***

##### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave flanks  
*Parent material:* Colluvium derived from granodiorite

##### **Properties and qualities**

*Slope:* 15 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.4 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 7 inches; sandy loam

Bw1—7 to 18 inches; fine gravelly sandy loam

Bw2—18 to 34 inches; fine gravelly sandy loam

BC—34 to 39 inches; fine gravelly sandy loam

C—39 to 60 inches; fine gravelly sandy loam

## ***Shirts, Sandy Loam, Dry***

### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly convex ridges and spurs

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.7 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 5 inches; sandy loam

AB—5 to 12 inches; sandy loam

Bw1—12 to 21 inches; coarse sandy loam

Bw2—21 to 33 inches; coarse sandy loam

C—33 to 39 inches; gravelly loamy coarse sand

R—39 to 49 inches; unweathered bedrock

## ***Dissimilar Minor Components***

### **Zimmer**

*Composition:* 10 percent

*Geomorphic position:* Convex ridges and spurs

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Vitrandic Argixerolls, ashy silt loam, moist***Composition:* 5 percent*Geomorphic position:* Bases*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Rock outcrop***Composition:* 5 percent*Geomorphic position:* Convex ridges and spurs**Major Uses**

Timber production, livestock grazing

**706—Northfork-Shirts-Zimmer complex, 35 to 90 percent slopes****Map Unit Setting***General landscape:* Mountains, canyonland*Major land resource area (MLRA):* 43B*Elevation:* 2,750 to 6,280 feet*Mean annual precipitation:* 26 to 34 inches*Mean annual air temperature:* 41 to 45 degrees F*Frost-free period:* 60 to 90 days**Map Unit Composition***Northfork and similar soils:* 40 percent*Shirts and similar soils:* 25 percent*Zimmer and similar soils:* 20 percent*Dissimilar minor components:* 15 percent**Major Components****Northfork, Fine Gravelly Sandy Loam****Setting***Landform:* Mountain slopes, canyon walls*Geomorphic position:* Concave, north-facing flanks*Parent material:* Colluvium derived from granodiorite**Properties and qualities***Slope:* 35 to 90 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Somewhat excessively drained*Permeability class (slowest):* Moderately rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 5.3 inches**Interpretive groups***Land capability subclass (nonirrigated):* 7e*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam  
 A2—4 to 14 inches; fine gravelly sandy loam  
 Bw1—14 to 44 inches; fine gravelly sandy loam  
 Bw2—44 to 56 inches; fine gravelly sandy loam  
 Bw3—56 to 60 inches; very gravelly sandy loam

### ***Shirts, Coarse Sandy Loam***

#### **Setting**

*Landform:* Mountain slopes, canyon walls  
*Geomorphic position:* Slightly convex, north-facing flanks  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 3 inches; coarse sandy loam  
 AB—3 to 10 inches; coarse sandy loam  
 Bw1—10 to 15 inches; fine gravelly coarse sandy loam  
 Bw2—15 to 25 inches; fine gravelly coarse sandy loam  
 C—25 to 29 inches; fine gravelly loamy coarse sand  
 R—29 to 39 inches; unweathered bedrock

### ***Zimmer***

#### **Setting**

*Landform:* Mountain slopes, canyon walls  
*Geomorphic position:* Convex, north-facing flanks and spurs  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A—0 to 7 inches; sandy loam  
 Bw—7 to 14 inches; fine gravelly sandy loam  
 R—14 to 24 inches; unweathered bedrock

***Dissimilar Minor Components*****Crumley**

*Composition:* 5 percent  
*Geomorphic position:* Lower concave flanks  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Eagleson, sandy loam**

*Composition:* 5 percent  
*Geomorphic position:* Upper concave flanks  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Rock outcrop**

*Composition:* 5 percent  
*Geomorphic position:* Convex flanks and spurs

***Major Uses***

Timber production, wildlife habitat

***707—Packerjohn-Shirts-Zimmer complex, 35 to 65 percent slopes******Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 4,440 to 5,990 feet  
*Mean annual precipitation:* 28 to 34 inches  
*Mean annual air temperature:* 41 to 44 degrees F  
*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Packerjohn and similar soils:* 40 percent  
*Shirts and similar soils:* 30 percent  
*Zimmer and similar soils:* 15 percent  
*Dissimilar minor components:* 15 percent

***Major Components******Packerjohn, Ashy Coarse Sandy Loam*****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Concave, north-facing flanks  
*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
 (CWS542)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A1—2 to 10 inches; ashy coarse sandy loam  
 A2—10 to 19 inches; fine gravelly ashy coarse sandy loam  
 Bw—19 to 33 inches; fine gravelly ashy loamy coarse sand  
 2C1—33 to 44 inches; fine gravelly loamy coarse sand  
 2C2—44 to 60 inches; very gravelly loamy coarse sand

#### ***Shirts, Coarse Sandy Loam***

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly convex, north-facing flanks  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-  
 PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 3 inches; coarse sandy loam  
 AB—3 to 10 inches; coarse sandy loam  
 Bw1—10 to 15 inches; fine gravelly coarse sandy loam  
 Bw2—15 to 25 inches; fine gravelly coarse sandy loam  
 C—25 to 29 inches; fine gravelly loamy coarse sand  
 R—29 to 39 inches; unweathered bedrock

#### ***Zimmer***

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Convex, north-facing flanks  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A—0 to 7 inches; sandy loam

Bw—7 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

***Dissimilar Minor Components*****Packerjohn, ashy sandy loam, dry**

*Composition:* 10 percent

*Geomorphic position:* Smooth and slightly concave flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks and spurs

***Major Use***

Timber production

***708—Zimmer-Northfork-Rock outcrop complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 2,880 to 6,880 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Zimmer and similar soils:* 35 percent

*Northfork and similar soils:* 25 percent

*Rock outcrop:* 25 percent

*Dissimilar minor components:* 15 percent

***Major Components******Zimmer*****Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Convex, north-facing flanks  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 1.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A—0 to 7 inches; sandy loam  
 Bw—7 to 14 inches; fine gravelly sandy loam  
 R—14 to 24 inches; unweathered bedrock

***Northfork, Fine Gravelly Sandy Loam***

**Setting**

*Landform:* Mountain slopes, canyon walls  
*Geomorphic position:* Concave, north-facing flanks  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 4 inches; fine gravelly sandy loam  
 A2—4 to 14 inches; fine gravelly sandy loam  
 Bw1—14 to 44 inches; fine gravelly sandy loam  
 Bw2—44 to 56 inches; fine gravelly sandy loam  
 Bw3—56 to 60 inches; very gravelly sandy loam

***Rock Outcrop***

*Landform:* Mountain slopes, canyon walls  
*Geomorphic position:* Convex flanks and ridges  
*Land capability subclass (nonirrigated):* 8

### ***Dissimilar Minor Components***

#### **Shirts, coarse sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Crumley**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks and bases

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### ***Major Uses***

Timber production, wildlife habitat

## ***709—Shirts-Charters complex, 15 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 4,400 to 6,060 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 41 to 44 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Shirts and similar soils:* 45 percent

*Charters and similar soils:* 30 percent

*Dissimilar minor components:* 25 percent

### ***Major Components***

#### ***Shirts, Sandy Loam, South Slope***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly convex ridges

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 5 inches; sandy loam  
 AB—5 to 11 inches; sandy loam  
 Bw1—11 to 23 inches; fine gravelly sandy loam  
 Bw2—23 to 35 inches; gravelly sandy loam  
 R—35 to 45 inches; unweathered bedrock

***Charters, Sandy Loam*****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave ridges  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A1—2 to 7 inches; sandy loam  
 A2—7 to 16 inches; sandy loam  
 Bw1—16 to 29 inches; fine gravelly sandy loam  
 Bw2—29 to 39 inches; fine gravelly sandy loam  
 C1—39 to 50 inches; fine gravelly loamy sand  
 C2—50 to 60 inches; fine gravelly loamy sand

***Dissimilar Minor Components*****Kosh, moist**

*Composition:* 10 percent  
*Geomorphic position:* Convex ridges  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Zimmer**

*Composition:* 10 percent  
*Geomorphic position:* Convex ridges  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Cumulic Ultic Haploxerolls, moderately well drained**

*Composition:* 5 percent  
*Geomorphic position:* Concave ridges  
*Ecological site:* SEMIWET MEADOW (R043AY008ID)

***Major Uses***

Timber production, livestock grazing

## **710—Charters-Northfork-Shirts complex, 35 to 90 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 3,030 to 6,570 feet

*Mean annual precipitation:* 26 to 34 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Charters and similar soils:* 35 percent

*Northfork and similar soils:* 35 percent

*Shirts and similar soils:* 15 percent

*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Charters, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Slightly concave, north-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 13 inches; fine gravelly sandy loam

Bw1—13 to 19 inches; fine gravelly coarse sandy loam

Bw2—19 to 34 inches; fine gravelly coarse sandy loam

Bw3—34 to 52 inches; fine gravelly coarse sandy loam

Bw4—52 to 60 inches; fine gravelly loamy coarse sand

#### **Northfork, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Concave, north-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 14 inches; fine gravelly sandy loam

Bw1—14 to 44 inches; fine gravelly sandy loam

Bw2—44 to 56 inches; fine gravelly sandy loam

Bw3—56 to 60 inches; very gravelly sandy loam

***Shirts, Coarse Sandy Loam*****Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; coarse sandy loam

AB—3 to 10 inches; coarse sandy loam

Bw1—10 to 15 inches; fine gravelly coarse sandy loam

Bw2—15 to 25 inches; fine gravelly coarse sandy loam

C—25 to 29 inches; fine gravelly loamy coarse sand

R—29 to 39 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Zimmer**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks and spurs

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Eagleson, sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### ***Major Uses***

Timber production, wildlife habitat

## ***711—Charters-Shirts-Zimmer complex, 15 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 4,150 to 6,530 feet

*Mean annual precipitation:* 26 to 28 inches

*Mean annual air temperature:* 40 to 44 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Charters and similar soils:* 30 percent

*Shirts and similar soils:* 30 percent

*Zimmer and similar soils:* 30 percent

*Dissimilar minor component:* 10 percent

### ***Major Components***

#### ***Charters, Fine Gravelly Sandy Loam, Dry***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave ridges and spurs

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 11 inches; fine gravelly sandy loam  
 A2—11 to 16 inches; fine gravelly sandy loam  
 Bw1—16 to 33 inches; fine gravelly sandy loam  
 Bw2—33 to 41 inches; fine gravelly sandy loam  
 Bw3—41 to 60 inches; fine gravelly sandy loam

***Shirts, Sandy Loam, Dry*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly convex ridges and spurs

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A—2 to 5 inches; sandy loam  
 AB—5 to 12 inches; sandy loam  
 Bw1—12 to 21 inches; coarse sandy loam  
 Bw2—21 to 33 inches; coarse sandy loam  
 C—33 to 39 inches; gravelly loamy coarse sand  
 R—39 to 49 inches; unweathered bedrock

***Zimmer*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex ridges and spurs

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7s*

*Forest habitat type: Douglas-fir/white spirea-ponderosa pine phase (CDS635)*

**Typical profile**

A—0 to 7 inches; sandy loam

Bw—7 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

***Dissimilar Minor Component*****Northfork, fine gravelly sandy loam**

*Composition: 10 percent*

*Geomorphic position: Concave ridges and spurs*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

***Major Uses***

Timber production, livestock grazing

***712—Charters-Shirts-Zimmer complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape: Mountains*

*Major land resource area (MLRA): 43B*

*Elevation: 3,080 to 6,510 feet*

*Mean annual precipitation: 26 to 34 inches*

*Mean annual air temperature: 40 to 45 degrees F*

*Frost-free period: 60 to 90 days*

***Map Unit Composition***

*Charters and similar soils: 40 percent*

*Shirts and similar soils: 35 percent*

*Zimmer and similar soils: 15 percent*

*Dissimilar minor components: 10 percent*

***Major Components******Charters, Fine Gravelly Sandy Loam*****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Concave, north-facing flanks*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 90 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest): Moderately rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 5.5 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 13 inches; fine gravelly sandy loam

Bw1—13 to 19 inches; fine gravelly coarse sandy loam

Bw2—19 to 34 inches; fine gravelly coarse sandy loam

Bw3—34 to 52 inches; fine gravelly coarse sandy loam

Bw4—52 to 60 inches; fine gravelly loamy coarse sand

***Shirts, Coarse Sandy Loam*****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Slightly convex, north-facing flanks*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 90 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest): Moderately rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 3.2 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; coarse sandy loam

AB—3 to 10 inches; coarse sandy loam

Bw1—10 to 15 inches; fine gravelly coarse sandy loam

Bw2—15 to 25 inches; fine gravelly coarse sandy loam

C—25 to 29 inches; fine gravelly loamy coarse sand

R—29 to 39 inches; unweathered bedrock

***Zimmer*****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Convex, north-facing flanks and ridges*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 90 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### **Typical profile**

A—0 to 7 inches; sandy loam

Bw—7 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Eagleson, sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Northfork, fine gravelly sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks and bases

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### ***Major Uses***

Timber production, wildlife habitat

## ***714—Shirts-Eagleson-Charters complex, 35 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 4,160 to 5,880 feet

*Mean annual precipitation:* 26 to 30 inches

*Mean annual air temperature:* 41 to 44 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Shirts and similar soils:* 40 percent

*Eagleson and similar soils:* 35 percent

*Charters and similar soils:* 15 percent

*Dissimilar minor component:* 10 percent

### ***Major Components***

#### ***Shirts, Sandy Loam, South Slope***

### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.8 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; sandy loam

AB—5 to 11 inches; sandy loam

Bw1—11 to 23 inches; fine gravelly sandy loam

Bw2—23 to 35 inches; gravelly sandy loam

R—35 to 45 inches; unweathered bedrock

***Eagleson, Fine Gravelly Sandy Loam*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 12 inches; fine gravelly sandy loam

Bw—12 to 17 inches; very gravelly sandy loam

C—17 to 25 inches; extremely gravelly loamy sand

R—25 to 35 inches; unweathered bedrock

***Charters, Sandy Loam*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 7 inches; sandy loam

A2—7 to 16 inches; sandy loam

Bw1—16 to 29 inches; fine gravelly sandy loam

Bw2—29 to 39 inches; fine gravelly sandy loam

C1—39 to 50 inches; fine gravelly loamy sand

C2—50 to 60 inches; fine gravelly loamy sand

***Dissimilar Minor Component*****Kosh, moist**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

***Major Use***

Timber production

***715—Eagleson-Kosh complex, 25 to 90 percent slopes******Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,350 to 7,580 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Eagleson and similar soils:* 45 percent

*Kosh and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

***Major Components******Eagleson, Fine Gravelly Sandy Loam, Dry*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, south-facing flanks and spurs

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 25 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 10 inches; fine gravelly sandy loam

A2—10 to 16 inches; very cobbly sandy loam

Bw—16 to 27 inches; extremely cobbly sandy loam

R—27 to 37 inches; unweathered bedrock

***Kosh*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks and spurs

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 25 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Typical profile**

A—0 to 10 inches; fine gravelly sandy loam

C—10 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

***Dissimilar Minor Components*****Ultic Haploxerolls, fine gravelly sandy loam, very deep**

*Composition:* 10 percent

*Geomorphic position:* Concave flanks and bases

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Ultic Haploxerolls, fine gravelly sandy loam, loamy subsoil**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave flanks

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

**Major Uses**

Timber production, wildlife habitat

**716—Zan-Belsh-Montchief complex, 35 to 90 percent slopes**

**Map Unit Setting**

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 4,690 to 7,360 feet

*Mean annual precipitation:* 28 to 36 inches

*Mean annual air temperature:* 36 to 39 degrees F

*Frost-free period:* 30 to 60 days

**Map Unit Composition**

*Zan and similar soils:* 45 percent

*Belsh and similar soils:* 25 percent

*Montchief and similar soils:* 25 percent

*Dissimilar minor component:* 5 percent

**Major Components**

**Zan**

**Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Slightly concave, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 3 inches; fine gravelly ashy coarse sandy loam

A2—3 to 14 inches; fine gravelly ashy coarse sandy loam

AB—14 to 24 inches; fine gravelly ashy loamy coarse sand

Bw—24 to 35 inches; fine gravelly ashy loamy coarse sand

2C—35 to 60 inches; very gravelly loamy coarse sand

**Belsh****Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Smooth, north-facing flanks

*Parent material:* Volcanic ash over colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 7 inches; fine gravelly ashy coarse sandy loam

AB—7 to 15 inches; fine gravelly ashy coarse sandy loam

2Bw—15 to 21 inches; very cobbly coarse sandy loam

2C1—21 to 37 inches; extremely cobbly coarse sand

2C2—37 to 60 inches; very gravelly coarse sand

**Montchief****Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 11 inches; ashy sandy loam

A2—11 to 16 inches; very gravelly ashy sandy loam

AC1—16 to 25 inches; extremely cobbly ashy loamy sand

AC2—25 to 33 inches; extremely cobbly ashy loamy coarse sand  
 R—33 to 43 inches; unweathered bedrock

***Dissimilar Minor Component***

**Lithic Dystrrocryepts**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks and spurs

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

***Major Uses***

Timber production, wildlife habitat

***718—Charters-Crumley-Eagleson complex, 35 to 90 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 3,330 to 6,810 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Charters and similar soils:* 35 percent

*Crumley and similar soils:* 30 percent

*Eagleson and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

***Major Components***

***Charters, Fine Gravelly Sandy Loam***

**Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Slightly concave, north-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam  
 A2—4 to 13 inches; fine gravelly sandy loam  
 Bw1—13 to 19 inches; fine gravelly coarse sandy loam  
 Bw2—19 to 34 inches; fine gravelly coarse sandy loam  
 Bw3—34 to 52 inches; fine gravelly coarse sandy loam  
 Bw4—52 to 60 inches; fine gravelly loamy coarse sand

### ***Crumley***

#### **Setting**

*Landform:* Mountain slopes, canyon walls  
*Geomorphic position:* Concave, north-facing flanks  
*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 14 to 25 inches to strongly contrasting textural stratification  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 2.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A1—2 to 4 inches; fine gravelly sandy loam  
 A2—4 to 12 inches; fine gravelly sandy loam  
 Bw—12 to 18 inches; very gravelly sandy loam  
 2C1—18 to 30 inches; extremely gravelly loamy sand  
 2C2—30 to 60 inches; extremely gravelly loamy sand

### ***Eagleson, Sandy Loam***

#### **Setting**

*Landform:* Mountain slopes, canyon walls  
*Geomorphic position:* Slightly convex, north-facing flanks  
*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; sandy loam

A2—4 to 15 inches; fine gravelly sandy loam

Bw—15 to 19 inches; fine gravelly sandy loam

C—19 to 37 inches; very cobbly sandy loam

R—37 to 47 inches; unweathered bedrock

***Dissimilar Minor Components***

**Shirts, coarse sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex flanks and spurs

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Kosh, moist**

*Composition:* 5 percent

*Geomorphic position:* Convex spurs and ridges

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

***Major Uses***

Timber production, wildlife habitat

***720—Drybuck-Deerrun-Kisky complex, 25 to 65 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 2,770 to 6,090 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 125 days

***Map Unit Composition***

*Drybuck and similar soils:* 40 percent

*Deerrun and similar soils:* 30 percent

*Kisky and similar soils:* 20 percent

*Dissimilar minor component:* 10 percent

***Major Components***

***Drybuck, Dry***

**Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.2 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; sandy loam

AB—6 to 25 inches; sandy loam

Bw—25 to 45 inches; sandy loam

C—45 to 57 inches; sandy loam

R—57 to 67 inches; unweathered bedrock

## ***Deerrun***

### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.9 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 11 inches; sandy loam

Bw—11 to 19 inches; sandy loam

C—19 to 33 inches; fine gravelly coarse sandy loam

R—33 to 43 inches; unweathered bedrock

## ***Kisky, Fine Gravelly Sandy Loam, Moist***

### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks and spurs

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

**Typical profile**

O<sub>i</sub>—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; fine gravelly sandy loam

AC—8 to 14 inches; very gravelly loamy coarse sand

R—14 to 24 inches; unweathered bedrock

***Dissimilar Minor Component*****Shimo, fine gravelly sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

*Ecological site:* SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)

***Major Use***

Timber production

***721—Shirts-Kosh-Charters complex, 25 to 65 percent slopes******Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,160 to 7,040 feet

*Mean annual precipitation:* 20 to 28 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Shirts and similar soils:* 40 percent

*Kosh and similar soils:* 30 percent

*Charters and similar soils:* 15 percent

*Dissimilar minor components:* 15 percent

***Major Components******Shirts, Fine Gravelly Sandy Loam*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; fine gravelly sandy loam

AB—7 to 11 inches; fine gravelly sandy loam

Bw—11 to 25 inches; fine gravelly sandy loam

C—25 to 29 inches; fine gravelly sandy loam

R—29 to 39 inches; unweathered bedrock

***Kosh*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Typical profile**

A—0 to 10 inches; fine gravelly sandy loam

C—10 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

***Charters, Fine Gravelly Sandy Loam, Dry*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 11 inches; fine gravelly sandy loam

A2—11 to 16 inches; fine gravelly sandy loam

Bw1—16 to 33 inches; fine gravelly sandy loam

Bw2—33 to 41 inches; fine gravelly sandy loam

Bw3—41 to 60 inches; fine gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Eagleson, fine gravelly sandy loam, dry**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

#### **Northfork, sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks and bases

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

### ***Major Use***

Timber production

## ***726—Garval-Kisky complex, 35 to 90 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 2,860 to 6,320 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 125 days

### ***Map Unit Composition***

*Garval and similar soils:* 50 percent

*Kisky and similar soils:* 25 percent

*Dissimilar minor components:* 25 percent

## **Major Components**

### **Garval**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 5 inches; fine gravelly loamy coarse sand

A2—5 to 13 inches; fine gravelly loamy coarse sand

AC—13 to 19 inches; gravelly coarse sand

C—19 to 29 inches; extremely gravelly coarse sand

R—29 to 39 inches; unweathered bedrock

### **Kisky, Fine Gravelly Loamy Coarse Sand**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.7 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Typical profile**

A1—0 to 4 inches; fine gravelly loamy coarse sand

A2—4 to 10 inches; fine gravelly loamy coarse sand

C—10 to 16 inches; extremely gravelly loamy coarse sand

R—16 to 26 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Drybuck**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave flanks and bases

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Huston, very stony surface**

*Composition:* 10 percent

*Geomorphic position:* Bases

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

### ***Major Uses***

Timber production (fig. 9), wildlife habitat

## ***730—Hellake-Stardust complex, 8 to 25 percent slopes***

### ***Map Unit Setting***

*General landscape:* Canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 3,540 to 4,390 feet

*Mean annual precipitation:* 20 to 24 inches

*Mean annual air temperature:* 46 to 48 degrees F

*Frost-free period:* 100 to 120 days

### ***Map Unit Composition***

*Hellake and similar soils:* 40 percent

*Stardust and similar soils:* 40 percent

*Dissimilar minor components:* 20 percent

### ***Major Components***

#### ***Hellake***

#### **Setting**

*Landform:* Landslides

*Geomorphic position:* Smooth and slightly concave areas

*Parent material:* Loamy lacustrine deposits over gravelly alluvium

#### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 30 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None



Figure 9.—Sparse forestland on a south-facing canyon wall in an area of Garval-Kisky complex, 35 to 90 percent slopes.

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Typical profile**

A—0 to 3 inches; loam

AB—3 to 10 inches; loam

Bt1—10 to 22 inches; clay loam

Bt2—22 to 36 inches; clay loam

Bt3—36 to 43 inches; clay loam

2BC—43 to 53 inches; very gravelly loam  
 2C1—53 to 60 inches; very gravelly sandy loam  
 2C2—60 to 66 inches; extremely gravelly loamy sand

### ***Stardust***

#### **Setting**

*Landform:* Landslides  
*Geomorphic position:* Convex areas  
*Parent material:* Loamy alluvium

#### **Properties and qualities**

*Slope:* 8 to 25 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Permeability class (slowest):* Moderate  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 8.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 3 inches; fine gravelly loam  
 A2—3 to 9 inches; fine gravelly loam  
 Bt1—9 to 18 inches; fine gravelly loam  
 Bt2—18 to 38 inches; fine gravelly sandy clay loam  
 Bt3—38 to 54 inches; gravelly sandy clay loam  
 BC—54 to 67 inches; gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Middlefork**

*Composition:* 10 percent  
*Geomorphic position:* Lower, north-facing areas  
*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase  
 (CDS627)

#### **Schiller, north slope**

*Composition:* 5 percent  
*Geomorphic position:* Shoulders  
*Ecological site:* NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6  
 (R010XY010ID)

#### **Cumulic Ultic Haploxerolls, moderately well drained**

*Composition:* 5 percent  
*Geomorphic position:* Swales  
*Ecological site:* SEMIWET MEADOW (R043AY008ID)

### ***Major Uses***

Timber production, livestock grazing, homesites

## **731—Shirts-Charters-Zimmer complex, 35 to 90 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,000 to 6,590 feet  
*Mean annual precipitation:* 22 to 28 inches  
*Mean annual air temperature:* 41 to 45 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Shirts and similar soils:* 40 percent  
*Charters and similar soils:* 25 percent  
*Zimmer and similar soils:* 25 percent  
*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Shirts, Sandy Loam, Dry**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly convex, south-facing flanks  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 4.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A—2 to 5 inches; sandy loam  
 AB—5 to 12 inches; sandy loam  
 Bw1—12 to 21 inches; coarse sandy loam  
 Bw2—21 to 33 inches; coarse sandy loam  
 C—33 to 39 inches; gravelly loamy coarse sand  
 R—39 to 49 inches; unweathered bedrock

#### **Charters, Fine Gravelly Sandy Loam, Dry**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave, south-facing flanks  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 11 inches; fine gravelly sandy loam

A2—11 to 16 inches; fine gravelly sandy loam

Bw1—16 to 33 inches; fine gravelly sandy loam

Bw2—33 to 41 inches; fine gravelly sandy loam

Bw3—41 to 60 inches; fine gravelly sandy loam

**Zimmer****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A—0 to 7 inches; sandy loam

Bw—7 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

**Dissimilar Minor Components****Middlefork**

*Composition:* 5 percent

*Geomorphic position:* Bases

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

**Northfork, sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### **Major Uses**

Timber production, wildlife habitat

## **733—Shirts-Kosh complex, 8 to 25 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 5,460 to 7,240 feet

*Mean annual precipitation:* 24 to 28 inches

*Mean annual air temperature:* 40 to 44 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Shirts and similar soils:* 50 percent

*Kosh and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

### **Major Components**

#### **Shirts, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly convex ridges and spurs

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4s

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; fine gravelly sandy loam

AB—7 to 11 inches; fine gravelly sandy loam

Bw—11 to 25 inches; fine gravelly sandy loam

C—25 to 29 inches; fine gravelly sandy loam

R—29 to 39 inches; unweathered bedrock

### **Kosh**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex ridges and spurs

*Parent material:* Residuum and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Typical profile**

A—0 to 10 inches; fine gravelly sandy loam

C—10 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

***Dissimilar Minor Components*****Ultic Haploxerolls, sandy loam, very deep**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave ridges

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Zimmer, fine gravelly sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Convex ridges and spurs

*Ecological site:* SUBALPINE SLOPE LOAMY 20+ ARTRS2/FEID (R012XY024ID)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex ridges and spurs

***Major Uses***

Timber production, livestock grazing

***734—Shirts-Kosh complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,440 to 6,410 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 41 to 45 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Shirts and similar soils:* 45 percent

*Kosh and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

## **Major Components**

### **Shirts, Sandy Loam, Dry**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase  
(CDS635)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 5 inches; sandy loam

AB—5 to 12 inches; sandy loam

Bw1—12 to 21 inches; coarse sandy loam

Bw2—21 to 33 inches; coarse sandy loam

C—33 to 39 inches; gravelly loamy coarse sand

R—39 to 49 inches; unweathered bedrock

### **Kosh**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Typical profile**

A—0 to 10 inches; fine gravelly sandy loam  
 C—10 to 18 inches; extremely gravelly loamy sand  
 R—18 to 28 inches; unweathered bedrock

***Dissimilar Minor Components*****Charters, fine gravelly sandy loam, dry**

*Composition:* 10 percent  
*Geomorphic position:* Concave flanks  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Eagleson, fine gravelly sandy loam, dry**

*Composition:* 10 percent  
*Geomorphic position:* Convex flanks  
*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

***Major Uses***

Timber production, wildlife habitat

***735—Shirts-Zimmer-Charters complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 2,890 to 6,810 feet  
*Mean annual precipitation:* 26 to 36 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Shirts and similar soils:* 50 percent  
*Zimmer and similar soils:* 25 percent  
*Charters and similar soils:* 15 percent  
*Dissimilar minor component:* 10 percent

***Major Components******Shirts, Coarse Sandy Loam*****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly convex, north-facing flanks  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 3.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; coarse sandy loam

AB—3 to 10 inches; coarse sandy loam

Bw1—10 to 15 inches; fine gravelly coarse sandy loam

Bw2—15 to 25 inches; fine gravelly coarse sandy loam

C—25 to 29 inches; fine gravelly loamy coarse sand

R—29 to 39 inches; unweathered bedrock

**Zimmer****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Convex, north-facing flanks, spurs, and ridges*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 90 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest): Moderately rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 1.5 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Douglas-fir/white spirea-ponderosa pine phase (CDS635)*

**Typical profile**

A—0 to 7 inches; sandy loam

Bw—7 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

**Charters, Fine Gravelly Sandy Loam****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Slightly concave, north-facing flanks*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 90 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest): Moderately rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 5.5 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 13 inches; fine gravelly sandy loam

Bw1—13 to 19 inches; fine gravelly coarse sandy loam

Bw2—19 to 34 inches; fine gravelly coarse sandy loam

Bw3—34 to 52 inches; fine gravelly coarse sandy loam

Bw4—52 to 60 inches; fine gravelly loamy coarse sand

***Dissimilar Minor Component*****Eagleson, sandy loam**

*Composition: 10 percent*

*Geomorphic position: Convex flanks and spurs*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

***Major Uses***

Timber production, wildlife habitat

***738—Tripod-Packerjohn-Pajo complex, 35 to 90 percent slopes******Map Unit Setting***

*General landscape: Mountains*

*Major land resource area (MLRA): 43B*

*Elevation: 3,200 to 6,660 feet*

*Mean annual precipitation: 26 to 36 inches*

*Mean annual air temperature: 39 to 44 degrees F*

*Frost-free period: 60 to 90 days*

***Map Unit Composition***

*Tripod and similar soils: 35 percent*

*Packerjohn and similar soils: 30 percent*

*Pajo and similar soils: 20 percent*

*Dissimilar minor components: 15 percent*

***Major Components******Tripod*****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Slightly convex, north-facing flanks*

*Parent material: Volcanic ash and colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 35 to 90 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; fine gravelly ashy coarse sandy loam

A2—6 to 13 inches; fine gravelly ashy coarse sandy loam

2AC—13 to 23 inches; very cobbly loamy coarse sand

2C1—23 to 50 inches; very gravelly coarse sand

2C2—50 to 60 inches; very cobbly coarse sand

#### ***Packerjohn, Ashy Coarse Sandy Loam***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 10 inches; ashy coarse sandy loam

A2—10 to 19 inches; fine gravelly ashy coarse sandy loam

Bw—19 to 33 inches; fine gravelly ashy loamy coarse sand

2C1—33 to 44 inches; fine gravelly loamy coarse sand

2C2—44 to 60 inches; very gravelly loamy coarse sand

#### ***Pajo, Fine Gravelly Ashy Coarse Sandy Loam***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; fine gravelly ashy coarse sandy loam

AC—8 to 16 inches; fine gravelly ashy loamy coarse sand

2C—16 to 27 inches; extremely gravelly coarse sand

2R—27 to 37 inches; unweathered bedrock

***Dissimilar Minor Components***

**Packerjohn, ashy sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Concave flanks

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

**Zimmer**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

***Major Uses***

Timber production, wildlife habitat

***739—Shirts-Zimmer-Packerjohn complex, 35 to 90 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 4,040 to 6,640 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 39 to 44 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Shirts and similar soils:* 40 percent

*Zimmer and similar soils:* 25 percent

*Packerjohn and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

**Major Components**  
**Shirts, Sandy Loam, Moist**

**Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/white spirea (CWS323)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; sandy loam

Bw1—12 to 25 inches; sandy loam

Bw2—25 to 34 inches; sandy loam

C—34 to 39 inches; fine gravelly sandy loam

R—39 to 49 inches; unweathered bedrock

**Zimmer****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase  
(CDS635)

**Typical profile**

A—0 to 7 inches; sandy loam

Bw—7 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

***Packerjohn, Ashy Coarse Sandy Loam***

**Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Concave, south-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 10 inches; ashy coarse sandy loam

A2—10 to 19 inches; fine gravelly ashy coarse sandy loam

Bw—19 to 33 inches; fine gravelly ashy loamy coarse sand

2C1—33 to 44 inches; fine gravelly loamy coarse sand

2C2—44 to 60 inches; very gravelly loamy coarse sand

***Dissimilar Minor Components***

**Rock outcrop**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

**Entic Ultic Haploxerolls, sandy, excessively drained**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks

*Forest habitat type:* Grand fir/white spirea (CWS323)

***Major Uses***

Timber production, wildlife habitat

***740—Charters-Eagleson complex, 35 to 90 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 3,500 to 6,590 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Charters and similar soils:* 40 percent

*Eagleson and similar soils:* 35 percent

*Dissimilar minor components:* 25 percent

#### **Major Components**

##### **Charters, Sandy Loam**

#### **Setting**

*Landform:* Canyon walls

*Geomorphic position:* Slightly concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 7 inches; sandy loam

A2—7 to 16 inches; sandy loam

Bw1—16 to 29 inches; fine gravelly sandy loam

Bw2—29 to 39 inches; fine gravelly sandy loam

C1—39 to 50 inches; fine gravelly loamy sand

C2—50 to 60 inches; fine gravelly loamy sand

##### **Eagleson, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Canyon walls

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2 inches

**Interpretive groups***Land capability subclass (nonirrigated): 7e**Forest habitat type: Douglas-fir/mallow ninebark-pinegrass phase (CDS717)***Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 12 inches; fine gravelly sandy loam

Bw—12 to 17 inches; very gravelly sandy loam

C—17 to 25 inches; extremely gravelly loamy sand

R—25 to 35 inches; unweathered bedrock

***Dissimilar Minor Components*****Kosh***Composition: 10 percent**Geomorphic position: Convex flanks, spurs, and ridges**Forest habitat type: Douglas-fir/mountain snowberry (CDS626)***Ultic Haploxerolls, fine gravelly sandy loam***Composition: 10 percent**Geomorphic position: Concave flanks and bases**Forest habitat type: Douglas-fir/mallow ninebark-pinegrass phase (CDS717)***Packerjohn, ashy coarse sandy loam***Composition: 5 percent**Geomorphic position: Concave flanks**Forest habitat type: Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)****Major Uses***

Timber production, wildlife habitat

***741—Zan fine gravelly ashy coarse sandy loam, 4 to 35 percent slopes******Map Unit Setting****General landscape: Mountains**Major land resource area (MLRA): 43B**Elevation: 5,790 to 6,810 feet**Mean annual precipitation: 30 to 36 inches**Mean annual air temperature: 37 to 39 degrees F**Frost-free period: 30 to 60 days****Map Unit Composition****Zan and similar soils: 85 percent**Dissimilar minor components: 15 percent***Major Component*****Zan*****Setting***Landform: Mountain slopes**Geomorphic position: Slightly concave ridges and spurs**Parent material: Volcanic ash and colluvium derived from granodiorite*

**Properties and qualities**

*Slope:* 4 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 3 inches; fine gravelly ashy coarse sandy loam

A2—3 to 14 inches; fine gravelly ashy coarse sandy loam

AB—14 to 24 inches; fine gravelly ashy loamy coarse sand

Bw—24 to 35 inches; fine gravelly ashy loamy coarse sand

2C—35 to 60 inches; very gravelly loamy coarse sand

***Dissimilar Minor Components*****Vitrandic Dystricrypts, fine gravelly ashy coarse sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex ridges and spurs

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Zimmer, fine gravelly sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Convex ridges and spurs

*Ecological site:* SUBALPINE SLOPE LOAMY 20+ ARTRS2/FEID (R012XY024ID)

***Major Uses***

Timber production, livestock grazing

**742—Crumley-Eagleson complex, 35 to 90 percent slopes*****Map Unit Setting***

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 3,220 to 6,080 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Crumley and similar soils:* 65 percent

*Eagleson and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

## **Major Components**

### **Crumley**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Lower, concave, north-facing flanks

*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 14 to 25 inches to strongly contrasting textural stratification

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 4 inches; fine gravelly sandy loam

A2—4 to 12 inches; fine gravelly sandy loam

Bw—12 to 18 inches; very gravelly sandy loam

2C1—18 to 30 inches; extremely gravelly loamy sand

2C2—30 to 60 inches; extremely gravelly loamy sand

### **Eagleson, Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Upper, concave, north-facing flanks

*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; sandy loam  
 A2—4 to 15 inches; fine gravelly sandy loam  
 Bw—15 to 19 inches; fine gravelly sandy loam  
 C—19 to 37 inches; very cobbly sandy loam  
 R—37 to 47 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Kosh, moist**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Charters, fine gravelly sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### ***Major Uses***

Timber production, wildlife habitat

## ***743—Packerjohn-Shirts complex, 8 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 4,400 to 6,420 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 39 to 44 degrees F

*Frost-free period:* 60 to 90 days

### ***Map Unit Composition***

*Packerjohn and similar soils:* 50 percent

*Shirts and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

### ***Major Components***

#### ***Packerjohn, Ashy Coarse Sandy Loam***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave ridges and spurs

*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated): 4e*

*Forest habitat type: Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)*

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 10 inches; ashy coarse sandy loam

A2—10 to 19 inches; fine gravelly ashy coarse sandy loam

Bw—19 to 33 inches; fine gravelly ashy loamy coarse sand

2C1—33 to 44 inches; fine gravelly loamy coarse sand

2C2—44 to 60 inches; very gravelly loamy coarse sand

***Shirts, Sandy Loam, Moist*****Setting**

*Landform: Mountain slopes*

*Geomorphic position: Slightly convex ridges and spurs*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 8 to 35 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential: Low*

*Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)*

*Drainage class: Somewhat excessively drained*

*Permeability class (slowest): Moderately rapid*

*Flooding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Available water capacity (entire profile): About 4.9 inches*

**Interpretive groups**

*Land capability subclass (nonirrigated): 4e*

*Forest habitat type: Grand fir/white spirea (CWS323)*

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; sandy loam

Bw1—12 to 25 inches; sandy loam

Bw2—25 to 34 inches; sandy loam

C—34 to 39 inches; fine gravelly sandy loam

R—39 to 49 inches; unweathered bedrock

***Dissimilar Minor Components*****Zimmer**

*Composition: 10 percent*

*Geomorphic position: Convex ridges and spurs*

*Forest habitat type: Douglas-fir/white spirea-ponderosa pine phase (CDS635)*

**Rock outcrop**

*Composition: 5 percent*

*Geomorphic position: Convex ridges and spurs*

***Major Uses***

Timber production, livestock grazing

## **744—Packerjohn-Shirts-Tripod complex, 4 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,570 to 6,800 feet  
*Mean annual precipitation:* 26 to 32 inches  
*Mean annual air temperature:* 39 to 44 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Packerjohn and similar soils:* 60 percent  
*Shirts and similar soils:* 20 percent  
*Tripod and similar soils:* 15 percent  
*Dissimilar minor component:* 5 percent

### **Major Components**

#### ***Packerjohn, Ashy Sandy Loam, Cool***

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave ridges and spurs  
*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 4 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 4.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Forest habitat type:* Grand fir/white spirea (CWS323)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 9 inches; ashy sandy loam  
 Bw1—9 to 15 inches; fine gravelly ashy sandy loam  
 Bw2—15 to 31 inches; ashy loamy sand  
 2C—31 to 60 inches; fine gravelly loamy sand

#### ***Shirts, Sandy Loam, Moist***

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly convex ridges and spurs  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 4 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Grand fir/white spirea (CWS323)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; sandy loam

Bw1—12 to 25 inches; sandy loam

Bw2—25 to 34 inches; sandy loam

C—34 to 39 inches; fine gravelly sandy loam

R—39 to 49 inches; unweathered bedrock

***Tripod, Cool*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Concave ridges and spurs

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 4 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Grand fir/white spirea (CWS323)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; fine gravelly ashy coarse sandy loam

A2—6 to 20 inches; fine gravelly ashy coarse sandy loam

2C—20 to 60 inches; very stony loamy sand

***Dissimilar Minor Component*****Entic Ultic Haploxerolls, sandy, excessively drained**

*Composition:* 5 percent

*Geomorphic position:* Convex ridges and spurs

*Forest habitat type:* Grand fir/white spirea (CWS323)

### **Major Uses**

Timber production, livestock grazing

## **745—Tripod-Packerjohn complex, 35 to 90 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 5,400 to 6,600 feet

*Mean annual precipitation:* 32 to 36 inches

*Mean annual air temperature:* 39 to 42 degrees F

*Frost-free period:* 60 to 75 days

### **Map Unit Composition**

*Tripod and similar soils:* 50 percent

*Packerjohn and similar soils:* 45 percent

*Dissimilar minor component:* 5 percent

### **Major Components**

#### **Tripod, Moist**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly ashy coarse sandy loam

A2—4 to 16 inches; fine gravelly ashy coarse sandy loam

2C1—16 to 38 inches; extremely gravelly sand

2C2—38 to 60 inches; very gravelly sand

#### **Packerjohn, Ashy Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 5 inches; ashy sandy loam

A2—5 to 16 inches; ashy sandy loam

Bw1—16 to 23 inches; fine gravelly coarse sandy loam

Bw2—23 to 39 inches; fine gravelly coarse sandy loam

2C—39 to 60 inches; fine gravelly loamy sand

***Dissimilar Minor Component*****Vitrandic Dystroxerepts, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks and spurs

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

***Major Uses***

Timber production, wildlife habitat

**746—Packerjohn ashy sandy loam, 15 to 35 percent slopes*****Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 6,000 to 6,570 feet

*Mean annual precipitation:* 32 to 36 inches

*Mean annual air temperature:* 39 to 42 degrees F

*Frost-free period:* 60 to 75 days

***Map Unit Composition***

*Packerjohn and similar soils:* 90 percent

*Dissimilar minor components:* 10 percent

***Major Component******Packerjohn, Ashy Sandy Loam*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave ridges and spurs

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 5 inches; ashy sandy loam

A2—5 to 16 inches; ashy sandy loam

Bw1—16 to 23 inches; fine gravelly coarse sandy loam

Bw2—23 to 39 inches; fine gravelly coarse sandy loam

2C—39 to 60 inches; fine gravelly loamy sand

***Dissimilar Minor Components*****Tripod, moist**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex ridges and spurs

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

**Vitrandid Dystroxerepts, moderately deep**

*Composition:* 5 percent

*Geomorphic position:* Convex ridges and spurs

*Forest habitat type:* Grand fir/white spirea (CWS323)

***Major Uses***

Timber production, livestock grazing

***747—Pinney-Charters-Shirts complex, 25 to 65 percent slopes******Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,500 to 4,520 feet

*Mean annual precipitation:* 26 to 30 inches

*Mean annual air temperature:* 42 to 44 degrees F

*Frost-free period:* 60 to 90 days

***Map Unit Composition***

*Pinney and similar soils:* 40 percent

*Charters and similar soils:* 25 percent

*Shirts and similar soils:* 15 percent

*Dissimilar minor components:* 20 percent

## **Major Components**

### **Pinney, Moist**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Concave, north-facing flanks

*Parent material:* Volcanic ash over loamy lacustrine deposits

#### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; ashy silt loam

A2—4 to 10 inches; ashy silt loam

A3—10 to 21 inches; ashy silt loam

2Bt1—21 to 32 inches; sandy clay loam

2Bt2—32 to 45 inches; sandy clay loam

2Bt3—45 to 60 inches; gravelly clay loam

### **Charters, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-  
PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 13 inches; fine gravelly sandy loam  
 Bw1—13 to 19 inches; fine gravelly coarse sandy loam  
 Bw2—19 to 34 inches; fine gravelly coarse sandy loam  
 Bw3—34 to 52 inches; fine gravelly coarse sandy loam  
 Bw4—52 to 60 inches; fine gravelly loamy coarse sand

***Shirts, Sandy Loam, Dry***

**Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 5 inches; sandy loam

AB—5 to 12 inches; sandy loam

Bw1—12 to 21 inches; coarse sandy loam

Bw2—21 to 33 inches; coarse sandy loam

C—33 to 39 inches; gravelly loamy coarse sand

R—39 to 49 inches; unweathered bedrock

***Dissimilar Minor Components***

**Middlefork, moist**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave flanks and bases

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Ultic Haploxerolls, fine gravelly sandy loam, very bouldery surface**

*Composition:* 5 percent

*Geomorphic position:* Convex spurs

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Pachic Ultic Haploxerolls, fine gravelly sandy loam, moist**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

***Major Use***

Timber production

## **748—Belsh-Zan complex, 8 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 6,240 to 6,990 feet  
*Mean annual precipitation:* 36 to 40 inches  
*Mean annual air temperature:* 36 to 38 degrees F  
*Frost-free period:* 30 to 60 days

### **Map Unit Composition**

*Belsh and similar soils:* 45 percent  
*Zan and similar soils:* 40 percent  
*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Belsh, Moist**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Smooth and slightly concave ridges and spurs  
*Parent material:* Volcanic ash over colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 4.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Forest habitat type:* Subalpine fir/thinleaf (blue) huckleberry (CES331)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 6 inches; fine gravelly ashy coarse sandy loam  
 AB—6 to 20 inches; fine gravelly ashy coarse sandy loam  
 2Bw—20 to 34 inches; extremely stony coarse sandy loam  
 2C—34 to 60 inches; extremely gravelly loamy coarse sand

#### **Zan, Moist**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Smooth and slightly concave ridges and spurs  
*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Subalpine fir/thinleaf (blue) huckleberry (CES331)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; fine gravelly ashy coarse sandy loam

A2—6 to 12 inches; fine gravelly ashy coarse sandy loam

AB—12 to 25 inches; fine gravelly ashy coarse sandy loam

Bw—25 to 41 inches; fine gravelly ashy loamy coarse sand

2C—41 to 60 inches; fine gravelly loamy coarse sand

#### ***Dissimilar Minor Components***

##### **Packerjohn, ashy sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex ridges and spurs

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

##### **Tripod, moist**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex ridges and spurs

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

##### **Vitrandic Dystricryepts, fine gravelly ashy coarse sandy loam, moist**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex ridges and spurs

*Forest habitat type:* Subalpine fir/thinleaf (blue) huckleberry (CES331)

#### ***Major Uses***

Timber production, livestock grazing

## **749—Quartzburg-Charters complex, 35 to 90 percent slopes**

#### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,280 to 5,940 feet

*Mean annual precipitation:* 26 to 30 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

#### ***Map Unit Composition***

*Quartzburg and similar soils:* 50 percent

*Charters and similar soils:* 25 percent

*Dissimilar minor components:* 25 percent

## **Major Components**

### **Quartzburg**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic), 23 to 55 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 5 inches; fine gravelly loamy coarse sand

A2—5 to 10 inches; fine gravelly loamy coarse sand

AC—10 to 25 inches; very gravelly loamy coarse sand

C—25 to 37 inches; very gravelly loamy coarse sand

Cr—37 to 42 inches; weathered bedrock

R—42 to 52 inches; unweathered bedrock

### **Charters, Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 7 inches; sandy loam

A2—7 to 16 inches; sandy loam  
 Bw1—16 to 29 inches; fine gravelly sandy loam  
 Bw2—29 to 39 inches; fine gravelly sandy loam  
 C1—39 to 50 inches; fine gravelly loamy sand  
 C2—50 to 60 inches; fine gravelly loamy sand

### ***Dissimilar Minor Components***

#### **Garval**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

#### **Kisky, fine gravelly loamy coarse sand**

*Composition:* 10 percent

*Geomorphic position:* Convex spurs and ridges

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex spurs and ridges

### ***Major Uses***

Timber production, wildlife habitat

## ***750—Garval-Kisky-Rock outcrop complex, 35 to 90 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 2,810 to 6,530 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 125 days

### ***Map Unit Composition***

*Garval and similar soils:* 50 percent

*Kisky and similar soils:* 20 percent

*Rock outcrop:* 20 percent

*Dissimilar minor components:* 10 percent

### ***Major Components***

#### ***Garval***

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 5 inches; fine gravelly loamy coarse sand  
 A2—5 to 13 inches; fine gravelly loamy coarse sand  
 AC—13 to 19 inches; gravelly coarse sand  
 C—19 to 29 inches; extremely gravelly coarse sand  
 R—29 to 39 inches; unweathered bedrock

***Kisky, Fine Gravelly Loamy Coarse Sand***

**Setting**

*Landform:* Mountain slopes, canyon walls  
*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 0.7 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

**Typical profile**

A1—0 to 4 inches; fine gravelly loamy coarse sand  
 A2—4 to 10 inches; fine gravelly loamy coarse sand  
 C—10 to 16 inches; extremely gravelly loamy coarse sand  
 R—16 to 26 inches; unweathered bedrock

***Rock Outcrop***

*Landform:* Mountain slopes, canyon walls  
*Geomorphic position:* Convex flanks, spurs, and ridges  
*Land capability subclass (nonirrigated):* 8

***Dissimilar Minor Components***

**Drybuck**

*Composition:* 5 percent  
*Geomorphic position:* Slightly concave flanks

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

**Shirts, coarse sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex, north-facing flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Major Uses**

Timber production, wildlife habitat

**751—Belsh-Zan complex, 35 to 65 percent slopes**

**Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 5,160 to 6,740 feet

*Mean annual precipitation:* 32 to 40 inches

*Mean annual air temperature:* 36 to 39 degrees F

*Frost-free period:* 30 to 60 days

**Map Unit Composition**

*Belsh and similar soils:* 50 percent

*Zan and similar soils:* 40 percent

*Dissimilar minor components:* 10 percent

**Major Components**

**Belsh, Moist**

**Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave, north-facing flanks

*Parent material:* Volcanic ash over colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Subalpine fir/thinleaf (blue) huckleberry (CES331)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; fine gravelly ashy coarse sandy loam

AB—6 to 20 inches; fine gravelly ashy coarse sandy loam

2Bw—20 to 34 inches; extremely stony coarse sandy loam  
 2C—34 to 60 inches; extremely gravelly loamy coarse sand

### ***Zan, Moist***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.8 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Subalpine fir/thinleaf (blue) huckleberry (CES331)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; fine gravelly ashy coarse sandy loam

A2—6 to 12 inches; fine gravelly ashy coarse sandy loam

AB—12 to 25 inches; fine gravelly ashy coarse sandy loam

Bw—25 to 41 inches; fine gravelly ashy loamy coarse sand

2C—41 to 60 inches; fine gravelly loamy coarse sand

### ***Dissimilar Minor Components***

#### **Packerjohn, ashy sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex flanks

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

#### **Tripod, moist**

*Composition:* 5 percent

*Geomorphic position:* Slightly convex flanks

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

### ***Major Uses***

Timber production, wildlife habitat

## ***752—Josie-Zimmer complex, 8 to 50 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 6,010 to 7,090 feet

*Mean annual precipitation:* 28 to 32 inches

*Mean annual air temperature:* 37 to 39 degrees F

*Frost-free period:* 45 to 60 days

### **Map Unit Composition**

*Josie and similar soils:* 70 percent

*Zimmer and similar soils:* 20 percent

*Dissimilar minor component:* 10 percent

### **Major Components**

#### **Josie**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave ridges and spurs

*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* SUBALPINE SLOPE LOAMY 20+ ARTRS2/FEID (R012XY024ID)

#### **Typical profile**

A1—0 to 2 inches; ashy sandy loam

A2—2 to 12 inches; ashy sandy loam

Bw1—12 to 33 inches; ashy sandy loam

Bw2—33 to 44 inches; ashy loamy sand

Bw3—44 to 60 inches; ashy loamy sand

### **Zimmer, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex ridges and spurs

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecological site:* SUBALPINE SLOPE LOAMY 20+ ARTRS2/FEID (R012XY024ID)

**Typical profile**

A—0 to 7 inches; fine gravelly sandy loam  
 Bw—7 to 12 inches; fine gravelly sandy loam  
 C—12 to 15 inches; gravelly loamy sand  
 R—15 to 25 inches; unweathered bedrock

***Dissimilar Minor Component*****Vitrandic Dystricrypts, ashy sandy loam, moderately deep**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex ridges and spurs

*Ecological site:* SUBALPINE SLOPE LOAMY 20+ ARTRS2/FEID (R012XY024ID)

***Major Uses***

Livestock grazing, wildlife habitat

**753—Tripod-Packerjohn-Shirts complex, 15 to 50 percent slopes*****Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 5,170 to 7,010 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 39 to 43 degrees F

*Frost-free period:* 60 to 75 days

***Map Unit Composition***

*Tripod and similar soils:* 45 percent

*Packerjohn and similar soils:* 25 percent

*Shirts and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

***Major Components******Tripod, Cool*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly convex, south-facing flanks and ridges

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Grand fir/white spirea (CWS323)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 6 inches; fine gravelly ashy coarse sandy loam  
 A2—6 to 20 inches; fine gravelly ashy coarse sandy loam  
 2C—20 to 60 inches; very stony loamy sand

***Packerjohn, Ashy Sandy Loam, Cool*****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Smooth and slightly concave, south-facing flanks and ridges  
*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 50 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 4.7 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Forest habitat type:* Grand fir/white spirea (CWS323)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 9 inches; ashy sandy loam  
 Bw1—9 to 15 inches; fine gravelly ashy sandy loam  
 Bw2—15 to 31 inches; ashy loamy sand  
 2C—31 to 60 inches; fine gravelly loamy sand

***Shirts, Sandy Loam, Moist*****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Convex, south-facing flanks and ridges  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 50 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 4.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Forest habitat type:* Grand fir/white spirea (CWS323)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A—2 to 12 inches; sandy loam

Bw1—12 to 25 inches; sandy loam  
 Bw2—25 to 34 inches; sandy loam  
 C—34 to 39 inches; fine gravelly sandy loam  
 R—39 to 49 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Zan**

*Composition:* 5 percent  
*Geomorphic position:* Concave, north-facing flanks  
*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

#### **Zimmer**

*Composition:* 5 percent  
*Geomorphic position:* Convex flanks and ridges  
*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### ***Major Uses***

Timber production, livestock grazing

## ***754—Packerjohn-Shirts complex, moist, 8 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 5,840 to 6,290 feet  
*Mean annual precipitation:* 30 to 34 inches  
*Mean annual air temperature:* 40 to 42 degrees F  
*Frost-free period:* 60 to 75 days

### ***Map Unit Composition***

*Packerjohn and similar soils:* 55 percent  
*Shirts and similar soils:* 20 percent  
*Dissimilar minor components:* 25 percent

### ***Major Components***

#### ***Packerjohn, Ashy Sandy Loam***

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Smooth and slightly concave ridges and spurs  
*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 35 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 5 inches; ashy sandy loam

A2—5 to 16 inches; ashy sandy loam

Bw1—16 to 23 inches; fine gravelly coarse sandy loam

Bw2—23 to 39 inches; fine gravelly coarse sandy loam

2C—39 to 60 inches; fine gravelly loamy sand

***Shirts, Sandy Loam, Moist*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex ridges and spurs

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.9 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Grand fir/white spirea (CWS323)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; sandy loam

Bw1—12 to 25 inches; sandy loam

Bw2—25 to 34 inches; sandy loam

C—34 to 39 inches; fine gravelly sandy loam

R—39 to 49 inches; unweathered bedrock

***Dissimilar Minor Components*****Zimmer**

*Composition:* 10 percent

*Geomorphic position:* Convex ridges and spurs

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Vitrandid Dystroxerepts, moderately deep**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex ridges and spurs

*Forest habitat type:* Grand fir/thinleaf (blue) huckleberry (CWS231)

**Rock outcrop**

*Composition:* 5 percent

*Geomorphic position:* Convex ridges and spurs

### **Major Uses**

Timber production, livestock grazing

## **755—Zimmer-Quartzburg-Rock outcrop complex, 50 to 90 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 3,290 to 5,010 feet

*Mean annual precipitation:* 22 to 26 inches

*Mean annual air temperature:* 43 to 45 degrees F

*Frost-free period:* 75 to 90 days

### **Map Unit Composition**

*Zimmer and similar soils:* 40 percent

*Quartzburg and similar soils:* 35 percent

*Rock outcrop:* 20 percent

*Dissimilar minor component:* 5 percent

### **Major Components**

#### **Zimmer**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 50 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Typical profile**

A—0 to 7 inches; sandy loam

Bw—7 to 14 inches; fine gravelly sandy loam

R—14 to 24 inches; unweathered bedrock

#### **Quartzburg**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 50 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic), 23 to 55 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 5 inches; fine gravelly loamy coarse sand

A2—5 to 10 inches; fine gravelly loamy coarse sand

AC—10 to 25 inches; very gravelly loamy coarse sand

C—25 to 37 inches; very gravelly loamy coarse sand

Cr—37 to 42 inches; weathered bedrock

R—42 to 52 inches; unweathered bedrock

**Rock Outcrop**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges

*Land capability subclass (nonirrigated):* 8

**Dissimilar Minor Component****Ultic Haploxerolls, fine gravelly sandy loam, very deep**

*Composition:* 5 percent

*Geomorphic position:* Bases

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Major Use**

Wildlife habitat

**756—Pajo-Tripod-Kosh complex, 50 to 90 percent slopes****Map Unit Setting**

*General landscape:* Mountains, canyonland

*Major land resource area (MLRA):* 43B

*Elevation:* 3,770 to 6,130 feet

*Mean annual precipitation:* 26 to 34 inches

*Mean annual air temperature:* 39 to 44 degrees F

*Frost-free period:* 60 to 90 days

**Map Unit Composition**

*Pajo and similar soils:* 40 percent

*Tripod and similar soils:* 25 percent

*Kosh and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

## **Major Components**

### **Pajo, Fine Gravelly Ashy Coarse Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 50 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.9 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; fine gravelly ashy coarse sandy loam

AC—8 to 16 inches; fine gravelly ashy loamy coarse sand

2C—16 to 27 inches; extremely gravelly coarse sand

2R—27 to 37 inches; unweathered bedrock

### **Tripod**

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Concave, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 50 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase  
(CWS542)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 6 inches; fine gravelly ashy coarse sandy loam

A2—6 to 13 inches; fine gravelly ashy coarse sandy loam

2AC—13 to 23 inches; very cobbly loamy coarse sand

2C1—23 to 50 inches; very gravelly coarse sand

2C2—50 to 60 inches; very cobbly coarse sand

### ***Kosh, Moist***

#### **Setting**

*Landform:* Mountain slopes, canyon walls

*Geomorphic position:* Convex, north-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 50 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.9 inch

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Typical profile**

A1—0 to 4 inches; fine gravelly sandy loam

A2—4 to 9 inches; fine gravelly sandy loam

C—9 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Rock outcrop**

*Composition:* 10 percent

*Geomorphic position:* Convex flanks, spurs, and ridges

#### **Packerjohn, ashy coarse sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave flanks

*Forest habitat type:* Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)

### ***Major Use***

Wildlife habitat

## **758—Eagleson-Kosh-Charters complex, 35 to 90 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 2,810 to 6,510 feet

*Mean annual precipitation:* 26 to 34 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Eagleson and similar soils:* 40 percent

*Kosh and similar soils:* 30 percent

*Charters and similar soils:* 20 percent

*Dissimilar minor component:* 10 percent

### **Major Components**

#### **Eagleson, Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, north-facing flanks

*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.3 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; sandy loam

A2—4 to 15 inches; fine gravelly sandy loam

Bw—15 to 19 inches; fine gravelly sandy loam

C—19 to 37 inches; very cobbly sandy loam

R—37 to 47 inches; unweathered bedrock

#### **Kosh, Moist**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, north-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.9 inch

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### **Typical profile**

A1—0 to 4 inches; fine gravelly sandy loam

A2—4 to 9 inches; fine gravelly sandy loam

C—9 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

### ***Charters, Fine Gravelly Sandy Loam***

### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, north-facing flanks

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 35 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 13 inches; fine gravelly sandy loam

Bw1—13 to 19 inches; fine gravelly coarse sandy loam

Bw2—19 to 34 inches; fine gravelly coarse sandy loam

Bw3—34 to 52 inches; fine gravelly coarse sandy loam

Bw4—52 to 60 inches; fine gravelly loamy coarse sand

### ***Dissimilar Minor Component***

### **Shirts, coarse sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex flanks and spurs

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### ***Major Uses***

Timber production, wildlife habitat

## **759—Charters-Shirts-Kosh complex, 25 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,650 to 6,860 feet  
*Mean annual precipitation:* 24 to 30 inches  
*Mean annual air temperature:* 41 to 45 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Charters and similar soils:* 30 percent  
*Shirts and similar soils:* 30 percent  
*Kosh and similar soils:* 20 percent  
*Dissimilar minor components:* 20 percent

### **Major Components**

#### **Charters, Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave, south-facing flanks  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 25 to 65 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 5.7 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A1—2 to 7 inches; sandy loam  
 A2—7 to 16 inches; sandy loam  
 Bw1—16 to 29 inches; fine gravelly sandy loam  
 Bw2—29 to 39 inches; fine gravelly sandy loam  
 C1—39 to 50 inches; fine gravelly loamy sand  
 C2—50 to 60 inches; fine gravelly loamy sand

#### **Shirts, Sandy Loam, South Slope**

#### **Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly convex, south-facing flanks  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.8 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; sandy loam

AB—5 to 11 inches; sandy loam

Bw1—11 to 23 inches; fine gravelly sandy loam

Bw2—23 to 35 inches; gravelly sandy loam

R—35 to 45 inches; unweathered bedrock

***Kosh, Moist*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, north-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.9 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A1—0 to 4 inches; fine gravelly sandy loam

A2—4 to 9 inches; fine gravelly sandy loam

C—9 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

***Dissimilar Minor Components*****Charters, fine gravelly sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Concave flanks and bases

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Eagleson, fine gravelly sandy loam***Composition:* 10 percent*Geomorphic position:* Slightly concave flanks and bases*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)**Major Use**

Timber production

**761—Charters-Middlefork complex, 8 to 50 percent slopes****Map Unit Setting***General landscape:* Mountains*Major land resource area (MLRA):* 43B*Elevation:* 3,440 to 5,060 feet*Mean annual precipitation:* 26 to 30 inches*Mean annual air temperature:* 43 to 45 degrees F*Frost-free period:* 75 to 90 days**Map Unit Composition***Charters and similar soils:* 45 percent*Middlefork and similar soils:* 40 percent*Dissimilar minor components:* 15 percent**Major Components****Charters, Fine Gravelly Sandy Loam****Setting***Landform:* Mountain slopes*Geomorphic position:* Smooth and slightly concave flanks and ridges*Parent material:* Colluvium derived from granodiorite**Properties and qualities***Slope:* 8 to 50 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* None within a depth of 60 inches*Drainage class:* Somewhat excessively drained*Permeability class (slowest):* Moderately rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 5.5 inches**Interpretive groups***Land capability subclass (nonirrigated):* 6e*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 4 inches; fine gravelly sandy loam

A2—4 to 13 inches; fine gravelly sandy loam

Bw1—13 to 19 inches; fine gravelly coarse sandy loam

Bw2—19 to 34 inches; fine gravelly coarse sandy loam

Bw3—34 to 52 inches; fine gravelly coarse sandy loam

Bw4—52 to 60 inches; fine gravelly loamy coarse sand

**Middlefork, Moist****Setting**

*Landform:* Terraces

*Geomorphic position:* Smooth and slightly concave areas

*Parent material:* Loamy lacustrine deposits

**Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 10.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 5 inches; loam

A2—5 to 13 inches; loam

BA—13 to 28 inches; loam

Bt1—28 to 36 inches; sandy clay loam

Bt2—36 to 47 inches; gravelly sandy clay loam

Bt3—47 to 62 inches; clay loam

**Dissimilar Minor Components****Zeb, gravelly sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Smooth and slightly concave backslopes

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Shirts, sandy loam, south slope**

*Composition:* 5 percent

*Geomorphic position:* Convex flanks and ridges

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Major Use**

Timber production, livestock grazing

**762—Drybuck-Hellake-Deerrun complex, 8 to 50 percent slopes****Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,510 to 4,780 feet

*Mean annual precipitation:* 20 to 24 inches

*Mean annual air temperature:* 46 to 48 degrees F

*Frost-free period:* 100 to 120 days

### **Map Unit Composition**

*Drybuck and similar soils:* 40 percent

*Hellake and similar soils:* 30 percent

*Deerrun and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

### **Major Components**

#### ***Drybuck, Dry***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 7.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; sandy loam

AB—6 to 25 inches; sandy loam

Bw—25 to 45 inches; sandy loam

C—45 to 57 inches; sandy loam

R—57 to 67 inches; unweathered bedrock

#### ***Hellake***

#### **Setting**

*Landform:* Dissected fan remnants

*Geomorphic position:* Smooth and slightly concave, south-facing backslopes

*Parent material:* Loamy lacustrine deposits over gravelly alluvium

#### **Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Moderate

*Depth to restrictive feature:* 30 to 60 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Permeability class (slowest):* Moderately slow

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 9.3 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Ponderosa pine/common snowberry (CPS526)

### **Typical profile**

A—0 to 3 inches; loam

AB—3 to 10 inches; loam

Bt1—10 to 22 inches; clay loam

Bt2—22 to 36 inches; clay loam

Bt3—36 to 43 inches; clay loam

2BC—43 to 53 inches; very gravelly loam

2C1—53 to 60 inches; very gravelly sandy loam

2C2—60 to 66 inches; extremely gravelly loamy sand

### ***Deerrun***

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex flanks and ridges

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.9 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 11 inches; sandy loam

Bw—11 to 19 inches; sandy loam

C—19 to 33 inches; fine gravelly coarse sandy loam

R—33 to 43 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Middlefork, moist**

*Composition:* 5 percent

*Geomorphic position:* Smooth and slightly concave, north-facing backslopes

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

#### **Northfork, fine gravelly sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Concave, north-facing flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

### **Major Uses**

Timber production, livestock grazing, homesites

## **763—Eagleson-Kosh-Rock outcrop complex, 35 to 90 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,610 to 7,220 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Eagleson and similar soils:* 40 percent

*Kosh and similar soils:* 35 percent

*Rock outcrop:* 15 percent

*Dissimilar minor components:* 10 percent

### **Major Components**

#### **Eagleson, Fine Gravelly Sandy Loam**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite and rhyolite

#### **Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 12 inches; fine gravelly sandy loam

Bw—12 to 17 inches; very gravelly sandy loam

C—17 to 25 inches; extremely gravelly loamy sand

R—25 to 35 inches; unweathered bedrock

### **Kosh**

#### **Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

**Typical profile**

A—0 to 10 inches; fine gravelly sandy loam

C—10 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

**Rock Outcrop**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks, spurs, and ridges

*Land capability subclass (nonirrigated):* 8

**Dissimilar Minor Components****Charters, sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Shirts, sandy loam, south slope**

*Composition:* 5 percent

*Geomorphic position:* Slightly concave flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Major Uses**

Timber production (fig. 10), wildlife habitat

**765—Backswitch-Zimmer-Rock outcrop complex, 8 to 35 percent slopes****Map Unit Setting**

*General landscape:* Intermontane basins

*Major land resource area (MLRA):* 43B

*Elevation:* 3,820 to 4,640 feet

*Mean annual precipitation:* 22 to 26 inches

*Mean annual air temperature:* 43 to 45 degrees F

*Frost-free period:* 75 to 90 days

**Map Unit Composition**

*Backswitch and similar soils:* 40 percent

*Zimmer and similar soils:* 20 percent



Figure 10.—Forest regeneration in a area of Eagleson-Kosh-Rock outcrop complex, 35 to 90 percent slopes. Shirts-Kosh complex, 35 to 90 percent slopes, on upper mountain slopes.

*Rock outcrop:* 15 percent

*Dissimilar minor components:* 25 percent

### **Major Components**

#### **Backswitch, Coarse Sandy Loam**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Smooth and slightly convex backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic), 22 to 50 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/elk sedge-ponderosa pine phase (CDG142)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 8 inches; coarse sandy loam

Bw1—8 to 14 inches; fine gravelly coarse sandy loam

Bw2—14 to 25 inches; fine gravelly coarse sandy loam

C—25 to 35 inches; very gravelly loamy coarse sand

Cr—35 to 38 inches; weathered bedrock

R—38 to 48 inches; unweathered bedrock

### ***Zimmer, Warm***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex shoulders and summits

*Parent material:* Residuum and colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 35 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.6 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Typical profile**

A—0 to 4 inches; sandy loam

Bw—4 to 10 inches; fine gravelly sandy loam

C—10 to 16 inches; fine gravelly sandy loam

R—16 to 26 inches; unweathered bedrock

### ***Rock Outcrop***

*Landform:* Hillslopes

*Geomorphic position:* Convex backslopes and shoulders

*Land capability subclass (nonirrigated):* 8

### ***Dissimilar Minor Components***

#### **Charters, coarse sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Concave backslopes

*Forest habitat type:* Douglas-fir/elk sedge-ponderosa pine phase (CDG142)

#### **Lithic Ultic Haploxerolls, very shallow**

*Composition:* 10 percent

*Geomorphic position:* Eroded shoulders and summits

*Ecological site:* SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)

#### **Backswitch, sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Concave, north-facing backslopes

*Forest habitat type:* Douglas-fir/dwarf bilberry (huckleberry) (CDS815)

### ***Major Uses***

Timber production, livestock grazing

## **766—Backswitch-Charters-Zimmer complex, 8 to 50 percent slopes**

### **Map Unit Setting**

*General landscape:* Intermontane basins  
*Major land resource area (MLRA):* 43B  
*Elevation:* 3,890 to 5,900 feet  
*Mean annual precipitation:* 22 to 28 inches  
*Mean annual air temperature:* 41 to 45 degrees F  
*Frost-free period:* 60 to 90 days

### **Map Unit Composition**

*Backswitch and similar soils:* 55 percent  
*Charters and similar soils:* 15 percent  
*Zimmer and similar soils:* 15 percent  
*Dissimilar minor components:* 15 percent

### **Major Components**

#### **Backswitch, Coarse Sandy Loam**

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly convex, south-facing backslopes  
*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 8 to 50 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic), 22 to 50 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Permeability class (slowest):* Moderately rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 4.2 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/elk sedge-ponderosa pine phase (CDG142)

#### **Typical profile**

O<sub>i</sub>—0 to 2 inches; slightly decomposed plant material  
 A—2 to 8 inches; coarse sandy loam  
 Bw<sub>1</sub>—8 to 14 inches; fine gravelly coarse sandy loam  
 Bw<sub>2</sub>—14 to 25 inches; fine gravelly coarse sandy loam  
 C—25 to 35 inches; very gravelly loamy coarse sand  
 Cr—35 to 38 inches; weathered bedrock  
 R—38 to 48 inches; unweathered bedrock

#### **Charters, Coarse Sandy Loam**

#### **Setting**

*Landform:* Hillslopes  
*Geomorphic position:* Slightly concave, south-facing backslopes  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 25 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 6.3 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Forest habitat type:* Douglas-fir/elk sedge-ponderosa pine phase (CDG142)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; coarse sandy loam

BA—4 to 8 inches; coarse sandy loam

Bw1—8 to 15 inches; fine gravelly coarse sandy loam

Bw2—15 to 32 inches; fine gravelly coarse sandy loam

Bw3—32 to 48 inches; fine gravelly coarse sandy loam

Bw4—48 to 60 inches; gravelly coarse sandy loam

***Zimmer, Dry*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing shoulders and summits

*Parent material:* Residuum and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 8 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Forest habitat type:* Douglas-fir/elk sedge-ponderosa pine phase (CDG142)

**Typical profile**

A1—0 to 2 inches; sandy loam

A2—2 to 7 inches; sandy loam

Bw—7 to 11 inches; fine gravelly sandy loam

C—11 to 16 inches; fine gravelly sandy loam

R—16 to 26 inches; unweathered bedrock

***Dissimilar Minor Components*****Charters, fine gravelly sandy loam, dry**

*Composition:* 5 percent

*Geomorphic position:* Concave toeslopes

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Eagleson, fine gravelly sandy loam, dry***Composition:* 5 percent*Geomorphic position:* Convex backslopes and shoulders*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)**Middlefork***Composition:* 5 percent*Geomorphic position:* Footslopes*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)**Major Uses**

Timber production (fig. 11), livestock grazing

**767—Shirts-Kosh-Charters complex, 15 to 50 percent slopes****Map Unit Setting***General landscape:* Intermontane basins*Major land resource area (MLRA):* 43B*Elevation:* 4,050 to 6,140 feet*Mean annual precipitation:* 24 to 28 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 60 to 90 days**Map Unit Composition***Shirts and similar soils:* 45 percent*Kosh and similar soils:* 25 percent*Charters and similar soils:* 20 percent*Dissimilar minor components:* 10 percent**Major Components****Shirts, Sandy Loam, Dry****Setting***Landform:* Hillslopes*Geomorphic position:* Smooth and slightly convex, south-facing backslopes*Parent material:* Colluvium derived from granodiorite**Properties and qualities***Slope:* 15 to 50 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)*Drainage class:* Somewhat excessively drained*Permeability class (slowest):* Moderately rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 4.7 inches**Interpretive groups***Land capability subclass (nonirrigated):* 6e*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material



Figure 11.—Forestland managed by use of thinning and herbicides in an area of Backswitch-Charters-Zimmer complex, 8 to 50 percent slopes.

A—2 to 5 inches; sandy loam  
 AB—5 to 12 inches; sandy loam  
 Bw1—12 to 21 inches; coarse sandy loam  
 Bw2—21 to 33 inches; coarse sandy loam  
 C—33 to 39 inches; gravelly loamy coarse sand  
 R—39 to 49 inches; unweathered bedrock

### ***Kosh***

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, south-facing shoulders and summits

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 1.1 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7s

*Forest habitat type:* Douglas-fir/mountain snowberry (CDS626)

#### **Typical profile**

A—0 to 10 inches; fine gravelly sandy loam

C—10 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

#### **Charters, Fine Gravelly Sandy Loam, Dry**

#### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Concave, south-facing backslopes

*Parent material:* Colluvium derived from granodiorite

#### **Properties and qualities**

*Slope:* 15 to 50 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A1—1 to 11 inches; fine gravelly sandy loam

A2—11 to 16 inches; fine gravelly sandy loam

Bw1—16 to 33 inches; fine gravelly sandy loam

Bw2—33 to 41 inches; fine gravelly sandy loam

Bw3—41 to 60 inches; fine gravelly sandy loam

#### **Dissimilar Minor Components**

#### **Middlefork**

*Composition:* 5 percent

*Geomorphic position:* Lower, smooth and slightly concave backslopes and footslopes

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

#### **Shirts, sandy loam, south slope**

*Composition:* 5 percent

*Geomorphic position:* Smooth and slightly convex, south-facing backslopes

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Major Uses**

Timber production, livestock grazing

**768—Shirts-Kosh-Eagleson complex, 35 to 90 percent slopes****Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,920 to 6,260 feet

*Mean annual precipitation:* 26 to 30 inches

*Mean annual air temperature:* 41 to 45 degrees F

*Frost-free period:* 60 to 90 days

**Map Unit Composition**

*Shirts and similar soils:* 35 percent

*Kosh and similar soils:* 25 percent

*Eagleson and similar soils:* 15 percent

*Dissimilar minor components:* 25 percent

**Major Components****Shirts, Sandy Loam, South Slope****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly convex, south-facing flanks

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 3.8 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; sandy loam

AB—5 to 11 inches; sandy loam

Bw1—11 to 23 inches; fine gravelly sandy loam

Bw2—23 to 35 inches; gravelly sandy loam

R—35 to 45 inches; unweathered bedrock

**Kosh, Moist****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Convex, south-facing flanks and spurs

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.9 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A1—0 to 4 inches; fine gravelly sandy loam

A2—4 to 9 inches; fine gravelly sandy loam

C—9 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

***Eagleson, Fine Gravelly Sandy Loam*****Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Slightly concave, south-facing flanks

*Parent material:* Colluvium derived from granodiorite and rhyolite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 12 inches; fine gravelly sandy loam

Bw—12 to 17 inches; very gravelly sandy loam

C—17 to 25 inches; extremely gravelly loamy sand

R—25 to 35 inches; unweathered bedrock

***Dissimilar Minor Components*****Charters, sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Slightly concave, south-facing flanks

*Forest habitat type:* Douglas-fir/mallow ninebark-pinegrass phase (CDS717)

**Packerjohn, ashy sandy loam, dry***Composition:* 10 percent*Geomorphic position:* Concave, north-facing flanks*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)**Belsh, moist***Composition:* 5 percent*Geomorphic position:* Concave bases*Forest habitat type:* Subalpine fir/thinleaf (blue) huckleberry (CES331)**Major Uses**

Timber production, wildlife habitat

**770—Shirts-Charters-Kosh complex, 15 to 65 percent slopes****Map Unit Setting***General landscape:* Intermontane basins*Major land resource area (MLRA):* 43B*Elevation:* 3,460 to 5,600 feet*Mean annual precipitation:* 24 to 28 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 60 to 90 days**Map Unit Composition***Shirts and similar soils:* 50 percent*Charters and similar soils:* 20 percent*Kosh and similar soils:* 20 percent*Dissimilar minor components:* 10 percent**Major Components****Shirts, Sandy Loam, Dry****Setting***Landform:* Hillslopes*Geomorphic position:* Smooth and slightly convex, north-facing backslopes*Parent material:* Colluvium derived from granodiorite**Properties and qualities***Slope:* 15 to 65 percent*Percentage of surface area covered by stones and boulders:* None*Shrink-swell potential:* Low*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)*Drainage class:* Somewhat excessively drained*Permeability class (slowest):* Moderately rapid*Flooding frequency:* None*Seasonal high water table (minimum depth):* More than 72 inches*Available water capacity (entire profile):* About 4.7 inches**Interpretive groups***Land capability subclass (nonirrigated):* 6e*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A—2 to 5 inches; sandy loam  
 AB—5 to 12 inches; sandy loam  
 Bw1—12 to 21 inches; coarse sandy loam  
 Bw2—21 to 33 inches; coarse sandy loam  
 C—33 to 39 inches; gravelly loamy coarse sand  
 R—39 to 49 inches; unweathered bedrock

***Charters, Fine Gravelly Sandy Loam, Dry*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly concave, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 5.5 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A1—1 to 11 inches; fine gravelly sandy loam  
 A2—11 to 16 inches; fine gravelly sandy loam  
 Bw1—16 to 33 inches; fine gravelly sandy loam  
 Bw2—33 to 41 inches; fine gravelly sandy loam  
 Bw3—41 to 60 inches; fine gravelly sandy loam

***Kosh, Moist*****Setting**

*Landform:* Hillslopes

*Geomorphic position:* Convex, north-facing shoulders and summits

*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 15 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 0.9 inch

**Interpretive groups**

*Land capability subclass (nonirrigated): 7s*

*Forest habitat type: Douglas-fir/white spirea-ponderosa pine phase (CDS635)*

**Typical profile**

A1—0 to 4 inches; fine gravelly sandy loam

A2—4 to 9 inches; fine gravelly sandy loam

C—9 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

***Dissimilar Minor Components*****Middlefork**

*Composition: 5 percent*

*Geomorphic position: Footslopes*

*Forest habitat type: Douglas-fir/common snowberry-ponderosa pine phase (CDS627)*

**Packerjohn, ashy sandy loam, dry**

*Composition: 5 percent*

*Geomorphic position: Concave backslopes*

*Forest habitat type: Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)*

***Major Uses***

Timber production, livestock grazing

***771—Backswitch-Shirts complex, 25 to 65 percent slopes******Map Unit Setting***

*General landscape: Intermontane basins*

*Major land resource area (MLRA): 43B*

*Elevation: 4,160 to 4,680 feet*

*Mean annual precipitation: 22 to 26 inches*

*Mean annual air temperature: 39 to 42 degrees F*

*Frost-free period: 50 to 75 days*

***Map Unit Composition***

*Backswitch and similar soils: 55 percent*

*Shirts and similar soils: 25 percent*

*Dissimilar minor components: 20 percent*

***Major Components******Backswitch, Sandy Loam*****Setting**

*Landform: Hillslopes*

*Geomorphic position: Smooth and slightly concave, north-facing backslopes*

*Parent material: Colluvium derived from granodiorite*

**Properties and qualities**

*Slope: 25 to 65 percent*

*Percentage of surface area covered by stones and boulders: None*

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic), 24 to 50 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/dwarf bilberry (huckleberry) (CDS815)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 7 inches; sandy loam

BA—7 to 11 inches; coarse sandy loam

Bw1—11 to 21 inches; fine gravelly coarse sandy loam

Bw2—21 to 33 inches; fine gravelly coarse sandy loam

C—33 to 40 inches; very cobbly loamy coarse sand

Cr—40 to 50 inches; weathered bedrock

R—50 to 60 inches; unweathered bedrock

### ***Shirts, Sandy Loam, Dry***

### **Setting**

*Landform:* Hillslopes

*Geomorphic position:* Slightly convex, north-facing backslopes

*Parent material:* Colluvium derived from granodiorite

### **Properties and qualities**

*Slope:* 25 to 65 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Somewhat excessively drained

*Permeability class (slowest):* Moderately rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 4.7 inches

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 5 inches; sandy loam

AB—5 to 12 inches; sandy loam

Bw1—12 to 21 inches; coarse sandy loam

Bw2—21 to 33 inches; coarse sandy loam

C—33 to 39 inches; gravelly loamy coarse sand

R—39 to 49 inches; unweathered bedrock

### ***Dissimilar Minor Components***

### **Ultic Argixerolls, very deep**

*Composition:* 10 percent

*Geomorphic position:* Footslopes

*Forest habitat type:* Douglas-fir/dwarf bilberry (huckleberry) (CDS815)

**Ultic Haploxerolls, fine gravelly sandy loam**

*Composition:* 5 percent

*Geomorphic position:* Concave backslopes

*Forest habitat type:* Douglas-fir/common snowberry-ponderosa pine phase (CDS627)

**Lithic Ultic Haploxerolls**

*Composition:* 5 percent

*Geomorphic position:* Shoulders, summits

*Forest habitat type:* Douglas-fir/elk sedge-ponderosa pine phase (CDG142)

**Major Use**

Timber production

**772—Pajo-Packerjohn-Kosh complex, 35 to 90 percent slopes**

**Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43B

*Elevation:* 3,400 to 6,960 feet

*Mean annual precipitation:* 28 to 36 inches

*Mean annual air temperature:* 39 to 44 degrees F

*Frost-free period:* 60 to 90 days

**Map Unit Composition**

*Pajo and similar soils:* 35 percent

*Packerjohn and similar soils:* 25 percent

*Kosh and similar soils:* 20 percent

*Dissimilar minor components:* 20 percent

**Major Components**

**Pajo, Fine Gravelly Ashy Sandy Loam**

**Setting**

*Landform:* Mountain slopes

*Geomorphic position:* Smooth and slightly convex, north-facing flanks

*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent

*Percentage of surface area covered by stones and boulders:* None

*Shrink-swell potential:* Low

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Excessively drained

*Permeability class (slowest):* Rapid

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Available water capacity (entire profile):* About 2.6 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 to 12 inches; fine gravelly ashy sandy loam  
 AC—12 to 16 inches; very gravelly ashy loamy sand  
 2C1—16 to 28 inches; extremely cobbly loamy coarse sand  
 2C2—28 to 38 inches; extremely cobbly loamy coarse sand  
 2R—38 to 48 inches; unweathered bedrock

***Packerjohn, Ashy Sandy Loam, Dry*****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Slightly concave, north-facing flanks  
*Parent material:* Volcanic ash and colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 6.4 inches

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
 A1—2 to 10 inches; ashy sandy loam  
 A2—10 to 17 inches; ashy sandy loam  
 Bw—17 to 34 inches; fine gravelly ashy coarse sandy loam  
 2C1—34 to 50 inches; loamy coarse sand  
 2C2—50 to 60 inches; fine gravelly loamy coarse sand

***Kosh, Moist*****Setting**

*Landform:* Mountain slopes  
*Geomorphic position:* Convex, north-facing flanks and spurs  
*Parent material:* Colluvium derived from granodiorite

**Properties and qualities**

*Slope:* 35 to 90 percent  
*Percentage of surface area covered by stones and boulders:* None  
*Shrink-swell potential:* Low  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (lithic)  
*Drainage class:* Excessively drained  
*Permeability class (slowest):* Rapid  
*Flooding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Available water capacity (entire profile):* About 0.9 inch

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Forest habitat type:* Douglas-fir/white spirea-ponderosa pine phase (CDS635)

**Typical profile**

A1—0 to 4 inches; fine gravelly sandy loam

A2—4 to 9 inches; fine gravelly sandy loam

C—9 to 18 inches; extremely gravelly loamy sand

R—18 to 28 inches; unweathered bedrock

***Dissimilar Minor Components*****Shirts, coarse sandy loam**

*Composition:* 10 percent

*Geomorphic position:* Slightly convex flanks and spurs

*Forest habitat type:* Douglas-fir/mallow ninebark-ponderosa pine phase (CDS717-PIPO)

**Montchief**

*Composition:* 5 percent

*Geomorphic position:* Bases

*Forest habitat type:* Subalpine fir/Rocky mountain maple (CES141)

**Zan, moist**

*Composition:* 5 percent

*Geomorphic position:* Concave flanks

*Forest habitat type:* Subalpine fir/thinleaf (blue) huckleberry (CES331)

***Major Uses***

Timber production, wildlife habitat

***900—Pits and Dumps, gravel***

*Major land resource area (MLRA):* 10

*Elevation:* 2,630 to 4,090 feet

*Map unit composition:* Pits, gravel—75 percent; dumps, gravel—25 percent

*Slope:* 0 to 100 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Flooding frequency:* None to frequent

*Seasonal high water table (minimum depth):* 20 to 72 inches or more

*Land capability subclass (nonirrigated):* 8

*Major use:* Sand and gravel excavation

***901—Dumps, landfill***

*Major land resource area (MLRA):* 43B

*Elevation:* 2,620 to 4,920 feet

*Map unit composition:* Dumps, landfill—100 percent

*Slope:* 0 to 25 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Flooding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Land capability subclass (nonirrigated): 8*  
*Major use: Solid waste disposal*

**999—Water**

# Use and Management of the Soils

---

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

## Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

### Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited*, *somewhat limited*, and *very limited*. The suitability ratings are expressed as *well suited*, *moderately suited*, *poorly suited*, and *unsuited* or as *good*, *fair*, and *poor*.

### Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations

appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

## Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described.

Cultivation of west-central Idaho began when the gold rush to Boise Basin abruptly provided local markets. The demand for farm products was so high that farming in the area began about a generation sooner than it would have otherwise. Early Chinese farmers used the natural geothermal water in the Garden Valley, which allowed them to produce crops year round for the neighboring mining communities. Irrigation projects were developed gradually, from those in areas of easily irrigated bottomland to small canals. Deadwood Reservoir, constructed in 1931, now provides irrigation water storage and flood protection for farms along the lower Payette River.

The survey area has about 8,000 acres of hay and pasture, in the Horseshoe Bend, Gardena, and Garden Valley areas. Alfalfa and grass hay are the dominant crops, and they are grown in rotation with small grain, such as barley, wheat, and oats. The climate in the Horseshoe Bend and Gardena areas is much warmer and drier than in the Garden Valley area; however, crop production is limited in all of the areas by low precipitation in summer.

Nearly one-half of the agricultural land presently is under irrigation (fig. 12). Center-pivot, hand-line, and side-roll sprinkler systems are generally the most practical methods of irrigation in these areas. Surface and furrow irrigation systems are suitable for the nearly level areas. Because of the increase in the cost of energy and water, low-pressure center-pivot systems are becoming popular in surrounding areas. Implementation of an irrigation water management plan helps to conserve soil and water resources.

A limited amount of available water is in the soils; therefore, a planned schedule of irrigation is needed to maintain soil moisture. The application interval varies according to the crop grown, the available water capacity of the soil, and the amount of moisture in the soil. For maximum efficiency, the soils should be irrigated when about one-third to one-half of the stored water has been used by the plants. The Collister soils, for example, have about 7 inches of available water in the root zone. If alfalfa hay is grown, these soils should be irrigated when about 3.5 inches has been removed by the crop. An irrigation system should be planned to replace water at a rate that will provide a stable water supply for the crop in the rotation that has the highest rate of consumptive use. It should provide uniform distribution of water across the field while controlling water erosion and minimizing loss from runoff and deep percolation.

The frequency, duration, and amount of water applied can be managed best with the use of sprinkler and drip irrigation systems. These systems are particularly well adapted to coarse-loamy soils, such as the Boise, Cloudyway, and Flofeather soils. These soils accept and transmit water with relative ease, but they have a limited capacity to retain soil moisture for plant roots. Some soils, such as those of the Hann and Jasseek series, have a clayey subsoil that has a slow rate of permeability. These soils require light, frequent applications of irrigation water to adequately wet and maintain available water in the root zone. Irrigation water must be applied carefully to minimize runoff and water-induced erosion, especially on medium and fine textured soils. The soils on nearly level stream terraces are less subject to runoff than are those on more sloping fans and hillslopes; however, water management is still important because overirrigation leaches plant nutrients and can create a temporary high water table.



**Figure 12.—Irrigated hay in an area of Bissell loam, 4 to 8 percent slopes. Payette River Canyon is in background.**

Prescribed grazing, forage harvesting management, residue management, and nutrient management are conservation practices that are needed to maintain soil quality. These practices are particularly needed on the Flofeather soils, which have a coarse textured surface layer that is highly susceptible to wind erosion. Windbreaks consisting of trees and shrubs are effective in reducing wind erosion while protecting crops, holding snow on fields, and providing food and cover for wildlife.

The poorly drained Pay and Ralsen soils have a seasonal high water table at or near the surface during part of the growing season. Planting and harvesting of field crops is difficult on these soils and other wet soils; therefore, these soils are used almost exclusively as pasture.

Flooding and poor drainage are major management factors for these soils and other wet soils. The seasonal high water table provides supplemental moisture, but it limits the choice of plants and the period of cutting or grazing of hay. Only hay and

pasture plants that tolerate periodic inundation and seasonal wetness should be seeded. To minimize compaction by livestock, grazing should be delayed until the soil has drained sufficiently and is firm enough to withstand trampling. If pesticides are used in areas subject to flooding, care should be taken to avoid contamination of streams. The rate and time of application are important considerations. The Collister and Staircase soils may require similar practices, although these soils are flooded less frequently and have a seasonal high water table at a greater depth. Water-control structures can reduce the risk of flooding, and open ditches may be needed to remove excess water. Adjusting applications of irrigation water to the available water capacity, the water intake rate, and the needs of the plant grown helps to minimize leaching of nutrients and prevent a rise in the level of the water table.

Because many of the soils in the valleys are fluvial, the texture of the subsoil and substratum commonly are highly contrasting to the loamy texture of the surface layer. The contrasting layers commonly are sandy and gravelly. Brassey, Jasseek, and Riverpoint soils are examples. To avoid exposing the sandy and gravelly layers, land smoothing should include only shallow cuts.

Large amounts of plant nutrients, particularly nitrogen and phosphorus, are removed when crops are harvested. Returning crop residue to the soil and adding feedlot manure and commercial fertilizers help to maintain the level of plant nutrients. Soil testing is the best method to determine the kinds and amount of fertilizer to apply for specific crops. Most of the soils in the survey area that are used for hay and pasture have a moderate content of organic matter and are slightly acid or neutral in the surface layer. Organic matter is an important source of nitrogen for crops, and it helps to increase the water intake rate, reduce soil loss from erosion, and increase soil tilth. Viable stands of alfalfa included in long-term rotations can produce nitrogen that is released back into the soil when the stands are removed and biomass from the alfalfa decomposes. This nitrogen may be available for subsequent crops or lost to the atmosphere, depending on the management practices used and the climatic conditions during the period of mineralization. Use of mulch tillage and regular additions of manure or other organic material help to improve soil structure and minimize crusting of the soil. Leaving crop residue on the surface also helps to prevent crusting of the soil.

Prescribed grazing is needed to maintain the desirable forage plants in pastures. Livestock grazing should be controlled to prevent soil compaction and trampling of plants when the soil is wet. Overgrazing of fields and pastures adjacent to streams can result in damage to riparian vegetation, reducing the stability of streambanks and the quality of water downstream. Highly erodible, fine textured soils on steep slopes should be planted to permanent pasture or used as wildlife habitat.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

### **Yields per Acre**

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 5. In any given year, yields may be higher or lower than those indicated in the table because of availability of irrigation water and variations in rainfall and other climatic factors. The land capability classification of map units in the survey area is shown in table 6.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops

depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

### **Land Capability Classification**

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system (USDA, 1961), soils are generally grouped at three levels—capability class, subclass, and unit. Only class and subclass are given in this survey. The land capability classification for each soil or miscellaneous area is given in table 6.

*Capability classes*, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial

plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

### **Prime Farmland**

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 8 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 11,500 acres, or less than 3 percent of the survey area, meets the requirements for prime farmland or would meet the requirements if an adequate and dependable supply of irrigation water was available.

A recent trend in land use has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed at the end of this section. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil properties and qualities that affect use and management are described under the heading "Detailed Soil Map Units."

The following map units meet the requirements for prime farmland. Urban or built-up areas of the soils listed are not considered prime farmland.

- 220 Oxyaquic Xerofluvents-Cumulic Haploxerolls complex, nearly level (if irrigated)
- 221 Bissell loam, 2 to 4 percent slopes (if irrigated)
- 222 Bissell loam, 4 to 8 percent slopes (if irrigated)
- 223 Staircase sandy loam, 1 to 4 percent slopes (if irrigated)
- 224 Porter sandy loam, 1 to 4 percent slopes (if irrigated)
- 225 Boise coarse sandy loam, 3 to 8 percent slopes (if irrigated)
- 226 Flofeather-Shawmount complex, 1 to 3 percent slopes (if irrigated)
- 227 Piercepark loam, 2 to 4 percent slopes (if irrigated)
- 228 Piercepark loam, 4 to 8 percent slopes (if irrigated)
- 229 Piercepark coarse sandy loam, 8 to 25 percent slopes (if irrigated)
- 232 Jasseek loam, 1 to 3 percent slopes (if irrigated)
- 233 Jasseek loam, 3 to 8 percent slopes (if irrigated)
- 238 Adaboi silt loam, 1 to 4 percent slopes (if irrigated)
- 240 Collister-Flofeather complex, 1 to 3 percent slopes (if irrigated)
- 401 Staircase sandy loam, 0 to 2 percent slopes
- 402 Crossbow-Foxlane complex, 1 to 4 percent slopes
- 405 Hellake-Staircase complex, 0 to 2 percent slopes
- 406 Hellake loam, 2 to 8 percent slopes
- 408 Stardust fine gravelly loam, 1 to 3 percent slopes
- 409 Stardust fine gravelly loam, 3 to 8 percent slopes
- 413 Cloudyway fine gravelly sandy loam, 4 to 15 percent slopes
- 420 Pioneervil-Grimescreek complex, 0 to 3 percent slopes
- 425 Middlefork-Brassey complex, 3 to 15 percent slopes
- 503 Cartwright loam, 3 to 8 percent slopes

## **Agricultural Waste Management**

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Tables 7, 8, and 9 show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose

of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Application of manure and food-processing waste* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

*Application of sewage sludge* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

*Disposal of wastewater by irrigation* not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

*Overland flow of wastewater* is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, permeability, depth to a water table, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

*Rapid infiltration of wastewater* is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

*Slow rate treatment of wastewater* is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application

rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste.

## **Rangeland and Grazeable Forestland**

Early farmers and ranchers arrived after the miners of the gold rush. Families settled on land near transportation routes and water. Settlement was encouraged by the Homestead Act, which offered 160 acres to each individual who could make the required land improvements and locate water. The ranchers and farmers continually expanded operations to supply agricultural products to the booming mining communities.

Raising of cattle, horses, and sheep became important industries. When the railroad was extended into southern Idaho in the 1880s, the production of wool and mutton became as important as the cattle and horse industries. Sheep need to be protected from predators, but they don't require nearly as much water as cattle. They can range farther from streams and on rougher terrain. Hundreds of thousands of livestock grazed in areas of rangeland and woodland and then were driven to railheads and shipped to markets on the East and West Coasts.

Historical grazing by cattle and sheep and the practice of burning rangeland resulted in a considerable change in the forage and soil resources in the survey area. Public land was impacted the most, with 50 percent or more of the forage depleted. At the time, the public land was open range. The result was heavy pressure on rangeland in spring when plants rely on stored energy to produce vital first leaves. These first leaves produce the energy plants need to grow; thus, overgrazing severely retarded plant growth. Being the first one to trail sheep or cattle through an area was a tremendous advantage. If a second band of livestock grazed the area before the vegetation recovered, it exhibited drastically declined vigor, produced less seed, and had less ability to survive fire (Steele and others, 1981).

Fire plays an integral role in maintaining healthy sagebrush-grass rangeland. After a fire, the rangeland plants return with increased vigor. Repetitive fires, however, have an extensive, long-term impact on the rangeland. A second consecutive year of fire damages the rangeland, and a third year of fire is disastrous. Early shepherders routinely burned areas of rangeland, expecting the same result as after the first fire.

Since the General Land Office (GLO) did not manage public rangeland, the local stockmen managed it. Their efforts to organize frequently were sabotaged by transient stockmen who had just as much claim to the rangeland as the local stockmen. In some cases, effective livestock grazing associations were formed to keep out the transient stockmen.

Decades of rangeland abuse combined with widespread poverty and drought ultimately lead to the grazing disaster of the 1930's. People began to realize that soil erosion threatened their way of life; thus, conservation was essential. They learned

that healthy plant communities not only conserve water and control erosion, but they also provide wildlife habitat and enhance the scenic and recreational value of the land. In 1940, the Squaw Creek Soil Conservation District was organized to continue the erosion control and rangeland restoration started by the Civilian Conservation Corps.

Today, cattle and sheep operations still contribute to the economy. About 70 percent of the agricultural income of the area, excluding timber, comes from livestock operations, principally cattle. Most are cow-calf operations, but there are some feeder calf operations. The typical operation consists of about 1,500 acres of deeded land supplemented with grazing by permit on Federal and State land. Cattle winter in the lower elevation valleys, mainly feeding on cuttings from hay meadows and alfalfa fields and on crop aftermath left standing in the fields. Calving usually occurs in January through March. As spring growth begins, animals are turned out on the rangeland, and they migrate to higher elevations as the season and forage conditions allow. The grazing season generally is from mid-April through mid-November.

Some sheep are raised in the area, but most bands are headquartered in adjacent counties. Herds graze the rangeland on their way to higher elevation summer range in the forests. In fall, herds graze the hay and crop aftermath as they are returning. Other livestock operations are of relatively small extent, but of special interest is the newly emerged elk ranching industry. Other livestock are pastured locally all year.

The rangeland in the survey area is in the foothills in the southern and western parts (fig. 13). About 140,000 acres, or 30 percent of the survey area, is rangeland. Large tracts of woodland throughout the rest of the survey area are also used for grazing, especially areas on south-facing slopes or cutover, less sloping areas.

The open rangeland historically consisted of a mixed stand of bunchgrasses, forbs, and shrubs. Soils and characteristic native plant communities commonly are distinctly different in the intermingled areas of granitic, basaltic, and lacustrine parent



**Figure 13.—Native rangeland on north-facing slope in an area of Cartwright-Brownlee-Robbscreek complex, 25 to 65 percent slopes. Robbscreek-Dobson-Brownlee complex, 25 to 65 percent slopes, on south-facing slope in background.**

material of the foothills. Bluebunch wheatgrass commonly was the dominant grass; but it was co-dominant with Idaho fescue on the protected north-facing slopes. Generally, the dominant shrubs were big sagebrush and antelope bitterbrush.

Overgrazing and fire have reduced the abundance of or eliminated many native perennial plants and shrubs. Palatable forage plants have been replaced by exotic annual grasses, such as cheatgrass and medusahead rye, and noxious weeds, such as rush skeletonweed. Presently, at lower elevations native vegetation is only in isolated areas. This shift from a plant community that is dominantly perennial grass to one that is dominantly annual grass has resulted in greater variations in annual production. Annual grasses depend more on timely spring rains than do perennial grasses.

Forestland that produces sufficient understory vegetation suitable for grazing, without significantly impairing wood production and other forest values, commonly is on exposed mountain slopes and ridges and in mountain valleys and intermontane basins. Climatic regimes in these mountainous areas are much more variable than those in the foothills; therefore, the native vegetation is more diverse. The understory vegetation in the relatively warm and dry forests is similar to that of the adjacent rangeland. As the climate becomes cooler and moister, Geyer's (elk) sedge becomes more common than bunchgrasses and common snowberry or white spirea is the dominant shrub. Steep, north-facing slopes commonly are characterized by a nearly continuous cover of mallow ninebark. Sites that remain cool throughout the year are characterized by huckleberry or mountain maple and few grasses.

The production of forage in the areas of forestland is highly dependent on the amount of light the understory plants receive. After harvesting or fire, there commonly is a large increase in production for several years. As the tree canopy closes, the understory production decreases. In many areas of forestland, the density of the tree canopy related to maximum wood production allows for only sparse understory vegetation.

Between areas of open rangeland and forestland are scattered areas that support dominantly mountain brush, such as bitter cherry and chokecherry, to the near exclusion of grasses. The snowpack in these areas persists, resulting in soils that warm up slower and stay moist longer into the growing season than adjacent areas of exposed rangeland. Under current climatic conditions, however, the amount of precipitation is not sufficient to support succession of the plant community to forestland. These unique sites differ from the drastically disturbed areas of forestland that have regenerated to persistent brushfields.

Forestland understory and rangeland vegetation are integral, vital parts of a healthy watershed, where clean water is slowly released from uplands over an extended period of time and aquifers are recharged. Grasses, forbs, and shrubs protect and stabilize soils by intercepting raindrops, contributing to soil structure, and improving the soil water intake rate during periods of runoff.

The relationship between soils and the historic climax vegetation was established during this survey and generally can be determined directly from the detailed soil map and map unit descriptions.

In areas that have similar climate and topography, differences in the kind, proportion, or production of plants are closely related to properties that affect the moisture supply, such as soil texture and depth. Soil reaction, surface stones, and a seasonal high water table are also important.

Rangeland soils are correlated to ecological sites, forestland soils are correlated to forest habitat types (see "Forestland" section), and higher taxonomic class soils are correlated to the more general ecoclass potential natural plant communities (Hall, 1998). A climax plant community type is used for naming in each of these methods of site classification. These names do not imply that management should be applied

strictly to produce the climax vegetation; in fact, seral or adapted species commonly are more favorable for management.

Table 10 shows the ecological site, forest habitat type, or ecoclass habitat type and the characteristic vegetation for each soil. Total production and composition of the characteristic vegetation is shown differently for each of the classification methods. For soils that have a rangeland ecological site, the table shows total production values for the site and percent composition of the major species based on dry weight. Production values are not given for forest habitat types; the table gives the percent composition of the major species based on the understory canopy cover. For higher taxonomic class soils, relative composition of the major species was not determined. An explanation of the column headings in the table follows.

An *ecological site, forest habitat type, or ecoclass habitat type* is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of the site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. The plant community is typified by an association of species that differs from that of other sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites and forest habitat types are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

*Total dry-weight production* is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

*Characteristic vegetation*—the grasses, forbs, and shrubs that make up most of the potential natural plant community on each soil—is listed by common name. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Management of grazing land requires a knowledge of the kinds of soil and of the historic climax plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the historic climax plant community or other reference plant community on a particular site. The more closely the existing community resembles the reference plant community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the reference plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the "National Range and Pasture Handbook," which is available in local offices of the Natural Resources Conservation Service or on the Internet (<http://www.glti.nrcs.usda.gov/technical/publications/nrph.html> USDA, 2003b).

The objective in grazing land management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water,

and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Prescribed grazing is the main management practice needed on grazing land in the survey area. Prescribed grazing allows plants to achieve adequate spring growth to withstand grazing pressures, allows the soils to dry out in spring to minimize damage from compaction and trampling, allows for periodic rest or deferment to maintain or improve vigor of the forage and allow for reproduction; and allows for removal of livestock when the desired amount of forage has been grazed.

Practices such as constructing water developments, fencing, salting, managing brush, range seeding, and distributing livestock properly can facilitate the implementation of prescribed grazing and result in desired changes in the plant community. The suitability of specific practices is dependent on the characteristics of the soil and site.

## Forestland

By Frank Gariglio, state forester, Natural Resources Conservation Service.

The history of logging in the survey area began shortly after the discovery of gold at Grimes Creek in August 1862. Several settlements were constructed as prospectors streamed into the Boise Basin to stake their claims. Old photographs of the Boise Basin indicate that virtually all of the timber adjacent to these mining towns was removed. By 1870, 13 woodcutting operations and 12 sawmills were producing lumber for construction of mine shores and homes, stores, and flumes in the Basin.

By the 1890s, additional harvesting and milling operations had been established in the area. The smaller sawmills generally were close to the logging sites; however, the Boise and Payette Rivers were used to float logs to larger sawmills downstream. In 1904, the Barber Lumber Company began a logging operation along Mores and Grimes Creeks, and the next year the company completed the Barber Dam on the Boise River, just east of Boise City. Ultimately, the company's plan to use the river to transport logs to the mill at Barber failed because of inadequate streamflow. In 1914, the company was sold to the Boise Payette Company, a predecessor to the Boise Cascade Company. The next year, the Boise Payette Company reopened the Barber Mill and constructed a railroad that reached the emerging community of New Centerville. In just 3 years, the mill was processing 22 million board feet of lumber annually. Production peaked at 62 million board feet in 1923, and then it declined until the mill was closed and dismantled in 1934.

In 1946, the Hoff Lumber Company upgraded an existing lumber mill in Horseshoe Bend and became one of the major local employers for many years. During this period, lumber from the survey area was hauled by log trucks to the mill for processing. In 1975, the Hoff Lumber Company sold the Horseshoe Bend Mill to the Boise Cascade Company. It was closed permanently in 1998. Logs are now transported out of the area for processing.

The survey area encompasses the relatively narrow ecotone between the sage-steppe grassland of the Snake River Plain and the coniferous forests of the Northern Rocky Mountains. The forests in the area are adapted to long, dry summers and cool, moist winters. Approximately 70 percent, or 320,000 acres of the survey area, is forestland, straddling the Boise Ridge and extending eastward. The most extensive tree species are Douglas fir, grand fir, ponderosa pine, and subalpine fir. Black cottonwood, Engelmann spruce, lodgepole pine, and quaking aspen are in isolated areas.

The forest habitat type method of site classification was used for this survey (Daubenmire, 1952; Steele and others, 1981). These natural vegetative groups

provide a comprehensive understanding of the environmental parameters for each site. Designation of a forest habitat type provides a system for objectively differentiating and correlating soil types based on the inherent climax plant community, which is the plant community that would develop in the absence of disturbances such as fire. Forest habitat types are widely used by forest professionals in communicating, making management decisions, and applying research.

Natural forest communities basically are determined by climate, topography, and soil type. Productivity is dependent on many environmental factors. The impact of harvesting, excluding fire, and other management activities on the nutrition status, cycling of organic matter, composition of tree species, accelerated erosion, and soil compaction commonly has resulted in forest stands that are now less healthy and sustainable than in pre-settlement times. Consequently, many stands are more susceptible to disease and insect infestation and to a higher risk of larger, more intense wildfires. Forest soil health and sustainability are influenced by the application of conservation practices during harvesting and management activities. This soil survey can assist land managers and decision makers in understanding the inherent potential and proper function of the soil resources.

Prior to the 20th century, the historic occurrence of wildfires in the survey area greatly influenced the composition of tree species. Since that time, fire suppression and preferential harvest of valuable trees has dramatically altered the composition of stands. In general, the relative proportion of ponderosa pine (an early-seral tree species) has decreased in the western part of Boise County with a corresponding increase in proportion of Douglas fir and grand fir. A major management concern associated with the typically dry forests in the area is the failure of many sites to regenerate trees following burns or harvests and the resulting persistent brushfields that make establishment of tree seedlings difficult.

Some of the soils in the area, such as those of the Highvalley, Packerjohn, Pinney, and Timberbutte series, have a low to moderate content of volcanic ash. Volcanic ash enhances seedling establishment and productivity; however, the ashy textured soils are sensitive to damage by traffic, resulting in a reduction in growth. Natural recovery from displacement and compaction is very slow.

The nutrient status of a forested soil is influenced mainly by the weathered parent material and past management. Some types of volcanic rock, especially basalt from which soils such as those of the Awley and Shilling series are derived, have a high inherent nutrient content. The granitic type, from which soils such as those of the Belsh and Charters series are derived, have low fertility. The level of potassium in forested soils is critical for current and future productivity and the sustainability of the forest environment. A large portion of the available potassium on any given forest stand can be tied up in the above-ground tree vegetation, particularly in the needles and twigs of conifer trees. The shade-tolerant and late-seral species, such as grand fir and Douglas fir, tend to have a greater influence on the above-ground potassium balance than do the early-seral species. It is critical to consider the nutrient balance if pre-commercial thinning, slash treatment, or other forest conservation practices are applied.

The role of woody material on the soil surface and in the profile is an important parameter for the sustainability of forested soils. Maintaining a proper amount of coarse woody debris, composed of boles, limbs, and branches more than 3 inches in size and in various states of decomposition, helps to maintain beneficial microbial functions, cycle nutrients, conserve moisture, intercept raindrops, and improve soil structure. Maintaining or applying coarse woody debris after harvest is especially important. In areas of the drier ponderosa pine habitat types, 5 to 13 tons of coarse woody debris per acre is recommended after harvest. In areas of the moister Douglas fir and grand fir habitat types, 7 to 14 tons per acre is recommended (Graham and others, 1994).

The topography of the forestland in the survey area is dominantly steep canyons and mountain slopes; however, rolling hills and terraces are in the Boise Basin and Garden Valley areas. Steepness of the terrain influences forest harvest methods. Compaction, displacement, and erosion of the soil must be carefully managed if a ground-based system is used. Areas that have slopes of more than 35 percent generally are not suited to ground skidding. High-lead or skyline systems can be used in these areas.

Careful placement and construction of landings, logging roads, and skid trails are needed to minimize soil compaction, erosion, and sedimentation during harvesting. Soil slippage and landslides can be a problem on the steeper slopes, especially those that have roads. Proper design and application of road drainage systems are essential for maintaining slope stability.

Natural seedling germination and survival and the eventual establishment of mature trees in a forest stand are influenced by the history and seedbed condition of the stand along with the climatic condition, topography, and soil characteristics. In areas where adequate silvicultural practices were not applied following past harvesting operations, planting desirable tree species can help to achieve regeneration. Tree planting can also be used to purposely change the species or genetic characteristics of species within a stand following harvesting. In some areas, pre-commercial or commercial thinning can shift the ecological balance to more suitable tree species. Many forested sites have been invaded by brushfields following harvesting operations. Regeneration of these areas is virtually impossible to achieve within a reasonable period of time unless significant site preparation is applied.

Shallow forested soils have characteristic limitations that affect the regeneration and growth of trees. The shallow Kisky, Kosh, Hoff, Whisk, and Zimmer soils have a lower potential productivity than do deeper soils in the same habitat type (fig. 14). These shallow soils have only a thin layer of humified organic matter accumulation and a very low capacity to store water for plant use. These characteristics are related to the high rate of natural erosion in the convex, exposed geomorphic positions typical of these shallow soils. Anthropogenic activities, such as use of skid trails and recreational traffic, significantly accelerate the rate of erosion on these soils.

A unique management practice of the late 1950s and early 1960s consisted of constructing contoured terraces on large mountainous parcels and planting ponderosa pine on the terraces (fig. 15). Terracing around the Boise Basin area was designed primarily as a site preparation method intended to eliminate plant competition from persistent brushfields that established after catastrophic wildfires two decades earlier. Similar terraces were constructed in the upper Boise Front to minimize soil erosion following more recent large-scale fires in areas of rangeland and forestland.

The rate of seedling survival was excellent, most likely because the terraces collected and retained precipitation. Despite the amount of soil disturbance during construction of the terraces, the dry climate and porous nature of the granitic parent material evidently prevented the occurrence of large-scale landslides and slope failure.

Terracing for site preparation is no longer recommended even in areas of soils derived from granitic rock because it permanently alters the soils and the configuration of the slope. The terraces make harvesting and management of timber difficult, significantly lower the long-term productivity of the stand, and allow invasive, noxious weeds to invade.

The terraced areas in the survey area are described as they would have occurred naturally; however, the soils that now occupy these areas commonly are dissimilar to the natural soils. The affected characteristics are dependent on the original profile, slope, and aspect; therefore, they are highly variable. In the less sloping areas,



**Figure 14.—Marginal forestland in an of Backswitch-Zimmer-Rock outcrop complex, 8 to 35 percent slopes.**

full-bench terracing was used. In the steeper areas, the terraces were created with a plow blade. Generally, the cut-and-fill operations exposed grus on the uphill side and spoil material buried the natural soil on the downhill side. As a result, a riser of increased slope developed on both sides of the terrace. Initially, the cut areas had essentially no organic matter or nutrients, higher acidity, lower base saturation, and almost no available water capacity. The fill areas were affected in the inverse. Time serves to mollify these changes, but inconsistently. Soil descriptions and interpretations, including production potentials, given in this survey do not apply to these anthropogenic soils in the terraced areas.

Mined areas in the Boise Basin were delineated and described as they occurred at the time of mapping. Because of the high variability of the soils in these areas, the taxonomic classification was identified to the subgroup level only; no family or series designation was identified. Soil interpretations for these soils, such as Dystric Xeropsammets, are less specific than for soils classified at the series level (USDA, 1999).

The tables in this section can help forest owners or managers plan the use of soils for wood production. They show the potential productivity of the soils and rate the soils according to the limitations that affect various aspects of forest management.

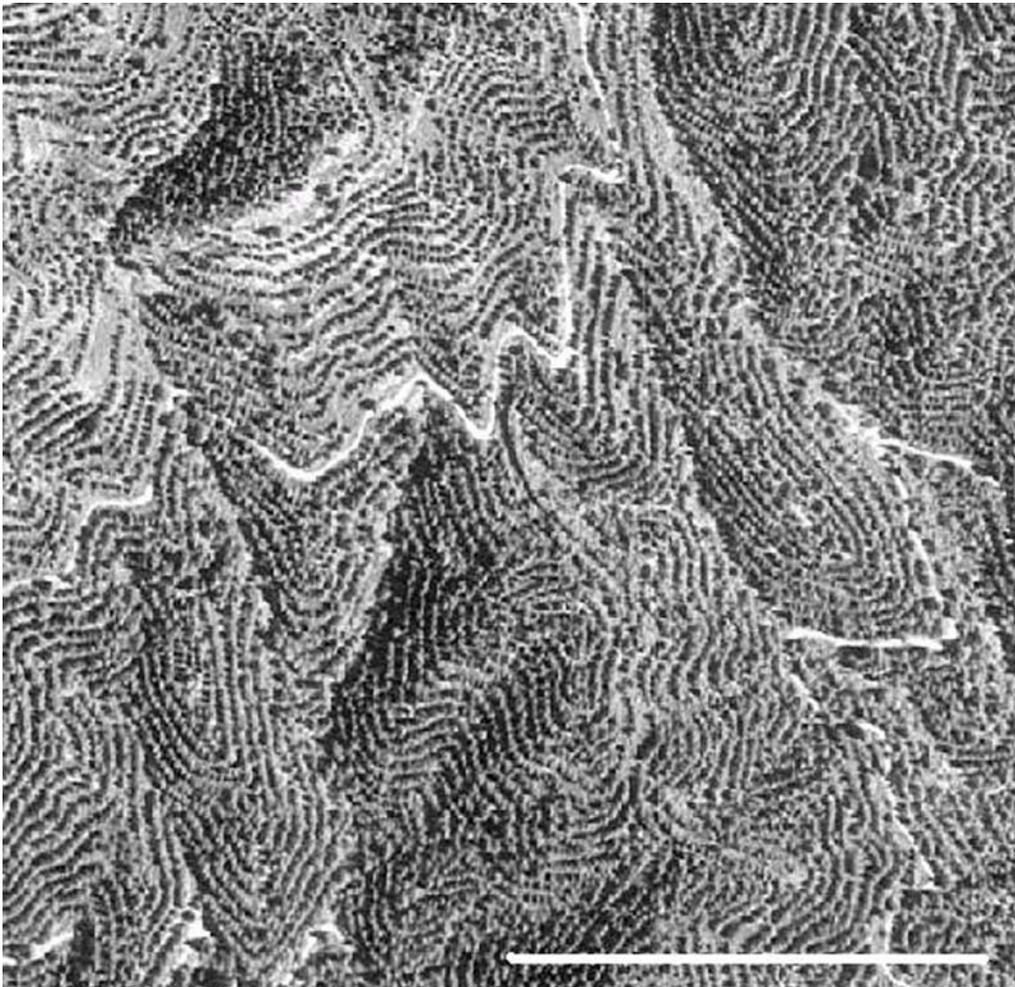


Figure 15.—Aerial view of contour terraces in an area of Shirts-Charters-Zimmer complex, 35 to 90 percent slopes, and Eagleson-Kosh complex, 25 to 90 percent slopes. Scale bar in lower right corner equals 1,000 feet.

### Forestland Productivity

In table 11, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index average*, a measure of site quality, is expressed as the average height, in feet, of the dominant or dominant and co-dominant trees at a specified *site index base age* of 50 or 100 years. The site index applies to fully stocked, even-aged, managed stands. The height of measured trees is considered to be independent of stand density over a wide range of stocking (Alexander, 1966; Alexander, 1967; Cochran, 1979a; Cochran, 1979b; Meyer, 1961).

*Common trees* are those that are adapted to the site. They are usually species that have commercial value and respond to management that includes proper silvicultural practices.

The *site index standard deviation* is a measure of the statistical dispersion of the site index data for the plot. The site index standard deviation value is provided only if data is available for three plots or more. The data must meet the standards of sampling and analysis in the "National Forestry Manual (USDA, 1998)," which is available in local offices of the Natural Resources Conservation Service or on the

Internet (<http://soils.usda.gov/technical/nfmanual/>). The designation (*e*) in this column indicates that the productivity values have been estimated. Estimates were not made for shallow soils or for soils classified above the series level.

The *volume of wood fiber*, a number, is the highest annual yield likely to be produced by the identified common trees. This value, indicating the amount of fiber produced in a fully stocked natural stand, is expressed as cubic feet per acre per year at the culmination of the mean annual increment (CMAI).

*CMAI* is the age that the maximum growth rate is achieved (Alexander, 1966; Cochran, 1979c; Edminster, 1980; Meyer, 1961).

*Trees to manage* are those forest trees that are adapted to the site and have commercial value or other value. They are species that respond to proper silvicultural practices and are not at excessive risk for mortality from diseases and insects that are inherent in the environment. More detailed information about potential productivity and trees to manage is available in the "National Forestry Manual."

Shallow soils typically are in narrow linear areas or small intermittent areas. As a result, representative plots that can be used for productivity measurements are scarce. Limited comparative studies show that the site index values of these soils are 15 to 25 percent less than for other soils. Trees that grow in adjacent areas of deeper soils commonly provide enough additional overstory canopy that these shallow soils can be classified as forestland habitat types instead of rangeland ecological sites. Regardless, the shallow soils are better suited to livestock grazing and wildlife habitat than to sustained timber production.

Potential productivity of the soils classified above the series level is not available or not precise because the plant communities are in early successional stage or are extremely variable. Detailed soil map units such as Pachic Argixerolls-Rubble land-Typic Haploxerolls complex, very steep, extend across climatic breaks that would separate the soils into soil series. The trees and understory vegetation in areas of map units such as Dystric Xeropsamments-Ultic Haploxeralfs-Lithic Xerorthents, hilly, are dominantly pioneer species.

### **Forest Management**

In tables 12a through 12e, interpretive ratings are given for various aspects of forest management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified forest management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for fire damage and seedling mortality are expressed as *low*, *moderate*, and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or

seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet (<http://soils.usda.gov/technical/nfmanual/>).

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and offsite damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance; and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding.

The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

## Recreation

The survey area is a year-round recreational backyard to the relatively densely populated Treasure Valley. The scenic mountains and canyons provide outstanding opportunities for sightseeing, hiking, cross-country and alpine skiing, camping, and recreational motor vehicle use. The area also provides excellent opportunities for fishing, hunting, and nature study. Boating and water skiing are popular activities on Lucky Peak Reservoir, and the Payette River is nationally known for whitewater rafting and kayaking.

The gold rush towns of Idaho City and Placerville provide opportunities for exploring the mining history of Idaho. In and around several small communities are parks, ballfields, geothermal swimming pools, and a golf course. Numerous developed recreational sites are maintained along the river corridors by the Forest Service and Bureau of Land Management. The more remote areas provide opportunities for primitive recreational activities.

The soils of the survey area are rated in tables 13a and 13b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or

expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 13a and 13b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

*Camp areas* require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Picnic areas* are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Playgrounds* require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Paths and trails* for hiking and horseback riding should require little or no slope

modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

*Off-road motorcycle trails* require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

*Golf fairways* are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

## Wildlife Habitat

By Dave Trochell, soil scientist, Natural Resources Conservation Service.

The availability and quality of food, cover, water, and space determine the characteristics of wildlife habitat. The quality of wildlife habitat and diversity of wildlife species are related to the complexity and integrity of the cover types, which provide protection, breeding areas, foraging areas, and accessible water. Wildlife habitat differs in its capacity to provide essential needs. Riparian areas generally provide habitat for the highest diversity of wildlife species; these areas provide ample water, support the highest diversity of plants, and provide corridors of protective cover.

Under natural habitat conditions, the diversity of the wildlife is key to the ecological functions that impact plant distribution and seed dispersal, water quality and quantity, nutrient cycling, and natural distribution of energy and biomass. Numerous environmental characteristics, such as precipitation, topography, range of temperature, and cover type, interact with soils to affect the daily, seasonal, and annual distribution of wildlife. Because of man-made pressures, planning for the protection and management of wildlife habitat is crucial.

Wildlife habitat can be improved or created by planting or promoting the natural establishment of desirable plant species while properly managing water and space. In table 10, the characteristic natural plant community for each soil in the survey area is listed. Soil properties and site features that affect water management are given for each soil in table 17. Information about flooding, water tables, and ponding is given in table 21.

The soils in the survey area support many different kinds of habitat for a broad variety of wildlife species associated with valleys, foothills, and mountains. A rich biodiversity of wildlife species has been recorded in the area, with about 170 species of resident and migratory birds, 70 species of mammals, and 25 species of reptiles and amphibians (Carpenter, 1990; Groves and others, 1997).

The valleys in the southern part of the survey area once supported plant communities characterized by basin big sagebrush and bluebunch wheatgrass on the stream terraces and by riparian and aquatic vegetation on the narrow, linear flood-plain steps. The riparian habitat was characterized by a canopy cover of black cottonwood and willow with a varied understory of shrubs, grasses, and forbs interspersed with marshes and open water. Over the last century and a half, the

valleys have been dramatically altered and fragmented by human activities, including channelization, agricultural conversion, intense grazing, and introduction of non-native plants. In addition, recent widespread homesite development is eliminating remnant native plant communities along with open areas used for crops and pasture. Typical wildlife species in the valleys include mammals such as mule deer, red fox, beaver, river otter, mink, striped skunk, raccoon, muskrat, little brown myotis, deer mouse, and vagrant shrew. Representative birds include great blue heron, Canada goose, mallard, Swainson's hawk, black-chinned hummingbird, downy woodpecker, western kingbird, American crow, barn swallow, American robin, yellow warbler, song sparrow, red-winged blackbird, and Bullock's oriole. Reptiles and amphibians include western terrestrial garter snake, Pacific tree frog, and western toad.

The foothills of the survey area were once primarily vegetated by big sagebrush, antelope bitterbrush, bluebunch wheatgrass, Idaho fescue, and a rich diversity of forbs. Many intermittent and perennial streams and the associated riparian habitat bisected the area. Fire, brush clearing, overgrazing, and homesite development have reduced or eliminated much of the natural upland and riparian vegetation. The streamside vegetation has been removed along many drainageways, and some of the streams have disappeared. Monocultures of fire-tolerant, invasive, and non-native annual grasses and weeds, such as cheatgrass, medusahead, bulbous bluegrass, and skeletonweed, commonly have replaced the native shrub/bunchgrass plant community. These invasive plants provide fuel for fires, which perpetuates the plants. In the Boise Foothills, this habitat conversion has dramatically reduced the winter range that once sustained a population of more than 6,000 mule deer. Diverse wildlife is in areas where remnants of native vegetation still exist, including elk, mule deer, coyote, badger, striped skunk, mountain cottontail, and long-tailed weasel. Bird species include red-tailed hawk, gray partridge, calliope hummingbird, mountain bluebird, lazuli bunting, spotted towhee, Brewer's sparrow, vesper sparrow, and western meadowlark. Reptiles in the foothills include gopher snake, racer snake, and western fence lizard.

The mountains and intermontane basins provide a variety of conifer forest habitat, from the dry, low-elevation ponderosa pine/bunchgrass type to the moist, high-elevation subalpine fir/huckleberry type. The habitat has been substantially altered by historic and present-day fire and logging. These areas presently provide a patchwork of forest types in various stages of successional recovery. Mammals in this ecosystem include elk, mule deer, black bear, coyote, least chipmunk, yellow pine chipmunk, Colombian ground squirrel, and red squirrel. Common bird species include ruffed grouse, hairy woodpecker, dusky flycatcher, Cassin's vireo, mountain chickadee, red-breasted nuthatch, Swainson's thrush, yellow-rumped warbler, western tanager, chipping sparrow, Cassin's finch, and pine siskin. Amphibians and reptiles include long-toed salamander, Pacific tree frog, spotted frog, rubber boa, gopher snake, and western rattlesnake.

## Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

*Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7*

feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

### **Building Site Development**

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 14a and 14b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest

negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Dwellings* are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

*Small commercial buildings* are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

*Local roads and streets* have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

*Shallow excavations* are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

*Lawns and landscaping* require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium

carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

### Sanitary Facilities

Table 15 shows the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Septic tank absorption fields* are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

*Sewage lagoons* are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and

the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

*Daily cover for landfill* is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

### **Construction Materials**

Tables 16a and 16b give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

*Sand and gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 16a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair, or poor* as potential sources of sand and gravel. A rating of *good or fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The numbers 0.00 to 0.07 indicate that the layer is a poor source. The numbers 0.75 to 1.00 indicate that the layer is a good source. The numbers 0.08 to 0.74 indicate the degree to which the layer is a likely source.

The soils are rated *good, fair, or poor* as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

*Topsoil* is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water

capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

*Reclamation material* is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

*Roadfill* is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

## Water Management

Table 17 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas and embankments, dikes, and levees. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Pond reservoir areas* hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is

determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

*Embankments, dikes, and levees* are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

## **Disturbed Land Reclamation**

Reclamation of disturbed land is the rehabilitation of an area to an appearance, use, and soil stability similar to that of the pre-disturbed, naturally functioning ecosystem and landscape. Disturbed land is reclaimed to control erosion, to restore site productivity, and for esthetics. Anthropogenic activities that commonly cause soil-landscape disturbances include road building, mining and mineral exploration, installation of pipelines, construction of stock ponds and reservoirs, excavation or filling of waste disposal sites, and recreational uses. Accelerated soil erosion can also be the result of other activities or natural events, such as overgrazing, fire, or flooding.

Soil is the basic resource sustaining the productivity of the land. A thorough knowledge of its properties and productive capacity is fundamental to the development of a plan to reclaim disturbed land. Associated slope and climatic conditions also influence the types of reclamation practices that will be successful. Typically, reclamation involves two processes—replacement or reconstruction of the soil and re-establishment of vegetative cover and biological activity.

Inherent soil properties commonly determine the success or failure of reclamation efforts. Each soil has unique characteristics, which are the products of parent material interacting with climate, biological activity, and topography over time. Layers, or horizons, of organic matter, clay, and carbonates accumulate during the soil formation processes. Soils can have numerous contrasting horizons, such as those of the Lidos series, or can be basically homogeneous, such as those of the Painter series. Each horizon may range from a fraction of an inch thick, such as the lamellae (E&Bt horizon) in the Hullsgulch soils, to more than 3 feet thick, such as the buried argillic horizon (Btb horizon) in the Adaboi soils.

Topsoil is defined as the surface layer, or A horizon. It is the layer of maximum humified organic matter accumulation and microbial activity. The A horizon, as a plant growth medium, provides the best tilth and the most oxygen and nutrients. The subsoil, or B horizon, is commonly a layer of accumulated clay and in some areas iron, aluminum, carbonates, and silica. The A and B horizons make up the solum, the part of the soil profile that largely sustains plant growth and in which the processes of soil formation are active. The solum of the Northfork soils is more than 60 inches thick, but that of the Solarview soils is less than 12 inches thick.

Texture, structure, consistency, bulk density, porosity, and depth are physical

properties of soils that should be considered. These properties influence aeration, root penetration, permeability, infiltration, runoff, available water capacity, and tilth. Sandy soils, such as those of the Belsh series, have large and continuous pore spaces and are characterized by rapid water infiltration, rapid permeability, and low available water capacity. In contrast, clayey soils, such as those of the Doubledia series, can hold much more water, but the small pores transmit air and water more slowly. Medium-textured soils, such as loam, clay loam, and silt loam, have the best balance of water retention and adequate air and water movement. Chemical properties to consider include mineralogy, organic matter content, cation-exchange capacity, and reaction (pH). These affect water infiltration, hydrology, fertility, and biological activity in the soils. Tables 19 and 20 show the physical and chemical properties of each soil in the survey area. Table 22 shows the depth of the soils to a restrictive layer.

If rehabilitation is considered before and during disturbance, reclamation and revegetation can be achieved more quickly, have a higher success rate, and are more cost effective. Typically, the solum must be replaced, primarily to provide a suitable medium for plant growth. Vegetation and biological activity can then be successfully re-established. Topsoil should be selectively removed and stockpiled before the disturbance. Once the subsoil or fill material has been replaced, the area should be graded to minimize slope gradients and contoured to blend in with the surrounding landscape. Next, the topsoil is spread and smoothed and the seedbed is prepared. Tables 16a and 16b rate the soils as potential sources of reclamation material and topsoil. More information is given under the heading "Construction Materials."

The first step in seedbed preparation is conditioning. It can include loosening compacted soils by chiseling, disking, or plowing. Furrowing or gouging to reduce the risk of wind and water erosion can modify the configuration of the soil surface. Conditioning also increases water storage in depressions and catchments, creating a more favorable microsite for seedling establishment. The type of conditioning required to rehabilitate an area depends on the soil texture, compaction, and drainage; surface stoniness; slope; climate; and seeding method.

Revegetation is a vital part of the rehabilitation process. Because protection of the soil is the primary objective, species selection is an important factor. Species that are adapted to the specific site and can survive under the present soil, climatic, and topographic conditions should be selected. Increased production, consistent viability, higher quality, and improved cover are secondary objectives that benefit livestock and wildlife. Native or introduced species can be used, although native plants generally are better adapted to the environmental extremes of the site. Table 10 shows the characteristic vegetation for each soil in the survey area. Introduced species are suitable if they provide quick and stabilizing cover, are compatible with the native species in the area, and are not overly aggressive or undesirable competitors.

Soil limitations, such as rock fragments, shallow rooting depth, and high clay content, should be considered as well as the ability of the plant to tolerate drought and other adverse environmental conditions. Topographic characteristics, including aspect, slope gradient, and position on the slope, affect runoff, drainage, moisture, temperature, erosion hazard, and stability. Plant material used in strongly sloping areas must be able to hold the soil securely in place and survive with a lower amount of moisture, especially if the slope has an exposed aspect. An example is soils of the Arrowrock series.

Once the plant species have been selected, the method of seeding and/or planting must be determined. Timing is an important factor. Seeding and planting should be done just prior to the longest period of favorable growing conditions. At this time, the soil moisture is adequate and the soil temperature is warm enough to allow for germination but not so hot that it inhibits growth. Seeding or planting should take

place as soon after seedbed preparation as possible to prevent weedy species from invading the site. Seeding by drilling or broadcasting generally is less costly than planting.

Mulch that covers the soil surface helps to minimize evaporation and erosion and insulates the soil. Mulching can be done before, during, or after seeding. The mulch helps to protect the soil from water erosion because it intercepts raindrops, reducing splashing and puddling. Mulch also slows the movement of the droplets of water, increasing infiltration and decreasing runoff. The roughness of the mulch minimizes the risk of wind erosion by reducing the velocity of the wind at the soil surface. Insulating the top layer of the soil with mulch protects against excessive heat and cold, which is critical for successful seed germination and plant establishment. Mulches that can be used include small-grain straw, grass hay, wood fibers, or manufactured blankets. Manure commonly is used because it also adds nutrients to the soil. If organic mulch is used, application of additional nitrogen is sometimes required to compensate for the nitrogen that is tied up in the decomposition of the mulch.

Concentrated efforts commonly are needed for establishment, growth, and survival of plants. Input of additional energy from outside the ecosystem, such as application of supplemental water (irrigation), nutrients (fertilization), weed control (herbicides), or species-specific inoculates and mycorrhizas, may be needed. Rehabilitation is considered successful when the soils are stabilized and the vegetation can sustain itself and reproduce without input from outside the ecosystem.

# Soil Properties

---

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering properties, physical and chemical properties, and pertinent soil and water features.

## Engineering Properties

Table 18 gives the engineering classifications and the range of properties for the layers of each soil in the survey area.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Texture* is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

*Classification* of the soils is determined according to the Unified soil classification system (ASTM, 2001; PCA, 1973) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2000).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

*Rock fragments* larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages

are estimates determined mainly by converting volume percentage in the field to weight percentage.

*Percentage (of soil particles) passing designated sieves* is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

*Liquid limit and plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

## Physical Properties

Table 19 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Depth* to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

*Clay* as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 19, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

*Moist bulk density* is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at  $1/3$ - or  $1/10$ -bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

*Permeability* ( $K_{sat}$ ) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity ( $K_{sat}$ ). The estimates in the table indicate the rate of water movement, in inches per

hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

*Available water capacity* refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

*Linear extensibility* refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at  $1/3$ - or  $1/10$ -bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

*Organic matter* is the plant and animal residue in the soil at various stages of decomposition. In table 19, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

*Erosion factors* are shown in table 19 as the K factor ( $K_w$  and  $K_f$ ) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

*Erosion factor  $K_w$*  indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

*Erosion factor  $K_f$*  indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

*Erosion factor T* is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

*Wind erodibility groups* are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.

Rock fragments in the upper mineral horizon increase the susceptibility of the soil to wind erosion, thus increasing the wind erodibility group number. Volcanic ash in the upper mineral horizon decreases the susceptibility of the soil to wind erosion, thus decreasing the wind erodibility group number. The content of rock fragments and volcanic ash is considered when the soils are assigned to a wind erodibility group.

*Wind erodibility index* is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

## Chemical Properties

Table 20 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Cation-exchange capacity* is the total amount of extractable bases that can be held by the soil, expressed in terms of centimeters per kilogram. It commonly is measured at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

*Soil reaction* is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

*Calcium carbonate* equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

## Water Features

Table 21 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

*Hydrologic soil groups* are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the

surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

*Water table* refers to a saturated zone in the soil. Table 21 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

*Ponding* is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 21 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

*Flooding* is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

*Duration* and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

## Soil Features

Table 22 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical,

chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, duripan, and strongly contrasting textural stratification. The table indicates the hardness and if observed, the thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

*Subsidence* is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

*Potential for frost action* is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

*Risk of corrosion* pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

## Classification of the Soils

---

The system of soil classification used by the National Cooperative Soil Survey has six categories (USDA, 1999 and 2003a). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 23 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

**ORDER.** Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Mollisol.

**SUBORDER.** Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Xeroll (*Xer*, meaning dry, plus *oll*, from Mollisol).

**GREAT GROUP.** Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Argixerolls (*Argi*, meaning presence of an argillic horizon, plus *xeroll*, the suborder of the Mollisols that has a xeric moisture regime).

**SUBGROUP.** Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. An example is Ultic Argixerolls.

**FAMILY.** Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is superactive, frigid Ultic Argixerolls.

**SERIES.** The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

### Taxonomic Units and Their Morphology

In this section, each taxonomic unit recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each unit. A pedon, a small three-dimensional area of soil, that is typical of the taxonomic unit in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (USDA, 1993). Many of the technical

terms used in the descriptions are defined in “Soil Taxonomy” (USDA, 1999) and in “Keys to Soil Taxonomy” (USDA, 2003a). Unless otherwise indicated, colors in the descriptions are for dry soil. Following the pedon description is the range of important characteristics of the soils in the unit.

### ***Adaboi Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Very slow

*Landform:* Fan remnants, hillslopes

*Parent material:* Loamy slope alluvium over silty lacustrine deposits

*Slope range:* 1 to 35 percent

*Elevation:* 3,350 to 3,800 feet

*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 49 to 51 degrees F

*Frost-free period:* 130 to 150 days

*Taxonomic class:* Fine, smectitic, mesic Pachic Argixerolls

#### ***Typical Pedon Location***

Boise County, Idaho; about 8 miles southwest of Horseshoe Bend; sec. 31, T. 6 N., R. 2 E.; Pearl Quadrangle; lat. 43°48'33" N., long. 116°16'22" W.; NAD 83

#### ***Typical Pedon***

- A1—0 to 2 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine and fine irregular pores; 2 percent gravel; slightly acid (pH 6.5); clear smooth boundary.
- A2—2 to 9 inches; grayish brown (10YR 5/2) silt loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; common very fine and fine tubular pores; 2 percent gravel; slightly acid (pH 6.5); clear smooth boundary.
- Bt1—9 to 13 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; strong fine subangular blocky structure; hard, friable, slightly sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; 2 percent gravel; neutral (pH 6.8); clear wavy boundary.
- Bt2—13 to 20 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; strong medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; about 25 percent of faces of peds covered with bleached silt grains; 2 percent gravel; neutral (pH 6.7); abrupt wavy boundary.
- Bt/E—20 to 25 inches; 65 percent Bt material that is brown (10YR 5/3) silty clay loam, brown (10YR 4/3) moist; strong medium and coarse subangular blocky structure; very hard, friable, slightly sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; 2 percent gravel; neutral

(pH 6.6); 35 percent E material that is light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; moderate fine granular structure; soft, friable, slightly sticky and slightly plastic; abrupt smooth boundary.

Btb1—25 to 43 inches; brown (10YR 5/3) silty clay, dark brown (10YR 3/3) moist; moderate medium and coarse prismatic structure; very hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; about 40 percent of faces of peds covered with bleached silt grains; 5 percent gravel; neutral (pH 7.0); gradual wavy boundary.

Btb2—43 to 67 inches; pale brown (10YR 6/3) clay, brown (10YR 4/3) moist; strong medium and coarse prismatic structure; very hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; 5 percent gravel; neutral (pH 7.2).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 42 inches

Depth to bedrock—60 inches or more

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—35 to 60 percent

Content of medium sand or coarser—less than 15 percent

Content of rock fragments—0 to 5 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—20 to 27 percent

Content of rock fragments—0 to 5 percent gravel

#### *Bt horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—silty clay loam or clay loam

Content of clay—35 to 40 percent

Content of rock fragments—0 to 5 percent gravel

#### *Bt/E horizon:*

##### *Bt material*

Percentage of horizon—more than 50 percent

Characteristics—same as Bt horizon

##### *E material*

Value—6 or 7 dry and 4 or 5 moist

Chroma—2 or 3 dry or moist

Content of clay—23 to 27 percent

Content of rock fragments—0 to 5 percent gravel

#### *Btb horizon:*

Value—5 to 7 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—silty clay or clay

Content of clay—40 to 60 percent

Content of rock fragments—0 to 10 percent gravel

## **Aradaran Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Slow

*Landform:* Hillslopes

*Parent material:* Clayey alluvium

*Slope range:* 4 to 15 percent

*Elevation:* 3,880 to 4,180 feet

*Mean annual precipitation:* 16 to 18 inches

*Mean annual air temperature:* 47 to 48 degrees F

*Frost-free period:* 110 to 120 days

*Taxonomic class:* Fine, smectitic, mesic Pachic Ultic Argixerolls

### **Typical Pedon Location**

Ada County, Idaho; about 6.5 miles north of Camel's Back Park in Boise City; sec. 34, T. 5 N., R. 2 E.; Boise North Quadrangle; lat. 43°43'42" N., long. 116°11'56" W.; NAD 83

### **Typical Pedon**

- A1—0 to 3 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate thin and medium platy structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine, fine, and medium tubular pores; 1 percent gravel; slightly acid (pH 6.2); clear smooth boundary.
- A2—3 to 9 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 1 percent gravel; slightly acid (pH 6.1); gradual wavy boundary.
- BA—9 to 14 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; 2 percent gravel; moderately acid (pH 5.9); clear wavy boundary.
- Bt1—14 to 23 inches; grayish brown (10YR 5/2) clay loam, dark brown (10YR 3/3) moist; strong fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; many very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 2 percent gravel; moderately acid (pH 6.0); clear smooth boundary.
- Bt2—23 to 29 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; weak fine prismatic structure parting to strong fine and medium subangular blocky; very hard, friable, very sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 10 to 20 percent of faces of peds covered with bleached silt grains; 2 percent gravel; slightly acid (pH 6.1); clear smooth boundary.
- Bt3—29 to 42 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 3/4) moist; moderate medium prismatic structure; very hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; 5 percent gravel; slightly acid (pH 6.2); gradual wavy boundary.
- Bt4—42 to 55 inches; light yellowish brown (10YR 6/4) fine gravelly clay loam, dark yellowish brown (10YR 4/4) moist; strong medium and coarse subangular blocky

structure; hard, friable, very sticky and moderately plastic; few very fine and fine roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 15 percent gravel and 5 percent cobbles; slightly acid (pH 6.3); gradual wavy boundary.

Bt5—55 to 60 inches; very pale brown (10YR 7/4) fine gravelly sandy clay loam, brown (10YR 5/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine irregular pores; few distinct clay films on faces of peds, in pores, and bridging sand grains; 15 percent gravel; slightly acid (pH 6.1).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 30 inches

Depth to bedrock—60 inches or more

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—35 to 50 percent

Content of rock fragments—0 to 15 percent

#### *A and BA horizons:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—20 to 27 percent

Content of rock fragments—0 to 15 percent gravel

#### *Bt1, Bt2, and Bt3 horizons:*

Value—4 or 5 dry and 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—clay or clay loam

Content of clay—35 to 50 percent

Content of rock fragments—0 to 15 percent gravel

#### *Bt4 and Bt5 horizons:*

Value—5 to 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—sandy clay loam or clay loam

Content of clay—25 to 40 percent

Content of rock fragments—10 to 30 percent total, with 10 to 20 percent gravel and 0 to 10 percent cobbles

## ***Arrowrock Series***

*Depth class:* Shallow

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls, hillslopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 35 to 90 percent

*Elevation:* 2,520 to 4,830 feet

*Mean annual precipitation:* 12 to 16 inches

*Mean annual air temperature:* 48 to 52 degrees F

*Frost-free period:* 120 to 155 days

*Taxonomic class:* Mixed, mesic, shallow Xeric Torripsamments

### **Typical Pedon Location**

Boise County, Idaho; about 2 miles northeast of the U.S. Forest Service Lucky Peak Nursery; sec. 10, T. 3 N., R. 4 E.; Arrowrock Dam Quadrangle; lat. 43°36'15" N., long. 115°57'30" W.; NAD 83

### **Typical Pedon**

- A1—0 to 2 inches; grayish brown (10YR 5/2) fine gravelly loamy sand, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; 30 percent fine gravel; neutral (pH 6.8); clear smooth boundary.
- A2—2 to 7 inches; brown (10YR 5/3) fine gravelly loamy sand, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure parting to single grain; soft, loose, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; 20 percent fine gravel; neutral (pH 6.8); clear smooth boundary.
- C—7 to 12 inches; yellowish brown (10YR 5/4) fine gravelly loamy sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; 30 percent fine gravel; neutral (pH 6.7); clear wavy boundary.
- Cr—12 to 15 inches; moderately cemented, weathered granodiorite; gradual wavy boundary.
- R—15 inches; unweathered granodiorite.

### **Range in Characteristics**

#### *Profile:*

Depth to bedrock (paralithic contact)—10 to 18 inches

Depth to bedrock (lithic contact)—15 to 20 inches

#### *Particle-size control section:*

Content of clay—2 to 8 percent

Content of rock fragments—15 to 35 percent

#### *A horizon:*

Value—3 or 4 dry

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent fine gravel

#### *C horizon:*

Value—5 to 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—sand, loamy sand, or coarse sand

Content of clay—1 to 7 percent

Content of rock fragments—15 to 35 percent fine gravel

## **Awley Series**

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Mountain slopes and ridges

*Parent material:* Volcanic ash over colluvium derived from basalt

*Slope range:* 15 to 65 percent

*Elevation:* 4,440 to 7,040 feet

*Mean annual precipitation:* 28 to 36 inches

*Mean annual air temperature:* 36 to 39 degrees F

*Frost-free period:* 30 to 60 days

*Taxonomic class:* Loamy-skeletal, isotic Andic Haplocryolls

### ***Typical Pedon Location***

Boise County, Idaho; about 5 miles southeast of Banks; sec. 25, T. 8 N., R. 3 E.;  
Banks Quadrangle; lat. 44°00'20" N., long. 116°02'50" W.; NAD 83

### ***Typical Pedon***

- Oi—0 to 1 inch; slightly decomposed forest litter.
- A—1 to 8 inches; dark grayish brown (10YR 4/2) ashy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel; moderately acid (pH 5.8); gradual smooth boundary.
- Bw1—8 to 18 inches; brown (10YR 5/3) ashy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel; slightly acid (pH 6.3); clear smooth boundary.
- Bw2—18 to 25 inches; pale brown (10YR 6/3) gravelly ashy sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 25 percent gravel; slightly acid (pH 6.4); clear smooth boundary.
- Bw3—25 to 37 inches; light yellowish brown (2.5Y 6/3) very gravelly sandy loam, olive brown (2.5Y 4/3) moist; moderate fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 50 percent gravel; slightly acid (pH 6.1); clear wavy boundary.
- C1—37 to 45 inches; light olive brown (2.5Y 5/4) extremely gravelly sandy loam, olive brown (2.5Y 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 80 percent gravel and 5 percent cobbles; slightly acid (pH 6.1); clear wavy boundary.
- C2—45 to 60 inches; light yellowish brown (2.5Y 6/3) extremely gravelly sandy loam, olive brown (2.5Y 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 70 percent gravel and 5 percent cobbles; slightly acid (pH 6.2).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches  
Thickness of volcanic ash mantle—7 to 14 inches  
Depth to bedrock—60 inches or more  
Base saturation (10 to 30 inches)—50 to 75 percent  
Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—7 to 14 percent  
Content of rock fragments—35 to 75 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
Chroma—2 or 3 dry or moist  
Content of rock fragments—0 to 15 percent gravel  
Content of volcanic glass—5 to 20 percent  
Bulk density—0.85 to 1.0 gram per cubic centimeter

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—1 to 2 percent

*Bw1 horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 3 or 4 moist

Chroma—3 or 4 dry

Content of clay—10 to 18 percent

Content of rock fragments—5 to 25 percent gravel

Content of volcanic glass—5 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

*Bw2 horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—loam or sandy loam

Content of clay—8 to 14 percent

Content of rock fragments—15 to 35 percent gravel

Content of volcanic glass—5 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

*Bw3 horizon:*

Hue—7.5YR, 10YR, or 2.5Y

Value—5 to 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loam or sandy loam

Content of clay—8 to 14 percent

Content of rock fragments—35 to 75 percent total, with 20 to 60 percent gravel and 0 to 45 percent cobbles

*C horizon:*

Hue—7.5YR, 10YR, or 2.5Y

Value—5 to 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loam or sandy loam

Content of clay—5 to 10 percent

Content of rock fragments—35 to 85 percent total, with 25 to 80 percent gravel and 5 to 50 percent cobbles

## ***Ayette Series***

*Depth class:* Deep

*Drainage class:* Well drained

*Permeability class:* Slow

*Landform:* Hillslopes and landslides

*Parent material:* Clayey lacustrine deposits

*Slope range:* 8 to 50 percent

*Elevation:* 2,630 to 4,770 feet

*Mean annual precipitation:* 13 to 20 inches

*Mean annual air temperature:* 46 to 51 degrees F

*Frost-free period:* 100 to 150 days

*Taxonomic class:* Fine, smectitic, mesic Vertic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 3 miles north of Horseshoe Bend; sec. 14, T. 7 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°57'03" N., long. 116°10'45" W.; NAD 83

### ***Typical Pedon***

- A—0 to 4 inches; gray (10YR 5/1) loam, very dark gray (10YR 3/1) moist; moderate thin and medium platy structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine, fine, and medium irregular pores; slightly acid (pH 6.2); clear smooth boundary.
- Bt1—4 to 8 inches; dark grayish brown (10YR 4/2) clay loam, very dark brown (10YR 2/2) moist; weak medium platy structure parting to moderate fine and medium subangular blocky; hard, friable, very sticky and very plastic; common very fine and fine and few medium roots; many very fine and fine tubular pores; common faint clay films on faces of peds and in pores; slightly acid (pH 6.5); clear smooth boundary.
- Bt2—8 to 12 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate fine and medium angular blocky structure; hard, firm, very sticky and very plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; neutral (pH 6.6); clear wavy boundary.
- Btss1—12 to 30 inches; pale brown (10YR 6/3) clay, brown (10YR 4/3) moist; weak fine prismatic structure parting to moderate fine and medium angular blocky; very hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; many prominent clay films on faces of peds and in pores; common intersecting slickensides; cracks 1 millimeter wide; slightly acid (pH 6.2); clear wavy boundary.
- Btss2—30 to 43 inches; light yellowish brown (2.5Y 6/3) clay, olive brown (2.5Y 4/3) moist; moderate fine prismatic structure; very hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; continuous prominent clay films on faces of peds and in pores; few intersecting slickensides; slightly acid (pH 6.5); clear wavy boundary.
- 2Cr—43 inches; moderately cemented, sandy lacustrine deposits.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches  
 Depth to bedrock (paralithic contact)—40 to 60 inches  
 Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—35 to 45 percent  
 Content of rock fragments—0 to 5 percent, mostly fine gravel

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—1 or 2 dry or moist  
 Content of rock fragments—0 to 5 percent gravel

#### *Bt horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—30 to 40 percent  
 Content of rock fragments—0 to 5 percent gravel

*Btss horizon:*

Hue—2.5Y or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—clay or clay loam

Content of clay—35 to 50 percent

Content of rock fragments—0 to 5 percent gravel

Width of cracks, where present—5 millimeters or less

Abundance of slickensides—few or common

***Backswitch Series****Depth class:* Moderately deep*Drainage class:* Somewhat excessively drained*Permeability class:* Moderately rapid*Landform:* Hillslopes*Parent material:* Colluvium derived from granodiorite*Slope range:* 8 to 65 percent*Elevation:* 3,820 to 5,900 feet*Mean annual precipitation:* 22 to 28 inches*Mean annual air temperature:* 39 to 45 degrees F*Frost-free period:* 50 to 90 days*Taxonomic class:* Coarse-loamy, mixed, superactive, frigid Typic Haploxerepts***Typical Pedon Location***

Boise County, Idaho; about 1 mile northeast of New Centerville; sec. 5, T. 6 N.,  
R. 5 E.; Placerville Quadrangle; lat. 43°53'13" N., long. 115°53'22" W.; NAD 83

***Typical Pedon***

Oi—0 to 2 inches; slightly decomposed forest litter.

A—2 to 8 inches; grayish brown (10YR 5/2) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; many very fine and fine and few medium irregular pores; 10 percent fine gravel; moderately acid (pH 5.7); clear wavy boundary.

Bw1—8 to 14 inches; pale brown (10YR 6/3) fine gravelly coarse sandy loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few very fine, fine, medium, and coarse roots; few very fine and fine irregular and tubular pores; 20 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.

Bw2—14 to 25 inches; light yellowish brown (10YR 6/4) fine gravelly coarse sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; few very fine and fine irregular and tubular pores; 20 percent fine gravel; slightly acid (pH 6.2); clear smooth boundary.

C—25 to 35 inches; very pale brown (10YR 7/4) very gravelly loamy coarse sand, yellowish brown (10YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine irregular pores; 40 percent fine gravel; neutral (pH 6.6); abrupt wavy boundary.

Cr—35 to 38 inches; highly fractured, moderately cemented granodiorite; clear smooth boundary.

R—38 inches; unweathered granodiorite.

### ***Range in Characteristics***

*Profile:*

Depth to bedrock (paralithic contact)—20 to 40 inches  
 Depth to bedrock (lithic contact)—22 to 50 inches  
 Reaction—moderately acid to neutral

*Particle-size control section:*

Content of clay—4 to 12 percent  
 Content of rock fragments—10 to 35 percent

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Texture—sandy loam or coarse sandy loam  
 Content of rock fragments—0 to 15 percent gravel

*Bw horizon:*

Value—6 or 7 dry and 4 or 5 moist  
 Chroma—2 to 4 dry or moist  
 Texture—sandy loam or coarse sandy loam  
 Content of clay—5 to 15 percent  
 Content of rock fragments—0 to 25 percent gravel  
 Base saturation (by ammonium acetate)—60 to 85 percent

*C horizon:*

Hue—10YR or 2.5Y  
 Value—6 or 7 dry and 4 or 5 moist  
 Chroma—3 or 4 dry or moist  
 Texture—sandy loam, coarse sandy loam, loamy sand, or loamy coarse sand  
 Content of clay—3 to 10 percent  
 Content of rock fragments—15 to 50 percent total, with 15 to 40 percent gravel,  
 0 to 20 percent cobbles, and 0 to 10 percent stones  
 Base saturation (by ammonium acetate)—60 to 85 percent

### ***Belsh Series***

*Depth class:* Very deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls and mountain slopes

*Parent material:* Volcanic ash over colluvium derived from granodiorite

*Slope range:* 8 to 90 percent

*Elevation:* 4,690 to 7,360 feet

*Mean annual precipitation:* 28 to 40 inches

*Mean annual air temperature:* 36 to 39 degrees F

*Frost-free period:* 30 to 60 days

*Taxonomic class:* Sandy-skeletal, isotic Vitrandic Dystrocryepts

### ***Typical Pedon Location***

Boise County, Idaho; about 8 miles east of Horseshoe Bend; sec. 13, T. 7 N.,  
 R. 3 E.; Harris Creek Summit Quadrangle; lat. 43°56'46" N., long. 116°02'25" W.;  
 NAD 83

### ***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

- A—1 to 7 inches; dark grayish brown (10YR 4/2) fine gravelly ashy coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, and medium irregular pores; 5 percent cobbles and 10 percent gravel; moderately acid (pH 5.9); clear smooth boundary.
- AB—7 to 15 inches; brown (10YR 5/3) fine gravelly ashy coarse sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, and medium irregular pores; 10 percent cobbles and 20 percent gravel; moderately acid (pH 5.8); clear smooth boundary.
- 2Bw—15 to 21 inches; light yellowish brown (10YR 6/4) very cobbly coarse sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, and medium irregular pores; 5 percent stones, 25 percent cobbles, and 25 percent gravel; moderately acid (pH 5.7); gradual wavy boundary.
- 2C1—21 to 37 inches; very pale brown (10YR 7/4) extremely cobbly coarse sand, light olive brown (2.5Y 5/4) moist; single grain; loose, nonsticky and nonplastic; many very fine, fine, medium, and coarse roots; many very fine, fine, and medium irregular pores; 10 percent stones, 50 percent cobbles, and 15 percent gravel; moderately acid (pH 5.8); clear smooth boundary.
- 2C2—37 to 60 inches; brownish yellow (10YR 6/6) very gravelly coarse sand, light olive brown (2.5Y 5/6) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; 40 percent fine gravel; moderately acid (pH 5.9).

### ***Range in Characteristics***

#### *Profile:*

- Thickness of umbric epipedon—10 to 20 inches  
 Thickness of volcanic ash influence—7 to 20 inches  
 Depth to bedrock—60 inches or more  
 Depth to skeletal material (2Bw horizon)—10 to 20 inches  
 Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

- Content of clay—2 to 8 percent  
 Content of rock fragments—35 to 75 percent

#### *A and AB horizons:*

- Value—3 to 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—4 to 10 percent  
 Content of rock fragments—15 to 35 percent total, with 10 to 35 percent gravel, 0 to 10 percent cobbles, and 0 to 10 percent stones  
 Base saturation (by ammonium acetate)—30 to 50 percent  
 Content of volcanic glass—5 to 10 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *2Bw horizon:*

- Hue—10YR or 2.5Y  
 Value—4 to 6 dry and 3 to 5 moist  
 Chroma—3 or 4 dry or moist  
 Texture—coarse sandy loam or loamy coarse sand  
 Content of clay—4 to 10 percent

Content of rock fragments—35 to 70 percent total, with 15 to 50 percent gravel, 0 to 35 percent cobbles, and 0 to 30 percent stones

*2C horizon:*

Hue—10YR or 2.5Y

Value—5 to 7 dry and 4 to 6 moist

Chroma—3 to 6 dry or moist

Texture—coarse sand or loamy coarse sand

Content of clay—2 to 5 percent

Content of rock fragments—35 to 80 percent total, with 15 to 50 percent gravel, 0 to 50 percent cobbles, and 0 to 15 percent stones

## ***Bissell Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Fan remnants

*Parent material:* Loamy alluvium

*Slope range:* 2 to 8 percent

*Elevation:* 2,520 to 3,100 feet

*Mean annual precipitation:* 13 to 15 inches

*Mean annual air temperature:* 50 to 51 degrees F

*Frost-free period:* 140 to 150 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Aridic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 3 miles north of Horseshoe Bend; sec. 12, T. 7 N., R. 2 W; Horseshoe Bend Quadrangle; lat. 43°57'21" N., long. 116°09'59" W.; NAD 83

### ***Typical Pedon***

Ap—0 to 7 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure parting to moderate fine and medium granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.

A—7 to 10 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium tubular pores; slightly acid (pH 6.2); clear smooth boundary.

Bt1—10 to 15 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium angular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular pores; many faint clay films on faces of peds and in pores; slightly acid (pH 6.5); clear smooth boundary.

Bt2—15 to 26 inches; brown (7.5YR 5/4) clay loam, dark brown (7.5YR 3/4) moist; weak medium prismatic structure parting to strong fine and medium angular blocky; very hard, very firm, very sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; many prominent clay

films on faces of peds and in pores; slightly acid (pH 6.5); clear smooth boundary.

Bt3—26 to 41 inches; brown (7.5YR 5/4) sandy clay loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; few very fine, fine, and medium tubular pores; common distinct clay films on faces of peds and in pores; 5 percent fine gravel; slightly acid (pH 6.4); clear wavy boundary.

2C—41 to 60 inches; light yellowish brown (10YR 6/4) very gravelly coarse sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; many very fine and fine and few medium tubular and irregular pores; 30 percent gravel and 10 percent cobbles; slightly acid (pH 6.3).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to base of argillic horizon—24 to 50 inches

Depth to strongly contrasting textural stratification (2C horizon)—40 to 60 inches

Depth to bedrock—60 inches or more

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—25 to 35 percent

Content of rock fragments—0 to 5 percent

#### *Ap and A horizons:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—0 to 5 percent gravel

#### *Bt horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—clay loam or sandy clay loam

Content of clay—25 to 35 percent

Content of rock fragments—0 to 10 percent gravel

#### *2C horizon:*

Hue—7.5YR, 10YR, or 2.5Y

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loamy coarse sand or coarse sandy loam

Content of clay—5 to 15 percent

Content of rock fragments—25 to 55 percent total, with 0 to 5 percent stones, 0 to 15 percent cobbles, and 25 to 50 percent gravel

## ***Bo Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Mountain slopes and ridges

*Parent material:* Volcanic ash over colluvium derived from basalt

*Slope range:* 15 to 65 percent

*Elevation:* 4,440 to 7,040 feet

*Mean annual precipitation:* 28 to 36 inches

*Mean annual air temperature:* 36 to 39 degrees F

*Frost-free period:* 30 to 60 days

*Taxonomic class:* Coarse-loamy, isotic Andic Haplocryolls

### **Typical Pedon Location**

Boise County, Idaho; about 5 miles southeast of Banks; sec. 25, T. 8 N., R. 3 E.;  
Banks Quadrangle; lat. 44°00'20" N., long. 116°03'10" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 4 inch; dark grayish brown (10YR 4/2) ashy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel; slightly acid (pH 6.5); clear smooth boundary.

A2—4 to 10 inches; brown (10YR 4/3) ashy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

Bw1—10 to 16 inches; brown (7.5YR 4/4) loam, dark brown (7.5YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel; slightly acid (pH 6.3); gradual wavy boundary.

Bw2—16 to 25 inches; brown (7.5YR 5/4) loam, brown (7.5YR 4/3) moist; weak medium and coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; 10 percent gravel; slightly acid (pH 6.3); gradual wavy boundary.

Bw3—25 to 51 inches; brown (7.5YR 5/4) loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; 10 percent gravel; slightly acid (pH 6.2); clear wavy boundary.

2Bw4—51 to 60 inches; brown (7.5YR 5/4) very cobbly loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; 15 percent gravel and 40 percent cobbles; slightly acid (pH 6.2).

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Thickness of volcanic ash mantle—7 to 14 inches

Depth to strongly contrasting textural stratification (2Bw horizon)—40 to 60 inches

Depth to bedrock—60 inches or more

Base saturation (10 to 30 inches)—50 to 75 percent

Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—10 to 18 percent

Content of rock fragments—5 to 25 percent

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—0 to 15 percent gravel

Content of volcanic glass—5 to 20 percent

Bulk density—0.85 to 1.0 gram per cubic centimeter

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—1 to 2 percent

*Bw horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 3 or 4 moist

Chroma—3 or 4 dry

Texture—loam or sandy loam

Content of clay—10 to 18 percent

Content of rock fragments—5 to 25 percent gravel

Content of volcanic glass—1 to 5 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

*2Bw horizon:*

Hue—7.5YR, 10YR, or 2.5Y

Value—5 to 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loam or sandy loam

Content of clay—8 to 14 percent

Content of rock fragments—35 to 60 percent total, with 15 to 60 percent gravel and 0 to 45 percent cobbles

**Boise Series**

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Fan remnants

*Parent material:* Coarse-loamy alluvium

*Slope range:* 3 to 8 percent

*Elevation:* 2,560 to 3,360 feet

*Mean annual precipitation:* 13 to 15 inches

*Mean annual air temperature:* 50 to 51 degrees F

*Frost-free period:* 140 to 150 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Cumulic Ultic Haploxerolls

**Typical Pedon Location**

Boise County, Idaho; about 0.5 mile north of Horseshoe Bend; sec. 22, T. 7 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°55'31" N., long. 116°11'49" W.; NAD 83

**Typical Pedon**

Ap1—0 to 3 inches; dark grayish brown (10YR 4/2) coarse sandy loam, very dark brown (10YR 2/2) moist; moderate thin and medium platy structure parting to weak fine and medium granular; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots;

- many very fine and fine and few medium irregular pores; 10 percent fine gravel; slightly acid (pH 6.5); abrupt smooth boundary.
- Ap2—3 to 7 inches; dark grayish brown (10YR 4/2) coarse sandy loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium irregular and tubular pores; 10 percent fine gravel; slightly acid (pH 6.5); clear smooth boundary.
- A—7 to 15 inches; dark grayish brown (10YR 4/2) fine gravelly coarse sandy loam, very dark gray (10YR 3/1) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium irregular and tubular pores; 15 percent fine gravel; moderately acid (pH 5.8); clear wavy boundary.
- Bw—15 to 28 inches; grayish brown (10YR 5/2) fine gravelly coarse sandy loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, friable, nonsticky and nonplastic; common very fine and fine and few medium roots; few very fine and fine tubular pores; 15 percent fine gravel; moderately acid (pH 5.8); clear smooth boundary.
- BC—28 to 36 inches; brown (10YR 5/3) very gravelly coarse sandy loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine and few medium roots; few very fine and fine tubular pores; 30 percent gravel, 15 percent cobbles, and 5 percent stones; moderately acid (pH 6.0); clear wavy boundary.
- C1—36 to 53 inches; pale brown (10YR 6/3) very gravelly loamy coarse sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; few very fine and fine irregular pores; 50 percent gravel; slightly acid (pH 6.1); clear smooth boundary
- C2—53 to 60 inches; pale brown (10YR 6/3) extremely gravelly loamy coarse sand, brown (10YR 4/3) moist; single grain; loose; few very fine and fine roots; few very fine and fine irregular pores; 70 percent gravel; slightly acid (pH 6.2).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches  
 Base saturation (10 to 30 inches)—50 to 75 percent  
 Depth to bedrock—60 inches or more

#### *Particle-size control section:*

Content of clay—8 to 18 percent  
 Content of rock fragments—5 to 35 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—1 to 3 dry or moist  
 Content of rock fragments—5 to 15 percent gravel  
 Reaction—moderately acid to neutral

#### *Bw horizon:*

Chroma—2 or 3 dry or moist  
 Texture—sandy loam or coarse sandy loam  
 Content of clay—10 to 18 percent  
 Content of rock fragments—5 to 25 percent gravel  
 Reaction—moderately acid or slightly acid

*C horizon:*

Chroma—3 or 4 dry or moist

Texture—coarse sandy loam or loamy coarse sand

Content of clay—3 to 10 percent

Content of rock fragments—35 to 75 percent total, with 35 to 70 percent gravel,

0 to 15 percent cobbles, and 0 to 5 percent stones

Reaction—moderately acid or slightly acid

***Borid Series***

*Depth class:* Shallow

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls and hillslopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 35 to 90 percent

*Elevation:* 2,520 to 5,280 feet

*Mean annual precipitation:* 12 to 17 inches

*Mean annual air temperature:* 47 to 52 degrees F

*Frost-free period:* 110 to 155 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Lithic Ultic Haploxerolls

***Typical Pedon Location***

Ada County, Idaho; about 3 miles northeast of Boise City; sec. 10, T. 3 N.,

R. 3 E.; Lucky Peak Quadrangle; lat. 43°36'34" N., long. 116°05'34" W.; NAD 83

***Typical Pedon***

A—0 to 3 inches: brown (10YR 5/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 5 percent cobbles and 20 percent fine gravel; neutral (pH 6.7); clear wavy boundary.

AB—3 to 7 inches; brown (10YR 5/3) very gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 35 percent gravel; neutral (pH 6.9); gradual wavy boundary.

Bw—7 to 15 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine irregular and tubular pores; 50 percent gravel; neutral (pH 7.2); gradual wavy boundary.

R—15 inches; fractured granite porphyry.

***Range in Characteristics****Profile:*

Thickness of mollic epipedon—7 to 12 inches

Depth to bedrock (lithic contact)—10 to 20 inches

Base saturation—50 to 75 percent

Reaction—slightly acid or neutral

*Particle-size control section:*

Content of clay—10 to 15 percent

Content of rock fragments—35 to 60 percent

*A horizon:*

Value—4 or 5 dry

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel and 0 to 5 percent cobbles

*AB horizon:*

Value—4 or 5 dry

Chroma—2 or 3 dry or moist

Texture—sandy loam or coarse sandy loam

Content of clay—10 to 15 percent

Content of rock fragments—35 to 60 percent total, with 35 to 50 percent gravel and 0 to 10 percent cobbles

*Bw horizon:*

Value—4 to 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—sandy loam or coarse sandy loam

Content of clay—10 to 15 percent

Content of rock fragments—35 to 60 percent total, with 35 to 50 percent gravel and 0 to 10 percent cobbles

***Brassey Series****Depth class:* Very deep*Drainage class:* Well drained*Permeability class:* Moderate*Landform:* Fan remnants*Parent material:* Gravelly alluvium*Slope range:* 3 to 15 percent*Elevation:* 4,040 to 5,090 feet*Mean annual precipitation:* 24 to 28 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 60 to 90 days*Taxonomic class:* Loamy-skeletal, mixed, superactive, frigid Ultic Argixerolls***Typical Pedon Location***

Boise County, Idaho; about 2 miles southwest of Placerville; sec. 22, T. 7 N., R. 4 E.; Placerville Quadrangle; lat. 43°55'35" N., long. 115°58'48" W.; NAD 83

***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 4 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; many very fine and fine and few medium irregular pores; 15 percent gravel; slightly acid (pH 6.1); clear smooth boundary.

A2—4 to 11 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine, common medium, and few coarse roots; common very fine and fine and few medium irregular pores; 15 percent gravel; moderately acid (pH 5.8); clear wavy boundary.

Bt1—11 to 21 inches; yellowish brown (10YR 5/4) very gravelly loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine,

fine, and medium and few coarse roots; few very fine and fine tubular pores; common faint clay films on faces of peds, on rock fragments, and in pores; 40 percent gravel and 10 percent cobbles; 10 percent pararock fragments; moderately acid (pH 5.6); clear wavy boundary.

Bt2—21 to 37 inches; yellowish brown (10YR 5/4) very gravelly sandy clay loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium and few coarse roots; few very fine and fine tubular pores; many faint clay films on faces of peds, on rock fragments, and in pores; 45 percent gravel and 10 percent cobbles; 15 percent pararock fragments; moderately acid (pH 5.6); clear wavy boundary.

Bt3—37 to 49 inches; light yellowish brown (10YR 6/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; few very fine and fine tubular pores; many faint clay films on faces of peds, on rock fragments, and in pores; 45 percent gravel and 15 percent cobbles; 15 percent pararock fragments; moderately acid (pH 5.7); clear wavy boundary.

C—49 to 60 inches; light yellowish brown (10YR 6/4) extremely gravelly coarse sand, dark yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; few very fine, fine, and medium irregular pores; 65 percent gravel; 5 percent pararock fragments; moderately acid (pH 6.0).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to base of argillic horizon—30 to 50 inches

Depth to strongly contrasting textural stratification (C horizon)—40 to 60 inches

Depth to bedrock—60 inches or more

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—18 to 27 percent

Content of rock fragments—35 to 60 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 25 percent gravel

#### *Bt1 horizon:*

Hue—7.5YR or 10YR

Chroma—3 or 4 dry or moist

Content of clay—20 to 27 percent

Content of rock fragments—15 to 50 percent total, with 15 to 50 percent gravel and 0 to 10 percent cobbles

Content of pararock fragments—0 to 15 percent

#### *Bt2 horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Texture—loam or sandy clay loam

Content of clay—20 to 27 percent

Content of rock fragments—35 to 70 percent total, with 15 to 60 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones

Content of pararock fragments—0 to 15 percent

*Bt3 horizon:*

Hue—7.5YR or 10YR

Value—6 or 7 dry and 4 or 5 moist

Chroma—4 to 6 dry or moist

Texture—sandy loam, coarse sandy loam, or sandy clay loam

Content of clay—18 to 24 percent

Content of rock fragments—45 to 75 percent total, with 35 to 60 percent gravel,  
0 to 20 percent cobbles, and 0 to 10 percent stones

Content of pararock fragments—0 to 15 percent

*C horizon:*

Hue—7.5YR or 10YR

Value—6 or 7 dry and 4 or 5 moist

Chroma—4 to 6 dry or moist

Texture—loamy sand, loamy coarse sand, or coarse sand

Content of clay—2 to 7 percent

Content of rock fragments—60 to 85 percent total, with 35 to 70 percent gravel,  
0 to 20 percent cobbles, and 0 to 10 percent stones

Content of pararock fragments—0 to 25 percent

***Breadloaf Series****Depth class:* Moderately deep*Drainage class:* Well drained*Permeability class:* Very slow*Landform:* Hillslopes and landslides*Parent material:* Clayey lacustrine deposits*Slope range:* 4 to 50 percent*Elevation:* 2,610 to 4,650 feet*Mean annual precipitation:* 14 to 20 inches*Mean annual air temperature:* 45 to 51 degrees F*Frost-free period:* 90 to 150 days*Taxonomic class:* Fine, smectitic, mesic Leptic Haploxererts***Typical Pedon Location***Boise County, Idaho; about 6 miles southwest of Horseshoe Bend; sec. 20, T. 6 N.,  
R. 2 E.; Cartwright Canyon Quadrangle; lat. 43°50'42" N., long. 116°14'43" W.;  
NAD 83***Typical Pedon***A—0 to 2 inches; grayish brown (10YR 5/2) clay loam, brown (10YR 4/3) moist; weak  
medium and coarse subangular blocky structure parting to strong fine granular;  
very hard, friable, moderately sticky and moderately plastic; common very fine  
and fine and few medium and coarse roots; many very fine and fine tubular pores;  
cracks 5 millimeters to 5 centimeters wide; neutral (pH 7.1); abrupt smooth  
boundary.Bt—2 to 6 inches; brown (10YR 5/3) clay, dark yellowish brown (10YR 4/4) moist;  
moderate medium prismatic structure; extremely hard, very firm, very sticky and  
very plastic; few very fine, fine, medium, and coarse roots; common very fine and  
fine tubular pores; common distinct clay films on faces of peds and in pores;  
cracks 5 millimeters to 5 centimeters wide; neutral (pH 6.6); abrupt wavy  
boundary.Btss1—6 to 12 inches; pale brown (10YR 6/3) clay, brown (10YR 5/3) moist; strong  
medium and coarse prismatic structure; extremely hard, very firm, very sticky and

very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; common intersecting slickensides; cracks 5 millimeters to 5 centimeters wide; neutral (pH 6.7); clear smooth boundary.

Btss2—12 to 17 inches; pale brown (10YR 6/3) clay, brown (10YR 5/3) moist; strong medium and coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; many prominent clay films on faces of peds and in pores; many intersecting slickensides; common wedge-shaped aggregates oriented at 40 to 50 degrees from horizontal in lower part of horizon; 1 percent fine manganese concretions that are black (10YR 2/1) dry; cracks 5 millimeters to 5 centimeters wide; neutral (pH 6.9); gradual wavy boundary.

Btss3—17 to 23 inches; very pale brown (10YR 7/3) paragravelly clay, brown (10YR 5/3) moist; moderate fine and medium prismatic structure parting to strong fine and medium angular blocky; extremely hard, very firm, very sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; few intersecting slickensides; 20 percent siltstone paragravel; cracks 1 millimeter to 2 centimeters wide; neutral (pH 7.0); abrupt wavy boundary.

Crk—23 to 33 inches; moderately cemented, stratified clayey lacustrine deposits that have less than 5 percent calcium carbonate on horizontal and vertical bedding faces and in pockets.

### ***Range in Characteristics***

#### *Profile:*

Depth to bedrock (paralithic contact)—20 to 40 inches

Characteristics of surface cracks—1 millimeter to 10 centimeters wide; open from July through November in most years

#### *Particle-size control section:*

Content of clay—35 to 60 percent

Content of rock fragments—0 to 5 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—27 to 35 percent

Content of rock fragments—0 to 5 percent gravel

Reaction—slightly acid or neutral

#### *Bt horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—silty clay or clay

Content of clay—40 to 60 percent

Content of rock fragments—0 to 5 percent gravel

Reaction—slightly acid or neutral

#### *Btss horizon:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—silty clay loam, silty clay, or clay

Content of clay—35 to 60 percent

Content of rock fragments—0 to 5 percent gravel

Content of pararock fragments—0 to 25 percent

Reaction—neutral or slightly alkaline  
 Characteristics of slickensides—few or common and intersecting  
 Abundance of wedge-shaped aggregates—few or common (oriented 30 to 60 degrees from horizontal)

### ***Brownlee Series***

*Depth class:* Deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 4 to 50 percent

*Elevation:* 2,600 to 5,820 feet

*Mean annual precipitation:* 13 to 22 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Ultic Argixerolls

#### ***Typical Pedon Location***

Boise County, Idaho; about 3 miles northwest of Gardena; sec. 20, T. 8 N., R. 2 E.;  
 Dry Buck Valley Quadrangle; lat. 44°00'34" N., long. 116°14'24" W.; NAD 83

#### ***Typical Pedon***

- Ap—0 to 4 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; moderate medium granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium roots; many fine and medium irregular pores; 5 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.
- A—4 to 9 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium roots; many fine tubular pores; 10 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.
- Bt1—9 to 16 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many fine tubular pores; few faint clay films on faces of peds; moderately acid (pH 5.6); clear smooth boundary.
- Bt2—16 to 21 inches; brown (10YR 5/3) sandy clay loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; common fine tubular pores; many faint clay films on faces of peds; 5 percent fine gravel; moderately acid (pH 5.6); gradual wavy boundary.
- Bt3—21 to 27 inches; yellowish brown (10YR 5/4) sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; common fine tubular pores; many distinct clay films on faces of peds; few thin continuous lamellae; 5 percent fine gravel; moderately acid (pH 5.7); gradual wavy boundary.
- BC—27 to 45 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and slightly plastic; few very fine roots; common medium

and coarse irregular pores; 20 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.

Cr—45 to 50 inches; moderately cemented, weathered granodiorite.

R—50 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock (paralithic contact)—40 to 50 inches

Depth to bedrock (lithic contact)—43 to 60 inches

Depth to base of argillic horizon—25 to 54 inches

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—moderately acid or slightly acid

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—15 to 18 percent

Content of rock fragments—0 to 15 percent gravel, dominantly fine gravel

#### *Bt horizon:*

Value—5 to 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loam, clay loam, or sandy clay loam

Content of clay—18 to 30 percent

Content of rock fragments—5 to 35 percent gravel, dominantly fine gravel

## ***Cartwright Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Hillslopes and fan remnants

*Parent material:* Loamy alluvium

*Slope range:* 3 to 65 percent

*Elevation:* 2,600 to 5,610 feet

*Mean annual precipitation:* 14 to 22 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 90 to 140 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Pachic Ultic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 9 miles south of Horseshoe Bend; sec. 9, T. 5 N., R. 2 E.; Cartwright Canyon Quadrangle; lat. 43°46'45" N., long. 116°12'57" W.; NAD 83

### ***Typical Pedon***

A1—0 to 2 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 5 percent fine gravel; slightly acid (pH 6.4); clear smooth boundary.

A2—2 to 8 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate thin platy structure parting to moderate fine granular; slightly

- hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent fine gravel; slightly acid (pH 6.5); clear wavy boundary.
- A3—8 to 21 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent fine gravel; neutral (pH 6.6); clear wavy boundary.
- BA—21 to 33 inches; brown (10YR 5/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; many very fine tubular pores; 5 percent fine gravel; slightly acid (pH 6.5); gradual wavy boundary.
- Bt1—33 to 48 inches; brown (10YR 5/3) loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; 5 percent fine gravel; slightly acid (pH 6.4); clear wavy boundary.
- Bt2—48 to 60 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; common faint clay films on faces of peds and in pores; 10 percent fine gravel; slightly acid (pH 6.4).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 46 inches  
 Depth to bedrock—60 inches or more  
 Base saturation (some part between 10 and 30 inches)—50 to 75 percent  
 Reaction—slightly acid or neutral

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—15 to 18 percent  
 Content of rock fragments—0 to 15 percent gravel, dominantly fine gravel

#### *BA horizon:*

Value—4 or 5 dry and 3 or 4 moist  
 Chroma—2 to 4 dry or moist  
 Texture—loam, sandy loam, or coarse sandy loam  
 Content of clay—15 to 18 percent  
 Content of rock fragments—0 to 25 percent gravel, dominantly fine gravel

#### *Bt horizon:*

Value—5 to 7 dry and 4 or 5 moist  
 Chroma—3 or 4 dry or moist  
 Texture—loam, clay loam, or sandy clay loam  
 Content of clay—18 to 30 percent  
 Content of rock fragments—5 to 35 percent gravel, dominantly fine gravel

## ***Charters Series***

*Depth class:* Very deep  
*Drainage class:* Somewhat excessively drained  
*Permeability class:* Moderately rapid

*Landform:* Canyon walls, hillslopes, and mountain slopes and ridges

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 8 to 90 percent

*Elevation:* 2,810 to 7,040 feet

*Mean annual precipitation:* 20 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, frigid Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 5 miles east of Horseshoe Bend; sec. 28, T. 7 N.,  
R. 3 E.; Harris Creek Summit Quadrangle; lat. 43°54'56" N., long. 116°06'16" W.;  
NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 4 inches; dark grayish brown (10YR 4/2) fine gravelly sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine, common medium and coarse, and few very coarse roots; many very fine and fine irregular pores; 20 percent fine gravel; slightly acid (pH 6.5); clear smooth boundary.

A2—4 to 13 inches; brown (10YR 5/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to moderate fine and medium granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium, coarse, and very coarse roots; many very fine and fine irregular pores; 20 percent fine gravel; slightly acid (pH 6.4); clear wavy boundary.

Bw1—13 to 19 inches; yellowish brown (10YR 5/4) fine gravelly coarse sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium, coarse, and very coarse roots; many very fine and fine irregular pores and few very fine and fine tubular pores; about 25 percent of faces of peds covered with skeletans; 20 percent fine gravel; neutral (pH 6.6); clear smooth boundary.

Bw2—19 to 34 inches; yellowish brown (10YR 5/4) fine gravelly coarse sandy loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; few discontinuous faint lamellae 2 to 3 millimeters wide; about 25 percent of faces of peds covered with skeletans; 25 percent fine gravel; slightly acid (pH 6.4); gradual wavy boundary.

Bw3—34 to 52 inches; yellowish brown (10YR 5/4) fine gravelly coarse sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, very friable, nonsticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; few discontinuous faint lamellae 2 to 3 millimeters wide; about 25 percent of faces of peds covered with skeletans; 20 percent fine gravel; slightly acid (pH 6.4); gradual wavy boundary.

Bw4—52 to 60 inches; yellowish brown (10YR 5/4) fine gravelly loamy coarse sand, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine and fine irregular pores; few faint discontinuous lamellae 2 to 3 millimeters wide; about 25 percent of faces of peds covered with skeletans; 25 percent fine gravel; slightly acid (pH 6.3).

### ***Range in Characteristics***

*Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock—60 inches or more

Base saturation—50 to 75 percent

*Particle-size control section:*

Content of clay—7 to 14 percent

Content of rock fragments—15 to 35 percent

*A horizon:*

Hue—10YR or 2.5Y

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Texture—sandy loam or coarse sandy loam

Content of rock fragments—5 to 35 percent gravel, dominantly fine gravel

Reaction—slightly acid or neutral

*Bw1 horizon:*

Hue—10YR or 2.5Y

Value—5 or 6 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—sandy loam or coarse sandy loam

Content of clay—8 to 15 percent

Content of rock fragments—15 to 35 percent gravel

Reaction—slightly acid or neutral

*Bw2, Bw3, and Bw4 horizons:*

Hue—10YR or 2.5Y

Value—5 to 7 dry and 4 to 6 moist

Chroma—3 or 4 dry or moist

Texture—coarse sandy loam, loamy coarse sand, sandy loam, or loamy sand

Content of clay—6 to 12 percent

Content of rock fragments—15 to 35 percent total, with 15 to 35 percent gravel and  
0 to 10 percent cobbles

Reaction—moderately acid or slightly acid

### ***Cleymor Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Very slow

*Landform:* Hillslopes and structural benches

*Parent material:* Clayey alluvium

*Slope range:* 4 to 35 percent

*Elevation:* 3,670 to 5,550 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Fine, smectitic, frigid Vertic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 3 miles southeast of Banks; sec. 10, T. 8 N., R. 3 E.;  
Banks Quadrangle; lat. 44°02'35" N., long. 116°05'07" W.; NAD 83

### ***Typical Pedon***

- Oi—0 to 1 inch; slightly decomposed forest litter.
- A—1 to 4 inches; very dark gray (10YR 3/1) silt loam, very dark brown (10YR 2/2) moist; moderate very thin platy structure parting to weak fine granular; soft, very friable, moderately sticky and moderately plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; moderately acid (pH 6.0); clear smooth boundary.
- ABt—4 to 7 inches; very dark gray (10YR 3/1) silty clay loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure parting to moderate very fine subangular blocky; hard, friable, moderately sticky and moderately plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular and tubular pores; common faint clay films on faces of peds; moderately acid (pH 5.9); clear smooth boundary.
- Bt1—7 to 11 inches; very dark grayish brown (10YR 3/2) silty clay loam, very dark brown (10YR 2/2) moist; strong fine subangular blocky structure; very hard, firm, very sticky and very plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; many distinct clay films on faces of peds; about 25 percent of surface of peds covered with coatings of silt; cracks 1 to 5 centimeters wide; moderately acid (pH 5.9); abrupt smooth boundary.
- Bt2—11 to 18 inches; very dark grayish brown (10YR 3/2) silty clay loam, very dark brown (10YR 2/2) moist; moderate very coarse prismatic structure; very hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; many distinct clay films on faces of peds; cracks 1 to 5 centimeters wide; moderately acid (pH 5.8); gradual smooth boundary.
- Btss1—18 to 31 inches; dark gray (10YR 4/1) silty clay, very dark gray (10YR 3/1) moist; strong very coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular and irregular pores; many prominent clay films on faces of peds; about 25 percent of surfaces of peds covered with coatings of silt; common distinct intersecting slickensides; cracks 1 to 5 centimeters wide; slightly acid (pH 6.1); gradual wavy boundary.
- Btss2—31 to 37 inches; very dark grayish brown (10YR 3/2) silty clay, very dark brown (10YR 2/2) moist; moderate medium prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular and irregular pores; many prominent clay films on faces of peds; common distinct intersecting slickensides; 1 percent gravel; cracks 1 to 5 centimeters wide; moderately acid (pH 5.8); gradual wavy boundary.
- Bt3—37 to 45 inches; brown (10YR 4/3) cobbly silty clay, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; extremely hard, very firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular and irregular pores; many prominent clay films on faces of peds; 25 percent cobbles and 5 percent gravel; cracks 1 to 5 centimeters wide; moderately acid (pH 5.9); gradual wavy boundary.
- Bt4—45 to 60 inches; brown (10YR 4/3) silty clay, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; extremely hard, very firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular and irregular pores; many prominent clay films on faces of peds; 5 percent gravel; cracks 1 to 5 centimeters wide; moderately acid (pH 6.0).

### ***Range in Characteristics***

*Profile:*

Thickness of mollic epipedon—20 to 60 inches  
 Depth to bedrock—60 inches or more  
 Reaction—slightly acid or moderately acid

*Particle-size control section:*

Content of clay—35 to 50 percent  
 Content of rock fragments—35 to 50 percent

*A horizon:*

Value—3 or 4 dry and 2 or 3 moist  
 Chroma—1 or 2 dry or moist  
 Content of clay—20 to 27 percent

*ABt horizon (where present):*

Value—3 or 4 dry and 2 or 3 moist  
 Chroma—1 to 3 dry or moist  
 Texture—silty clay loam or silt loam  
 Content of clay—23 to 30 percent

*Bt1, Bt2, and Btss horizons:*

Value—3 or 4 dry and 2 or 3 moist  
 Chroma—1 to 3 dry or moist  
 Texture—silty clay loam or silty clay  
 Content of clay—35 to 50 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Width of cracks—1 to 5 centimeters when dry

*Bt3 and Bt4 horizons:*

Value—3 or 4 dry and 2 or 3 moist  
 Chroma—1 to 3 dry or moist  
 Content of clay—40 to 50 percent  
 Content of rock fragments—5 to 35 percent total, with 0 to 15 percent gravel and  
 0 to 30 percent cobbles  
 Width of cracks—1 to 5 centimeters when dry

### ***Cloudyway Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderately rapid

*Landform:* Alluvial fans

*Parent material:* Coarse-loamy alluvium

*Slope range:* 4 to 15 percent

*Elevation:* 2,750 to 3,670 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Cumulic Ultic  
 Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 6 miles north of Crouch; sec. 13, T. 10 N., R. 4 E.;  
 Pyle Creek Quadrangle; lat. 44°11'44" N., long. 115°56'12" W.; NAD 83

### ***Typical Pedon***

- O<sub>i</sub>— 0 to 1 inch; slightly decomposed forest litter.
- A<sub>1</sub>—1 to 4 inches; dark grayish brown (10YR 4/2) fine gravelly sandy loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure parting to moderate fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; many very fine and fine and few medium irregular pores; 20 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.
- A<sub>2</sub>—4 to 9 inches; grayish brown (10YR 5/2) fine gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; common very fine and fine tubular and irregular pores; 20 percent fine gravel; moderately acid (pH 5.8); clear smooth boundary.
- A<sub>3</sub>—9 to 18 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; 25 percent gravel; moderately acid (pH 5.7); clear smooth boundary.
- AC—18 to 24 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine tubular pores; 25 percent gravel; moderately acid (pH 5.6); clear smooth boundary.
- C<sub>1</sub>—24 to 43 inches; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine irregular pores; 30 percent gravel; moderately acid (pH 6.0); clear smooth boundary.
- C<sub>2</sub>—43 to 60 inches; very pale brown (10YR 7/3) gravelly loamy sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine irregular pores; 30 percent gravel; slightly acid (pH 6.1).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches  
 Depth to bedrock—60 inches or more  
 Base saturation (10 to 30 inches)—50 to 75 percent  
 Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—8 to 18 percent  
 Content of rock fragments—15 to 35 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—15 to 25 percent gravel, dominantly fine gravel

#### *C horizon:*

Value—6 or 7 dry and 4 or 5 moist  
 Chroma—3 or 4 dry or moist  
 Texture—sandy loam, coarse sandy loam, or loamy sand  
 Content of clay—5 to 12 percent  
 Content of rock fragments—15 to 35 percent gravel and 0 to 5 percent cobbles

## ***Collister Series***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Permeability class:* Moderate

*Landform:* Flood-plain steps

*Parent material:* Loamy alluvium

*Slope range:* 1 to 3 percent

*Elevation:* 3,340 to 3,730 feet

*Mean annual precipitation:* 15 to 16 inches

*Mean annual air temperature:* 49 to 50 degrees F

*Frost-free period:* 130 to 140 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Cumulic Haploxerolls

### ***Typical Pedon Location***

Ada County, Idaho; about 4 miles northeast of Eagle; sec. 26, T. 5 N., R. 1 E.; Pearl Quadrangle; lat. 43°44'12" N., long. 116°18'12" W.; NAD 83

### ***Typical Pedon***

- Ap1—0 to 4 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium and thick platy structure parting to moderate fine and medium granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 5 percent gravel; neutral (pH 7.1); clear smooth boundary.
- Ap2—4 to 10 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine and fine tubular pores; 5 percent gravel; neutral (pH 7.0); gradual wavy boundary.
- A1—10 to 19 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine and fine roots; common very fine and fine tubular pores; neutral (pH 6.8); clear smooth boundary.
- A2—19 to 23 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (2.5Y 3/2) moist; moderate thin platy structure parting to moderate fine subangular blocky; hard, very friable, moderately sticky and moderately plastic; common very fine and fine roots; many very fine and fine tubular pores; neutral (pH 6.7); clear wavy boundary.
- Bw1—23 to 28 inches; grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; hard, friable, very sticky and moderately plastic; few very fine and fine roots; common very fine and fine tubular pores; 5 percent gravel; neutral (pH 6.8); clear wavy boundary.
- Bw2—28 to 36 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark gray (10YR 3/1) moist; moderate fine and medium subangular blocky structure; hard, friable, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; few distinct masses of iron that are dark yellowish brown (10YR 4/4) moist on faces of peds and many prominent coatings of silt that are dark grayish brown (10YR 4/2) moist on faces of peds; neutral (pH 6.6); clear smooth boundary.
- Bw3—36 to 42 inches; dark grayish brown (10YR 4/2) silt loam, very dark gray (10YR 3/1) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine and fine roots; many very fine and fine

and common medium tubular pores; few faint masses of iron that are dark yellowish brown (10YR 4/4) moist; few distinct manganese concretions; neutral (pH 6.8); clear wavy boundary.

Bw4—42 to 58 inches; dark gray (10YR 4/1) sandy clay loam, black (10YR 2/1) moist; moderate medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine irregular pores; few faint masses of iron that are dark yellowish brown (10YR 4/4) moist; 5 percent gravel; neutral (pH 6.7); clear wavy boundary.

C—58 to 68 inches; brown (10YR 5/3) sandy loam, very dark grayish brown (10YR 3/2) moist; massive; hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine irregular pores; few faint masses of iron that are dark yellowish brown (10YR 4/4) moist; 5 percent gravel; slightly acid (pH 6.4).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 60 inches

Depth to redoximorphic features—24 to 48 inches

Thickness of solum—40 inches or more

Content of organic carbon—1 to 3 percent, decreasing irregularly with increasing depth

Depth to bedrock—60 inches or more

Frequency of flooding—rare

Reaction—neutral or slightly acid

#### *Particle-size control section:*

Content of clay—22 to 30 percent

Content of rock fragments—0 to 10 percent

#### *Ap horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—18 to 25 percent

Content of rock fragments—0 to 5 percent gravel

#### *A horizon:*

Hue—10YR or 2.5Y

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—loam or silt loam

Content of clay—20 to 27 percent

Content of rock fragments—0 to 5 percent gravel

#### *Bw1 horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—loam or clay loam

Content of clay—25 to 30 percent

Content of rock fragments—0 to 5 percent gravel

#### *Bw2, Bw3, and Bw4 horizons:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 or 2 dry or moist

Texture—silty clay loam, silt loam, or sandy clay loam

Content of clay—25 to 30 percent

Content of rock fragments—0 to 15 percent gravel

Characteristics of redoximorphic features—few to many, faint or distinct masses of iron

*C horizon:*

Value—5 to 7 dry and 3 to 5 moist

Chroma—2 or 3 dry or moist

Texture—sandy loam, loam, or clay loam

Content of clay—15 to 30 percent

Content of rock fragments—0 to 15 percent gravel

Characteristics of redoximorphic features—few or common masses of iron

## ***Cranegulch Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Slow

*Landform:* Structural benches

*Parent material:* Loamy alluvium

*Slope range:* 5 to 15 percent

*Elevation:* 3,960 to 4,120 feet

*Mean annual precipitation:* 16 to 17 inches

*Mean annual air temperature:* 47 to 48 degrees F

*Frost-free period:* 110 to 120 days

*Taxonomic class:* Fine, smectitic, mesic Typic Argixerolls

### ***Typical Pedon Location***

Ada County, Idaho; about 3.5 miles northwest of Camel's Back Park in Boise City; sec. 16, T. 4 N., R. 2 E.; Boise North Quadrangle; lat. 43°41'13" N., long. 116°13'06" W.; NAD 83

### ***Typical Pedon***

A1—0 to 3 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure parting to moderate fine and medium granular; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine and fine and few medium tubular pores; 5 percent gravel; neutral (pH 7.0); clear smooth boundary.

A2—3 to 10 inches; grayish brown (10YR 5/2) loam, very dark brown (10YR 2/2) moist; moderate medium platy structure parting to moderate fine and medium granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine and fine and few medium tubular pores; 5 percent gravel; neutral (pH 6.8); diffuse wavy boundary.

Bt1—10 to 14 inches; yellowish brown (10YR 5/4) sandy clay loam, dark yellowish brown (10YR 3/4) moist; pockets of A horizon material that are grayish brown (10YR 5/2), dark brown (10YR 3/3) moist; weak fine subangular blocky structure; hard, very friable, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; few distinct clay films on faces of peds, in pores, and bridging sand grains; few bleached silt grains on faces of peds; 10 percent gravel; slightly acid (pH 6.4); clear wavy boundary.

Bt2—14 to 21 inches; yellowish brown (10YR 5/4) sandy clay, dark yellowish brown (10YR 3/4) moist; moderate medium and coarse subangular blocky structure; very hard, friable, very sticky and moderately plastic; few very fine and fine roots;

common very fine and fine tubular pores; common distinct clay films on faces of peds, in pores, and bridging sand grains; 10 percent gravel; neutral (pH 7.1); clear smooth boundary.

Bt3—21 to 33 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 3/4) moist; moderate fine and medium prismatic structure; very hard, firm, very sticky and moderately plastic; few very fine and fine roots; few very fine and fine tubular pores; many prominent clay films on faces of peds, in pores, and bridging sand grains; roots matted on vertical and horizontal faces of peds; very dark brown (10YR 2/2) organic stains on vertical and horizontal faces of peds; 10 percent gravel; neutral (pH 7.0); gradual wavy boundary.

Bt4—33 to 50 inches; light yellowish brown (10YR 6/4) sandy clay, dark yellowish brown (10YR 4/4) moist; moderate medium prismatic structure parting to strong medium and coarse subangular blocky; very hard, firm, very sticky and moderately plastic; few very fine and fine roots; few very fine and fine tubular pores; common prominent clay films on faces of peds, in pores, and bridging sand grains; roots matted on vertical and horizontal faces of peds; 10 percent gravel; neutral (pH 6.8); gradual wavy boundary.

Bt5—50 to 60 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; strong medium and coarse subangular blocky structure; very hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; common distinct clay films on faces of peds, in pores, and bridging sand grains; continuous sandy clay lamellae that is yellowish brown (10YR 5/4), dark yellowish brown (10YR 3/4) moist, and 2 to 10 millimeters thick and 1 to 4 inches apart; 10 percent gravel; neutral (pH 6.9).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock—60 inches or more

Reaction—neutral or slightly acid

#### *Particle-size control section:*

Content of clay—35 to 45 percent

Content of medium sand or coarser—15 to 25 percent

Content of rock fragments—0 to 35 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—15 to 20 percent

Content of rock fragments—0 to 35 percent total, with 0 to 25 percent gravel and 0 to 10 percent cobbles

#### *Bt1 horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—sandy clay loam or clay loam

Content of clay—20 to 30 percent

Content of rock fragments—0 to 35 percent total, with 0 to 25 percent gravel and 0 to 10 percent cobbles

#### *Bt2, Bt3, Bt4, and Bt5 horizons:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—sandy clay, clay, or clay loam

Content of clay—35 to 50 percent

Content of rock fragments—0 to 35 percent total, with 0 to 25 percent gravel and 0 to 10 percent cobbles

## ***Crawley Series***

*Depth class:* Shallow

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes

*Parent material:* Silty lacustrine deposits

*Slope range:* 15 to 65 percent

*Elevation:* 2,670 to 4,120 feet

*Mean annual precipitation:* 13 to 16 inches

*Mean annual air temperature:* 49 to 51 degrees F

*Frost-free period:* 130 to 150 days

*Taxonomic class:* Loamy, mixed, superactive, mesic, shallow Aridic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 8 miles southwest of Horseshoe Bend; sec. 31, T. 6 N., R. 2 E.; Pearl Quadrangle; lat. 43°48'34" N., long. 116°16'11" W.; NAD 83

### ***Typical Pedon***

A—0 to 4 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.

Bt1—4 to 7 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 10 percent pararock fragments; neutral (pH 7.0); clear wavy boundary.

Bt2—7 to 13 inches; yellowish brown (10YR 5/4) paragravelly silty clay loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; hard, friable, moderately sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 25 percent pararock fragments; neutral (pH 7.0); abrupt smooth boundary.

Crkq—13 to 23 inches; moderately cemented, stratified silty lacustrine deposits that have less than 5 percent calcium carbonate on horizontal and vertical faces; discontinuous, very thin (less than 1 millimeter) coatings of silica on horizontal and vertical sediment planes.

### ***Range in Characteristics***

*Profile:*

Thickness of mollic epipedon—7 to 10 inches

Depth to bedrock (paralithic contact)—10 to 20 inches

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or loam

Content of clay—18 to 25 percent  
 Content of rock fragments—0 to 10 percent fine gravel  
 Reaction—slightly acid or neutral

*Bt horizon:*

Value—5 or 6 dry and 3 or 4 moist  
 Chroma—2 to 4 dry or moist  
 Texture—silty clay loam or clay loam  
 Content of clay—27 to 35 percent  
 Content of rock fragments—0 to 5 percent gravel  
 Content of pararock fragments—5 to 30 percent  
 Reaction—neutral or slightly alkaline

## ***Crossbow Series***

*Depth class:* Very deep  
*Drainage class:* Somewhat poorly drained  
*Permeability class:* Moderately rapid  
*Landform:* Flood-plain steps  
*Parent material:* Coarse-loamy alluvium  
*Slope range:* 0 to 3 percent  
*Elevation:* 3,000 to 3,490 feet  
*Mean annual precipitation:* 20 to 26 inches  
*Mean annual air temperature:* 45 to 48 degrees F  
*Frost-free period:* 90 to 120 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Aquic Cumulic  
 Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 2.5 miles north of Crouch; sec. 3, T. 9 N., R. 4 E.;  
 Pyle Creek Quadrangle; lat. 44°08'26" N., long. 115°58'04" W.; NAD 83

### ***Typical Pedon***

- A1—0 to 4 inches; dark grayish brown (10YR 4/2) fine sandy loam, very dark brown (10YR 2/2) moist; moderate medium and coarse granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine and fine irregular pores; slightly acid (pH 6.1); clear smooth boundary.
- A2—4 to 11 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; common distinct relict iron concentrations that are brown (10YR 5/3), dark brown (10YR 3/3) moist, and are in pores and on faces of pedis; slightly acid (pH 6.2); gradual wavy boundary.
- A3—11 to 21 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; common distinct relict iron concentrations that are brown (10YR 5/3), dark brown (10YR 3/3) moist, and are in pores and on faces of pedis; moderately acid (pH 5.8); gradual wavy boundary.
- A4—21 to 36 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine, fine, and medium

roots; many very fine and fine irregular pores; common distinct iron concentrations that are yellowish brown (10YR 5/4), dark yellowish brown (10YR 3/4) moist, and are in pores and on faces of peds; few faint depletions that are gray (10YR 5/1), very dark gray (10YR 3/1) moist; slightly acid (pH 6.3); clear smooth boundary.

C1—36 to 42 inches; light gray (10YR 7/2) loamy fine sand, grayish brown (10YR 5/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine and fine irregular pores; common distinct iron concentrations that are yellowish brown (10YR 5/4), dark yellowish brown (10YR 3/4) moist, and are in lenses; moderately acid (pH 5.6); abrupt smooth boundary.

C2—42 to 60 inches; light gray (10YR 7/2) gravelly coarse sand, grayish brown (10YR 5/2) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; many very fine, fine, medium, and coarse irregular pores; common distinct iron concentrations that are yellowish brown (10YR 5/4), dark yellowish brown (10YR 3/4) moist, and are in lenses; 30 percent gravel; moderately acid (pH 5.6).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches  
 Depth to redoximorphic features—20 to 30 inches  
 Depth to relict redoximorphic features—typically less than 20 inches  
 Depth to bedrock—60 inches or more  
 Frequency of flooding—occasional  
 Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—5 to 18 percent  
 Content of rock fragments—0 to 10 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—1 or 2 dry or moist  
 Content of clay—8 to 18 percent  
 Content of rock fragments—0 to 5 percent gravel  
 Characteristics of redoximorphic features in lower part—common or many, distinct or prominent iron concentrations; common or few, faint depletions

#### *C1 horizon:*

Value—6 to 8 dry and 4 to 6 moist  
 Chroma—1 or 2 dry or moist  
 Texture—loamy fine sand or loamy sand  
 Content of clay—3 to 8 percent  
 Content of rock fragments—0 to 10 percent gravel  
 Characteristics of redoximorphic features—common or many, distinct or prominent iron concentrations in lenses

#### *C2 horizon:*

Value—6 to 8 dry and 4 to 6 moist  
 Chroma—1 or 2 dry or moist  
 Texture—coarse sand or sand  
 Content of clay—0 to 5 percent  
 Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel and 0 to 5 percent cobbles  
 Characteristics of redoximorphic features—common or many, distinct or prominent iron concentrations in lenses

## ***Crumley Series***

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls and mountain slopes

*Parent material:* Colluvium derived from granodiorite and rhyolite

*Slope range:* 35 to 90 percent

*Elevation:* 3,220 to 6,810 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Sandy-skeletal, mixed, frigid Ultic Haploxerolls

### ***Typical Pedon Location***

Ada County, Idaho; about 6 miles east of Boise City; sec. 2, T. 3 N., R. 3 E.; Lucky Peak Quadrangle; lat. 43°37'16" N., long. 116°03'56" W.; NAD 83

### ***Typical Pedon***

Oi—0 to 2 inches; slightly decomposed forest litter.

A1—2 to 4 inches; dark grayish brown (10YR 4/2) fine gravelly sandy loam, very dark brown (10YR 2/2) moist; weak medium granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine, fine, and medium irregular and tubular pores; 30 percent gravel; slightly acid (pH 6.1); clear smooth boundary.

A2—4 to 12 inches; grayish brown (10YR 5/2) fine gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots; common very fine, fine, and medium irregular and tubular pores; 30 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

Bw—12 to 18 inches; brown (10YR 5/3) very gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; common very fine, fine, and medium irregular and tubular pores; 50 percent gravel; moderately acid (pH 5.9); clear irregular boundary.

2C1—18 to 30 inches; pale yellow (2.5Y 7/4) extremely gravelly loamy sand, light olive brown (2.5Y 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; common very fine, fine, and medium irregular and tubular pores; 5 percent cobbles and 70 percent gravel; strongly acid (pH 5.4); gradual wavy boundary.

2C2—30 to 60 inches; pale yellow and olive yellow (2.5Y 7/4 and 2.5Y 6/6) extremely gravelly loamy sand, light yellowish brown (2.5Y 6/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine, fine, medium, and coarse roots; few very fine, fine, and medium irregular and tubular pores; 60 percent gravel; strongly acid (pH 5.4).

### ***Range in Characteristics***

#### ***Profile:***

Thickness of mollic epipedon—10 to 20 inches

Depth to sandy-skeletal material (2C horizon)—14 to 25 inches

Depth to bedrock—60 inches or more

Base saturation (10 to 30 inches)—50 to 75 percent

*Particle-size control section:*

Content of clay—3 to 7 percent

Content of rock fragments—35 to 75 percent

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 0 to 5 percent cobbles and 15 to 35 percent gravel

*Bw horizon:*

Value—5 or 6 dry and 3 or 4 moist

Texture—sandy loam or coarse sandy loam

Content of clay—7 to 14 percent

Content of rock fragments—25 to 50 percent total, with 0 to 10 percent cobbles and 15 to 50 percent gravel

Reaction—moderately acid or slightly acid

*2C horizon:*

Hue—10YR or 2.5Y

Value—5 to 7 dry and 4 to 6 moist

Chroma—4 to 6 dry or moist

Texture—loamy sand, loamy coarse sand, or coarse sand

Content of clay—0 to 7 percent

Content of rock fragments—35 to 80 percent total, with 0 to 25 percent cobbles and 25 to 75 percent gravel

Reaction—strongly acid to slightly acid

***Cumulic Haploxerolls****Depth class:* Very deep*Drainage class:* Moderately well drained*Permeability class:* Moderately rapid*Landform:* Flood-plain steps*Parent material:* Sandy and gravelly alluvium*Slope range:* 0 to 2 percent*Elevation:* 2,520 to 3,630 feet*Mean annual precipitation:* 13 to 16 inches*Mean annual air temperature:* 49 to 51 degrees F*Frost-free period:* 130 to 150 days*Taxonomic class:* Cumulic Haploxerolls***Representative Pedon Location***

Boise County, Idaho; Horseshoe Bend; sec. 27, T. 7 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°54'33" N., long. 116°12'08" W.; NAD 83

***Representative Pedon***

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) sandy loam, very dark gray (10YR 3/1) moist; weak thin and medium platy structure parting to weak fine subangular blocky; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; many very fine and fine and few medium irregular pores; slightly acid (pH 6.3); clear smooth boundary.

A—10 to 26 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots;

common very fine and fine and few medium irregular pores; neutral (pH 6.6); clear smooth boundary.

Bw1—26 to 36 inches; light brownish gray (10YR 6/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine and fine tubular pores; few fine and medium faint pale brown (10YR 6/3) masses of iron on faces of peds; moderately alkaline (pH 8.0); clear smooth boundary.

Bw2—36 to 50 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine and fine tubular pores; common fine and medium faint light yellowish brown (10YR 6/4) masses of iron in matrix; slightly alkaline (pH 7.8); clear smooth boundary.

C—50 to 60 inches; light gray (10YR 7/2) loamy sand, grayish brown (10YR 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; common fine and medium distinct light yellowish brown (10YR 6/4) masses of iron in matrix; moderately alkaline (pH 7.9).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches  
 Depth to bedrock—60 inches or more  
 Depth to redoximorphic features—24 to 50 inches  
 Frequency of flooding—rare  
 Reaction—slightly acid to moderately alkaline

#### *Particle-size control section:*

Content of clay—5 to 14 percent  
 Content of rock fragments—0 to 15 percent

#### *Ap and A horizons:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—1 or 2 dry or moist  
 Content of rock fragments—0 to 10 percent gravel

#### *Bw horizon:*

Value—4 to 6 dry and 2 to 4 moist  
 Chroma—2 or 3 dry or moist  
 Texture—fine sandy loam, sandy loam, coarse sandy loam, loamy sand, or loamy coarse sand  
 Content of clay—7 to 14 percent  
 Content of rock fragments—0 to 15 percent gravel

#### *C horizon:*

Hue—2.5Y or 10YR  
 Value—5 to 7 dry and 3 to 5 moist  
 Chroma—2 to 4 dry or moist  
 Texture—loamy sand or loamy coarse sand  
 Content of clay—2 to 10 percent  
 Content of rock fragments—0 to 35 percent total, with 0 to 30 percent gravel and 0 to 10 percent cobbles

## ***Deerrun Series***

*Depth class:* Moderately deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid  
*Landform:* Canyon walls and mountain slopes  
*Parent material:* Colluvium derived from granodiorite  
*Slope range:* 8 to 90 percent  
*Elevation:* 2,750 to 6,250 feet  
*Mean annual precipitation:* 20 to 26 inches  
*Mean annual air temperature:* 45 to 48 degrees F  
*Frost-free period:* 90 to 125 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 7.5 miles southeast of Horseshoe Bend; sec. 29,  
 T. 6 N., R. 3 E.; Shafer Butte Quadrangle; lat. 43°50'02" N., long. 116°07'14" W.;  
 NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.  
 A—1 to 11 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist;  
 moderate medium and coarse granular structure; soft, very friable, nonsticky and  
 slightly plastic; many very fine and fine and few medium and coarse roots; many  
 very fine and fine irregular pores and few medium tubular pores; 5 percent fine  
 gravel; slightly acid (pH 6.3); clear smooth boundary.  
 Bw—11 to 19 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist;  
 moderate medium subangular blocky structure; slightly hard, very friable, slightly  
 sticky and slightly plastic; many very fine and fine and few medium roots; many  
 very fine and fine and few medium tubular pores; 5 percent fine gravel;  
 moderately acid (pH 5.8); clear smooth boundary.  
 C—19 to 33 inches; light brown (7.5YR 6/4) fine gravelly coarse sandy loam, brown  
 (7.5YR 4/4) moist; single grain; loose, nonsticky and nonplastic; few very fine  
 roots; common very fine irregular pores; 20 percent fine gravel; moderately acid  
 (pH 5.7); abrupt wavy boundary.  
 R—33 inches; unweathered granodiorite.

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—7 to 20 inches  
 Depth to bedrock (lithic contact)—20 to 40 inches  
 Base saturation (10 to 30 inches)—50 to 75 percent  
 Reaction—moderately acid to neutral

#### *Particle-size control section:*

Content of clay—5 to 15 percent  
 Content of rock fragments—5 to 35 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—0 to 15 percent gravel

#### *Bw horizon:*

Hue—7.5YR, 10YR, or 2.5Y  
 Value—4 to 6 dry and 3 to 5 moist  
 Chroma—2 to 4 dry or moist  
 Texture—sandy loam or coarse sandy loam

Content of clay—5 to 15 percent  
 Content of rock fragments—5 to 35 percent gravel

*C horizon:*

Hue—7.5YR, 10YR, or 2.5Y  
 Value—5 or 6 dry and 4 or 5 moist  
 Chroma—3 to 6 dry or moist  
 Texture—coarse sandy loam or loamy coarse sand  
 Content of clay—4 to 12 percent  
 Content of rock fragments—5 to 35 percent gravel

## ***Dobson Series***

*Depth class:* Shallow

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls and hillslopes

*Parent material:* Colluvium and residuum derived from granitic rock

*Slope range:* 25 to 90 percent

*Elevation:* 2,600 to 5,820 feet

*Mean annual precipitation:* 12 to 20 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 155 days

*Taxonomic class:* Loamy, mixed, superactive, mesic Lithic Ultic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 9 miles south of Horseshoe Bend; sec. 9, T. 5 N.,  
 R. 2 E.; Cartwright Canyon Quadrangle; lat. 43°46'56" N., long. 116°13'10" W.;  
 NAD 83

### ***Typical Pedon***

A—0 to 2 inches; grayish brown (10YR 5/2) fine gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine irregular pores; 15 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.

Bw—2 to 12 inches; brown (10YR 5/3) fine gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak very fine and fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; 15 percent fine gravel; neutral (pH 6.8); gradual wavy boundary.

BC—12 to 14 inches; very pale brown (10YR 7/4) fine gravelly loamy coarse sand, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; hard, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; 25 percent fine gravel; neutral (pH 6.8); abrupt wavy boundary.

R—14 inches; unweathered granodiorite.

### ***Range in Characteristics***

*Profile:*

Thickness of mollic epipedon—7 to 12 inches

Depth to bedrock (lithic contact)—10 to 20 inches

Reaction—slightly acid or neutral

Base saturation (in some part of solum)—50 to 75 percent

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 30 percent gravel, dominantly fine

*Bw horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—coarse sandy loam, sandy loam, or loam

Content of clay—10 to 18 percent

Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel and 0 to 5 percent cobbles

*BC horizon:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—2 to 4 dry or moist

Texture—coarse sandy loam or loamy coarse sand

Content of clay—5 to 10 percent

Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel and 0 to 5 percent cobbles

***Doubledia Series****Depth class:* Deep*Drainage class:* Well drained*Permeability class:* Very slow*Landform:* Fan remnants, hillslopes, and landslides*Parent material:* Clayey lacustrine deposits*Slope range:* 2 to 50 percent*Elevation:* 2,610 to 4,650 feet*Mean annual precipitation:* 14 to 20 inches*Mean annual air temperature:* 45 to 51 degrees F*Frost-free period:* 90 to 150 days*Taxonomic class:* Fine, smectitic, mesic Chromic Haploxererts***Typical Pedon Location***

Boise County, Idaho; about 6 miles southwest of Horseshoe Bend; sec. 20, T. 6 N., R. 2 E.; Cartwright Canyon Quadrangle; lat. 43°50'45" N., long. 116°14'47" W.; NAD 83

***Typical Pedon***

A—0 to 3 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure parting to strong fine granular; hard, friable, moderately sticky and moderately plastic; many very fine and fine and common medium and coarse roots; many very fine and fine irregular pores; cracks filled with granular material; neutral (pH 6.9); abrupt smooth boundary.

Bt—3 to 6 inches; grayish brown (10YR 5/2) clay, very dark grayish brown (10YR 3/2) moist; weak fine prismatic structure parting to strong fine subangular blocky; extremely hard, firm, very sticky and very plastic; many very fine and fine and common medium and coarse roots; common very fine and fine tubular pores; common faint clay films on faces of peds and in pores; cracks filled with granular material; slightly acid (pH 6.5); clear wavy boundary.

Btss1—6 to 11 inches; grayish brown (10YR 5/2) clay, very dark grayish brown (10YR

3/2) moist; moderate fine prismatic structure; extremely hard, very firm, very sticky and very plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; few intersecting slickensides; cracks 1 to 10 millimeters wide; about 10 percent of faces of peds covered with bleached silt grains; neutral (pH 6.7); gradual wavy boundary.

Btss2—11 to 21 inches; pale brown (10YR 6/3) clay, brown (10YR 4/3) moist; strong medium and coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; common intersecting slickensides; common wedge-shaped aggregates oriented at 40 to 50 degrees from horizontal in lower part of horizon; 1 percent fine manganese concretions that are black (10YR 2/1) dry; cracks 1 to 15 millimeters wide; neutral (pH 6.6); clear broken boundary.

B't—21 to 25 inches; light gray (2.5Y 7/2) clay loam, grayish brown (2.5Y 5/2) moist; moderate fine prismatic structure parting to strong fine and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; common very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; cracks 1 to 15 millimeters wide; neutral (pH 7.0); gradual wavy boundary.

B'tss1—25 to 34 inches; pale brown (10YR 6/3) paragravelly clay, brown (10YR 4/3) moist; strong medium and coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; common intersecting slickensides; common wedge-shaped aggregates oriented at 40 to 50 degrees from horizontal in lower part of horizon; 1 percent fine manganese concretions that are black (10YR 2/1) dry; cracks 1 to 15 millimeters wide; about 20 percent paragravel; neutral (pH 7.1); clear broken boundary.

B'tss2—34 to 41 inches; pale brown (10YR 6/3) very paragravelly clay, brown (10YR 5/3) moist; strong fine and medium subangular blocky structure; extremely hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; cracks 1 to 15 millimeters wide; about 50 percent paragravel; slightly alkaline (pH 7.4); abrupt wavy boundary.

Crk—41 to 60 inches; moderately cemented, stratified clayey lacustrine deposits that have less than 5 percent calcium carbonate on horizontal and vertical bedding faces and in pockets.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock (paralithic contact)—40 to 60 inches

Characteristics of surface cracks—1 millimeter to 5 centimeters wide; open from July through October in most years

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—silty clay loam or clay loam

Content of clay—27 to 35 percent

Content of rock fragments—0 to 5 percent gravel

Reaction—slightly acid or neutral

*Bt and Btss horizons:*

Value—5 or 6 dry and 2 to 4 moist

Chroma—2 to 4 dry or moist

Texture—silty clay or clay

Content of clay—40 to 60 percent

Content of rock fragments—0 to 5 percent gravel

Content of pararock fragments—0 to 10 percent paragravel

Characteristics of slickensides (Btss horizon)—few to common and intersecting

Abundance of wedge-shaped aggregates (Btss horizon)—few to common

Reaction—moderately acid to neutral

*B't and B'tss horizons:*

Hue—2.5Y or 10YR

Value—6 or 7 dry and 4 or 5 moist

Chroma—2 to 4 dry or moist

Texture—silty clay loam, clay loam, silty clay, or clay

Content of clay—35 to 60 percent

Content of rock fragments—0 to 5 percent gravel

Content of pararock fragments—0 to 50 percent paragravel

Characteristics of slickensides (B'tss horizon)—few to common and intersecting

Abundance of wedge-shaped aggregates (B'tss horizon)—few to common

Reaction—neutral or slightly alkaline

***Drybuck Series****Depth class:* Deep*Drainage class:* Somewhat excessively drained*Permeability class:* Moderately rapid*Landform:* Canyon walls and mountain slopes*Parent material:* Colluvium derived from granodiorite*Slope range:* 8 to 90 percent*Elevation:* 2,760 to 6,260 feet*Mean annual precipitation:* 20 to 26 inches*Mean annual air temperature:* 45 to 48 degrees F*Frost-free period:* 90 to 125 days*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Pachic Ultic Haploxerolls***Typical Pedon Location***

Boise County, Idaho; about 10 miles north of Horseshoe Bend; sec. 34, T. 9 N.,  
R. 2 E.; Dry Buck Valley Quadrangle; lat. 44°04'13" N., long. 116°12'02" W.;  
NAD 83

***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 7 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown  
(10YR 3/2) moist; weak medium and thick platy structure parting to moderate fine  
and medium granular; soft, very friable, nonsticky and slightly plastic; many very  
fine and fine and common medium roots; many very fine, fine, and medium  
irregular and tubular pores; 10 percent fine gravel; moderately acid (pH 5.6); clear  
wavy boundary.

A2—7 to 15 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown  
(10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable,

nonsticky and slightly plastic; many very fine and fine and few medium roots; many very fine, fine, and medium irregular and tubular pores; 10 percent fine gravel; slightly acid (pH 6.1); gradual wavy boundary.

AB—15 to 31 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; many very fine, fine, and medium irregular and tubular pores; 10 percent fine gravel; slightly acid (pH 6.5); abrupt wavy boundary.

Bw1—31 to 43 inches; brown (10YR 5/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; many very fine and fine tubular pores; 20 percent fine gravel; neutral (pH 6.6); gradual wavy boundary.

Bw2—43 to 53 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; slightly hard, very friable, nonsticky and slightly plastic; few very fine, fine, and medium roots; many very fine and fine tubular pores; 10 percent fine gravel; neutral (pH 6.6); abrupt wavy boundary.

R—53 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 45 inches

Depth to bedrock (lithic contact)—40 to 60 inches

Reaction—moderately acid to neutral

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

#### *Particle-size control section:*

Content of clay—8 to 15 percent

Content of rock fragments—0 to 25 percent

#### *A horizon:*

Value—3 to 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of rock fragments—0 to 15 percent gravel

#### *AB horizon:*

Value—4 or 5 dry and 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—sandy loam or coarse sandy loam

Content of clay—7 to 15 percent

Content of rock fragments—0 to 15 percent gravel

#### *Bw horizon:*

Value—4 or 5 dry and 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—sandy loam or coarse sandy loam

Content of clay—8 to 15 percent

Content of rock fragments—0 to 35 percent gravel

## ***Duco Series***

*Depth class:* Shallow

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes and structural benches

*Parent material:* Colluvium derived from basalt

*Slope range:* 4 to 65 percent

*Elevation:* 2,630 to 5,750 feet

*Mean annual precipitation:* 13 to 18 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Lithic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 11 miles south of Horseshoe Bend; sec. 22, T. 5 N., R. 2 E.; Cartwright Canyon Quadrangle; lat. 43°45'23" N., long. 116°12'13" W.; NAD 83

### **Typical Pedon**

A—0 to 3 inches; grayish brown (10YR 5/2) stony loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine tubular pores; 10 percent gravel, 10 percent cobbles, and 5 percent stones; neutral (pH 6.8); clear smooth boundary.

Bt—3 to 15 inches; brown (10YR 5/3) extremely stony clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 10 percent gravel, 20 percent cobbles, and 40 percent stones; neutral (pH 7.2); abrupt wavy boundary.

R—15 inches; fractured basalt.

### **Range in Characteristics**

#### *Profile:*

Percentage of surface covered with stones—0.01 to 3.0 percent

Thickness of mollic epipedon—7 to 20 inches

Depth to bedrock—10 to 20 inches

Reaction—neutral or slightly alkaline

#### *Particle-size control section:*

Content of clay—25 to 35 percent

Content of rock fragments—35 to 75 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—20 to 60 percent total, with 5 to 50 percent gravel, 0 to 15 percent cobbles, and 0 to 10 percent stones

#### *Bt horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—loam or clay loam

Content of clay—25 to 35 percent

Content of rock fragments—35 to 80 percent total, with 5 to 75 percent gravel, 0 to 30 percent cobbles, and 0 to 50 percent stones

## ***Dystric Xeropsamments***

*Depth class:* Moderately deep and deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Benches

*Parent material:* Residuum derived from granodiorite

*Slope range:* 2 to 25 percent

*Elevation:* 3,690 to 5,200 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Dystric Xeropsamments

### ***Representative Pedon Location***

Boise County, Idaho; about 1 mile northeast of New Centerville; sec. 32, T. 7 N., R. 5 E.; Placerville Quadrangle; lat. 43°53'40" N., long. 115°53'57" W.; NAD 83

### ***Representative Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 4 inches; yellowish brown (10YR 5/4) loamy sand, dark yellowish brown (10YR 3/4) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few coarse roots; common very fine and fine irregular pores; 5 percent fine gravel; slightly acid (pH 6.4); abrupt smooth boundary.

C1—4 to 15 inches; light yellowish brown (10YR 6/4) loamy coarse sand, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots; common very fine and fine irregular and tubular pores; 10 percent fine gravel; neutral (pH 6.6); abrupt smooth boundary.

C2—15 to 24 inches; reddish yellow (7.5YR 6/6) coarse sand, strong brown (7.5YR 4/6) moist; massive; hard, friable, nonsticky and nonplastic; few very fine, fine, medium, and coarse roots; few very fine and fine irregular and tubular pores; 10 percent fine gravel; slightly acid (pH 6.5); clear wavy boundary.

Cr—24 to 50 inches; moderately cemented, weathered granodiorite.

R—50 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0.1 to 3.0 percent

Depth to bedrock (paralithic contact)—20 to 60 inches

Depth to bedrock (lithic contact)—22 to 60 inches

Base saturation (by ammonium acetate)—less than 60 percent

Reaction—moderately acid to neutral

#### *Particle-size control section:*

Content of clay—0 to 7 percent

Content of rock fragments—5 to 35 percent

#### *A horizon:*

Hue—7.5YR, 10YR, or 2.5Y

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Content of rock fragments—5 to 35 percent total, with 5 to 35 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones

*C horizon:*

Hue—7.5YR, 10YR, or 2.5Y

Value—5 to 7 dry and 4 to 6 moist

Chroma—4 to 6 dry or moist

Texture—loamy sand, loamy coarse sand, or coarse sand

Content of clay—0 to 7 percent

Content of rock fragments—5 to 35 percent total, with 5 to 45 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones

***Eagleson Series****Depth class:* Moderately deep*Drainage class:* Somewhat excessively drained*Permeability class:* Moderately rapid*Landform:* Canyon walls and mountain slopes*Parent material:* Colluvium derived from granodiorite and rhyolite*Slope range:* 25 to 90 percent*Elevation:* 2,810 to 7,580 feet*Mean annual precipitation:* 22 to 36 inches*Mean annual air temperature:* 40 to 45 degrees F*Frost-free period:* 60 to 90 days*Taxonomic class:* Loamy-skeletal, mixed, superactive, frigid Ultic Haploxerolls***Typical Pedon Location***

Boise County, Idaho; about 1.5 miles south of Bogus Basin Ski Area; sec. 28,  
T. 5 N., R. 3 E.; Robie Creek Quadrangle; lat. 43°44'31" N., long. 116°06'31" W.;  
NAD 83

***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 10 inches; brown (10YR 4/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and common coarse roots; many very fine, fine, and medium irregular and tubular pores; 25 percent fine gravel; slightly acid (pH 6.1); clear wavy boundary.

A2—10 to 16 inches; brown (10YR 4/3) very cobbly sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium tubular pores; 30 percent cobbles and 20 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.

Bw—16 to 27 inches; brown (10YR 5/3) extremely cobbly sandy loam, brown (10YR 4/3) moist; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; common very fine, fine, and medium tubular pores; 15 percent stones, 55 percent cobbles, and 15 percent gravel; moderately acid (pH 5.9); abrupt wavy boundary.

R—27 inches; unweathered granodiorite.

***Range in Characteristics****Profile:*

Thickness of mollic epipedon—7 to 20 inches

Depth to bedrock (lithic contact)—20 to 40 inches

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—moderately acid or slightly acid

*Particle-size control section:*

Content of clay—5 to 12 percent

Content of rock fragments—35 to 65 percent

*A1 horizon:*

Value—3 or 4 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of rock fragments—10 to 35 percent fine gravel

*A2 horizon:*

Value—3 to 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 60 percent total, with 10 to 25 percent gravel and 0 to 40 percent cobbles

*Bw horizon:*

Value—4 to 6 dry and 2 to 5 moist

Chroma—2 or 3 dry or moist

Texture—sandy loam or coarse sandy loam

Content of clay—6 to 12 percent

Content of rock fragments—35 to 85 percent total, with 10 to 55 percent gravel, 0 to 60 percent cobbles, and 0 to 20 percent stones

***Flofeather Series***

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Flood-plain steps

*Parent material:* Coarse-loamy alluvium

*Slope range:* 1 to 3 percent

*Elevation:* 2,520 to 3,730 feet

*Mean annual precipitation:* 13 to 16 inches

*Mean annual air temperature:* 49 to 51 degrees F

*Frost-free period:* 130 to 150 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Cumulic Haploxerolls

***Typical Pedon Location***

Ada County, Idaho; Boise City; sec. 35, T. 4 N., R. 2 E.; Boise North Quadrangle;  
lat. 43°38'25" N., long. 116°11'27" W.; NAD 83

***Typical Pedon***

A1—0 to 7 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; weak thin and medium platy structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; common very fine and fine and few medium irregular pores; 5 percent fine gravel; neutral (pH 6.7); clear smooth boundary.

A2—7 to 22 inches; dark gray (10YR 4/1) sandy loam, black (10YR 2/1) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium irregular and tubular pores; 5 percent fine gravel; neutral (pH 6.9); clear smooth boundary.

Bw1—22 to 30 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; slightly

hard, friable, slightly sticky and nonplastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular pores; 10 percent fine gravel; neutral (pH 7.1); clear smooth boundary.

Bw<sub>2</sub>—30 to 41 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; few very fine, fine, and medium roots; common very fine and fine and few medium tubular pores; 10 percent fine gravel; neutral (pH 7.0); clear smooth boundary.

BC—41 to 48 inches; brown (10YR 5/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine and fine roots; few very fine and fine tubular pores; 20 percent fine gravel; neutral (pH 7.1); clear smooth boundary.

C—48 to 60 inches; pale brown (10YR 6/3) fine gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine irregular pores; 20 percent gravel; neutral (pH 6.6).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 50 inches

Reaction—slightly acid or neutral

Frequency of flooding—very rare or rare

#### *Particle-size control section:*

Content of clay—7 to 18 percent

Content of rock fragments—5 to 15 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of rock fragments—0 to 10 percent gravel

#### *Bw horizon:*

Value—4 to 6 dry and 2 to 4 moist

Chroma—2 or 3 dry or moist

Texture—sandy loam or coarse sandy loam

Content of clay—7 to 18 percent

Content of rock fragments—5 to 15 percent gravel, dominantly fine gravel

#### *C horizon:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—2 to 4 dry or moist

Texture—sandy loam, coarse sandy loam, or loamy coarse sand

Content of clay—4 to 15 percent

Content of rock fragments—5 to 35 percent gravel, dominantly fine gravel

## ***Flybow Series***

*Depth class:* Very shallow

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Mountain slopes, canyon walls, and structural benches

*Parent material:* Residuum and colluvium derived from basalt

*Slope range:* 4 to 90 percent

*Elevation:* 3,530 to 6,210 feet

*Mean annual precipitation:* 15 to 20 inches  
*Mean annual air temperature:* 45 to 49 degrees F  
*Frost-free period:* 90 to 130 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, nonacid, mesic Lithic Xerorthents

### **Typical Pedon Location**

Boise County, Idaho; about 4 miles southeast of Banks; sec. 23, T. 8 N., R. 3 E.;  
 Banks Quadrangle; lat. 44°00'44" N., long. 116°04'07" W.; NAD 83

### **Typical Pedon**

A1—0 to 3 inches; brown (10YR 4/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine and fine irregular pores; 45 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

A2—3 to 8 inches; brown (10YR 5/3) extremely gravelly loam, brown (10YR 4/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine and fine irregular pores; 75 percent gravel; slightly acid (pH 6.4); abrupt smooth boundary.

R—8 inches; fractured basalt.

### **Range in Characteristics**

#### *Profile:*

Depth to bedrock (lithic contact)—4 to 10 inches

Hue—7.5YR, 10YR, or 2.5Y

Value—4 or 5 dry and 3 or 4 moist

Chroma—2 to 4 dry or moist

Content of clay—7 to 15 percent

Content of rock fragments—35 to 75 percent total, with 35 to 75 percent gravel and 0 to 10 percent cobbles

Reaction—slightly acid or neutral

## **Foxlane Series**

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Permeability class:* Moderately rapid

*Landform:* Flood-plain steps

*Parent material:* Sandy and gravelly alluvium

*Slope range:* 0 to 4 percent

*Elevation:* 2,950 to 3,700 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

*Taxonomic class:* Sandy-skeletal, mixed, mesic Entic Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 3.5 miles southeast of Crouch; sec. 27, T. 9 N., R. 4 E.;  
 Garden Valley Quadrangle; lat. 44°04'49" N., long. 115°57'47" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed pine needles and litter.

- A1—1 to 4 inches; grayish brown (10YR 5/2) gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate thick platy structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 20 percent gravel; slightly acid (pH 6.4); clear smooth boundary.
- A2—4 to 10 inches; brown (10YR 5/3) gravelly fine sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, slightly sticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 20 percent gravel; moderately acid (pH 6.0); clear smooth boundary.
- AC—10 to 13 inches; grayish brown (10YR 5/2) gravelly loamy fine sand, very dark grayish brown (10YR 3/2) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 30 percent gravel; moderately acid (pH 5.8); clear smooth boundary.
- 2C1—13 to 47 inches; light gray (10YR 7/2) very gravelly coarse sand, grayish brown (10YR 5/2) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; many medium and coarse irregular pores; 45 percent gravel and 10 percent cobbles; strongly acid (pH 5.4); gradual wavy boundary.
- 2C2—47 to 60 inches; very pale brown (10YR 8/2) extremely gravelly coarse sand, light brownish gray (10YR 6/2) moist; single grain; loose, nonsticky and nonplastic; many medium and coarse irregular pores; many distinct iron concentrations that are strong brown (7.5YR 5/6), strong brown (7.5YR 4/6) moist, and are in lenses 5 to 15 millimeters thick, common faint depletions that are white (10YR 8/1), gray (10YR 6/1) moist; 60 percent gravel and 10 percent cobbles; strongly acid (pH 5.4).

### ***Range in Characteristics***

#### *Profile:*

- Thickness of mollic epipedon—10 to 14 inches  
 Depth to redoximorphic features—40 to 60 inches  
 Depth to bedrock—60 inches or more  
 Depth to sandy-skeletal material (2C horizon)—10 to 21 inches  
 Frequency of flooding—rare  
 Base saturation (some part between 10 and 30 inches)—50 to 75 percent

#### *Particle-size control section:*

- Content of clay—0 to 5 percent  
 Content of rock fragments—35 to 60 percent

#### *A horizon:*

- Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—10 to 18 percent  
 Content of rock fragments—15 to 35 percent gravel  
 Reaction—moderately acid or slightly acid

#### *AC horizon:*

- Value—5 or 6 dry and 3 or 4 moist  
 Chroma—2 or 3 dry or moist  
 Texture—sandy loam, loamy fine sand, or loamy sand  
 Content of clay—5 to 14 percent  
 Content of rock fragments—15 to 35 percent gravel  
 Reaction—moderately acid or slightly acid

*2C1 horizon:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—1 or 2 dry or moist

Texture—coarse sand, sand, loamy coarse sand, or loamy sand

Content of clay—0 to 8 percent

Content of rock fragments—35 to 60 percent total, with 25 to 50 percent gravel and 5 to 15 percent cobbles

Reaction—strongly acid or moderately acid

*2C2 horizon:*

Value—6 to 8 dry and 4 to 6 moist

Chroma—1 or 2 dry or moist

Texture—sand or coarse sand

Content of clay—0 to 5 percent

Content of rock fragments—60 to 85 percent total, with 50 to 70 percent gravel and 5 to 20 percent cobbles

Characteristics of redoximorphic features—common, distinct or prominent iron concentrations; common or many, faint depletions

Reaction—strongly acid or moderately acid

**Gacey Series**

*Depth class:* Shallow to a duripan

*Drainage class:* Well drained

*Permeability class:* Slow

*Landform:* Fan remnants

*Parent material:* Clayey alluvium over sandy and gravelly alluvium

*Slope range:* 3 to 8 percent

*Elevation:* 2,810 to 3,370 feet

*Mean annual precipitation:* 14 to 15 inches

*Mean annual air temperature:* 49 to 50 degrees F

*Frost-free period:* 130 to 140 days

*Taxonomic class:* Clayey-skeletal, smectitic, mesic, shallow Argiduridic Durixerolls

**Typical Pedon Location**

Boise County, Idaho; about 2 miles southeast of Gardena; sec. 7, T. 7 N., R. 3 E.; Horseshoe Bend Quadrangle; lat. 43°57'52" N., long. 116°09'19" W.; NAD 83

**Typical Pedon**

A1—0 to 3 inches; dark grayish brown (10YR 4/2) stony loam, very dark brown (10YR 2/2) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots and few medium roots; many very fine and fine and common medium tubular and irregular pores; 15 percent gravel, 5 percent cobbles, and 10 percent stones; neutral (pH 6.7); clear smooth boundary.

Bt1—3 to 7 inches; dark grayish brown (10YR 4/2) cobbly clay loam, very dark brown (10YR 2/2) moist; moderate thin platy structure parting to moderate fine angular blocky; hard, friable, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine and few medium tubular pores; many faint clay films on faces of peds and in pores; 15 percent gravel, 10 percent cobbles, and 5 percent stones; neutral (pH 6.6); clear smooth boundary.

Bt2—7 to 10 inches; grayish brown (10YR 5/2) very cobbly clay loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium prismatic structure

parting to moderate fine and medium angular blocky; very hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; 15 percent gravel, 15 percent cobbles, and 5 percent stones; neutral (pH 6.6); abrupt smooth boundary.

Bt3—10 to 15 inches; pale brown (10YR 6/3) very cobbly clay, brown (10YR 4/3) moist; strong fine and medium prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; continuous prominent clay films on faces of peds and in pores; 20 percent gravel, 15 percent cobbles, and 5 percent stones; neutral (pH 6.7); abrupt wavy boundary.

2Bqm—15 to 20 inches; brownish yellow (10YR 6/6) and dark yellowish brown (10YR 3/6), very strongly cemented, continuous duripan; massive; extremely hard; 65 percent rock fragments; clear smooth boundary.

2C—20 to 60 inches; pale brown (10YR 6/3) extremely stony sandy loam, dark yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; 35 percent gravel, 20 percent cobbles, and 25 percent stones; neutral (pH 7.2).

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—3 to 15 percent

Thickness of mollic epipedon—7 to 10 inches

Depth to duripan—10 to 20 inches

Depth to bedrock—60 inches or more

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—35 to 50 percent

Content of rock fragments—35 to 55 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—20 to 35 percent total, with 10 to 25 percent gravel, 5 to 20 percent cobbles, and 5 to 20 percent stones

#### *Upper part of Bt horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—27 to 40 percent

Content of rock fragments—25 to 50 percent total, with 10 to 25 percent gravel, 5 to 20 percent cobbles, and 0 to 15 percent stones

#### *Lower part of Bt horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Content of organic matter—less than 1 percent

Texture—clay or clay loam

Content of clay—35 to 50 percent

Content of rock fragments—35 to 60 percent total, with 10 to 30 percent gravel, 5 to 25 percent cobbles, and 0 to 15 percent stones

#### *2Bqm horizon:*

Cementation—indurated or very strongly cemented

*2C horizon:*

Hue—10YR or 2.5Y

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 to 6 dry or moist

Texture—loamy sand or sandy loam

Content of clay—5 to 15 percent

Content of rock fragments—50 to 85 percent total, with 20 to 50 percent gravel, 10 to 25 percent cobbles, and 5 to 25 percent stones

**Garval Series***Depth class:* Moderately deep*Drainage class:* Excessively drained*Permeability class:* Rapid*Landform:* Canyon walls and mountain slopes*Parent material:* Colluvium derived from granodiorite*Slope range:* 35 to 90 percent*Elevation:* 2,810 to 6,530 feet*Mean annual precipitation:* 20 to 26 inches*Mean annual air temperature:* 45 to 48 degrees F*Frost-free period:* 90 to 125 days*Taxonomic class:* Sandy-skeletal, mixed, mesic Entic Ultic Haploxerolls**Typical Pedon Location**

Boise County, Idaho; about 2 miles southwest of Crouch; sec. 20, T. 9 N., R. 4 E.; Banks Quadrangle; lat. 44°05'56" N., long. 116°00'40" W.; NAD 83

**Typical Pedon**

Oi—0 to 1 inch; partially decomposed pine needles.

A1—1 to 5 inches; grayish brown (10YR 5/2) fine gravelly loamy coarse sand, very dark grayish brown (10YR 3/2) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium irregular pores; 15 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.

A2—5 to 13 inches; grayish brown (10YR 5/2) fine gravelly loamy coarse sand, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots; common very fine and fine irregular pores; 15 percent fine gravel; slightly acid (pH 6.3); clear smooth boundary.

AC—13 to 19 inches; brown (10YR 5/3) gravelly coarse sand, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; few very fine and fine irregular pores; 25 percent gravel; slightly acid (pH 6.3); abrupt wavy boundary.

C—19 to 29 inches; pale brown (10YR 6/3) extremely gravelly coarse sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, medium, and coarse roots; 65 percent gravel and 20 percent cobbles; neutral (pH 6.6); abrupt smooth boundary.

R—29 inches; moderately fractured granodiorite.

### ***Range in Characteristics***

*Profile:*

Thickness of mollic epipedon—7 to 15 inches

Depth to bedrock—20 to 40 inches

Base saturation—50 to 75 percent

*Particle-size control section:*

Content of clay—2 to 7 percent

Content of rock fragments—35 to 85 percent

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent gravel

Reaction—moderately acid or slightly acid

*AC and C horizons:*

Hue—10YR or 2.5Y

Value—5 to 7 dry and 3 to 5 moist

Chroma—3 or 4 dry or moist

Texture—loamy coarse sand or coarse sand

Content of clay—2 to 6 percent

Content of rock fragments—35 to 85 percent total, with 15 to 65 percent gravel,  
5 to 35 percent cobbles, and 0 to 15 percent stones

Reaction—slightly acid or neutral

### ***Gimmi Series***

*Depth class:* Moderately deep

*Drainage class:* Well drained

*Permeability class:* Slow

*Landform:* Landslides

*Parent material:* Colluvium derived from basalt and silty lacustrine deposits

*Slope range:* 5 to 35 percent

*Elevation:* 2,710 to 3,540 feet

*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 49 to 50 degrees F

*Frost-free period:* 130 to 140 days

*Taxonomic class:* Fine, smectitic, mesic Vertic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 2 miles northeast of Horseshoe Bend; sec. 13, T. 7 N.,  
R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°56'31" N., long. 116°10'17" W.;  
NAD 83

### ***Typical Pedon***

A—0 to 3 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown  
(10YR 2/2) moist; weak thin and medium platy structure parting to weak fine  
granular; slightly hard, very friable, slightly sticky and slightly plastic; many very  
fine and fine and few medium and coarse roots; many very fine and fine and few  
medium tubular and irregular pores; 25 percent gravel, 10 percent cobbles, and  
5 percent stones; slightly acid (pH 6.3); clear smooth boundary.

BA—3 to 6 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish

brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; few very fine, fine, and medium tubular pores; 25 percent gravel, 10 percent cobbles, and 5 percent stones; slightly acid (pH 6.4); clear smooth boundary.

Bt1—6 to 10 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine angular blocky structure; hard, firm, very sticky and very plastic; common very fine and fine roots; few very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; 15 percent gravel, 10 percent cobbles, and 5 percent stones; neutral (pH 6.7); clear wavy boundary.

Bt2—10 to 15 inches; yellowish brown (10YR 5/4) gravelly clay, dark yellowish brown (10YR 3/4) moist; moderate fine and medium prismatic structure; very hard, firm, very sticky and very plastic; common very fine and fine roots; few very fine and fine tubular pores; continuous prominent clay films on faces of peds and in pores; 15 percent gravel and 10 percent cobbles; cracks less than 5 millimeters wide; neutral (pH 6.8); clear wavy boundary.

Bt3—15 to 23 inches; light yellowish brown (10YR 6/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate fine and medium prismatic structure; very hard, very firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; continuous prominent clay films on faces of peds and in pores; 15 percent gravel and 10 percent cobbles; neutral (pH 6.8); gradual smooth boundary.

2CBt—23 to 31 inches; very pale brown (10YR 7/3) extremely paragravelly silty clay loam, brown (10YR 5/3) moist; massive; very hard, firm, very sticky and very plastic; few very fine and fine roots; common distinct clay films on pararock fragments; 85 percent pararock fragments; neutral (pH 6.9); abrupt smooth boundary.

2Cr—31 inches; moderately cemented, stratified silty lacustrine deposits.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0.1 to 3.0 percent

Thickness of mollic epipedon—8 to 15 inches

Depth to bedrock (paralithic contact)—20 to 40 inches

#### *Particle-size control section:*

Content of clay—35 to 50 percent

Content of rock fragments—15 to 35 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Content of rock fragments—35 to 50 percent total, with 15 to 35 percent gravel, 5 to 15 percent cobbles, and 0 to 5 percent stones

Reaction—slightly acid or neutral

#### *Bt1 horizon:*

Hue—7.5YR or 10YR

Chroma—2 or 3 dry or moist

Content of clay—27 to 35 percent

Content of rock fragments—15 to 35 percent total, with 10 to 25 percent gravel, 5 to 15 percent cobbles, and 0 to 5 percent stones

Reaction—slightly acid or neutral

#### *Bt2 and Bt3 horizons:*

Hue—7.5YR, 10YR, or 2.5Y

Value—4 or 5 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist  
 Texture—clay loam or clay  
 Content of clay—35 to 50 percent  
 Content of rock fragments—15 to 35 percent total, with 10 to 25 percent gravel,  
 0 to 10 percent cobbles, and 0 to 5 percent stones  
 Width of cracks—5 millimeters or less  
 Reaction—neutral or slightly alkaline

### ***Grimescreek Series***

*Depth class:* Very deep  
*Drainage class:* Somewhat poorly drained  
*Permeability class:* Moderately rapid  
*Landform:* Flood-plain steps  
*Parent material:* Coarse-loamy alluvium  
*Slope range:* 0 to 2 percent  
*Elevation:* 3,390 to 4,640 feet  
*Mean annual precipitation:* 22 to 28 inches  
*Mean annual air temperature:* 42 to 45 degrees F  
*Frost-free period:* 60 to 90 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, frigid Aquic Cumulic  
 Haploxerolls

#### ***Typical Pedon Location***

Boise County, Idaho; about 3 miles southwest Placerville; sec. 34, T. 7 N., R. 4 E.;  
 Placerville Quadrangle; lat. 43°54'20" N., long. 115°58'29" W.; NAD 83

#### ***Typical Pedon***

- A1—0 to 6 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; few very fine tubular pores and few fine and medium irregular pores; few fine and medium distinct relict iron concentrations that are dark yellowish brown (10YR 4/4) moist; 10 percent fine gravel; neutral (pH 6.8); clear smooth boundary.
- A2—6 to 11 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; few very fine and fine tubular and irregular pores; common fine and medium distinct relict iron concentrations that are dark yellowish brown (10YR 4/4) moist and are in pores; 10 percent fine gravel; neutral (pH 6.9); clear smooth boundary.
- AC—11 to 21 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; few very fine and fine tubular and irregular pores; common fine distinct relict iron concentrations that are dark yellowish brown (10YR 4/4) moist and are in pores; 5 percent fine gravel; neutral (pH 7.0); clear smooth boundary.
- Ab1—21 to 23 inches; dark grayish brown (10YR 4/2) coarse sandy loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; soft, loose, nonsticky and nonplastic; few very fine roots; common very fine and fine irregular pores; few fine distinct iron concentrations that are dark yellowish brown (10YR 3/4) moist; 10 percent gravel; neutral (pH 7.0); clear broken boundary.

Ab<sub>2</sub>—23 to 36 inches; brown (10YR 5/3) coarse sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, loose, nonsticky and nonplastic; common very fine, fine, and medium irregular pores; many fine and medium distinct iron concentrations that are dark yellowish brown (10YR 4/4) moist, few fine and medium faint depletions that are dark grayish brown (10YR 4/2) moist; 10 percent gravel; neutral (pH 6.8); clear smooth boundary.

AC<sub>b</sub>—36 to 58 inches; pale brown (10YR 6/3) fine gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, loose, nonsticky and nonplastic; common very fine and fine irregular pores; many fine prominent iron concentrations that are dark yellowish brown (10YR 4/4 and 10YR 4/6) moist, many medium and coarse faint depletions that are dark grayish brown (10YR 4/2) moist; 15 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.

C—58 to 72 inches; light brownish gray (10YR 6/2) loamy sand, dark grayish brown (10YR 4/2) moist; single grain; loose, nonsticky and nonplastic; depletions that are dark gray (2.5Y 4/1) moist; 5 percent fine gravel; slightly acid (pH 6.4).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches

Depth to redoximorphic features—20 to 30 inches

Depth to relict redoximorphic features—typically at the surface

Depth to bedrock—60 inches or more

Frequency of flooding—occasional

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—5 to 18 percent

Content of rock fragments—0 to 15 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of clay—8 to 18 percent

Content of rock fragments—0 to 15 percent gravel

Presence of relict redoximorphic features—none in some pedons

#### *Ab horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Texture—coarse sandy loam, sandy loam, or loamy fine sand

Content of clay—4 to 18 percent

Content of rock fragments—0 to 15 percent gravel

Characteristics of redoximorphic features—few to many, distinct or prominent iron concentrations

#### *C horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—1 to 3 dry or moist

Texture—sandy loam, loamy sand, loamy fine sand, or sand

Content of clay—0 to 8 percent

Content of rock fragments—0 to 15 percent gravel

Characteristics of redoximorphic features—none to common, faint or distinct iron concentrations

Thin discontinuous lenses of sandy and/or loamy material with varying organic matter content are in most pedons.

## ***Gwin Series***

*Depth class:* Shallow

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes, mountain slopes, and structural benches

*Parent material:* Residuum and colluvium derived from basalt

*Slope range:* 4 to 65 percent

*Elevation:* 2,990 to 6,210 feet

*Mean annual precipitation:* 14 to 20 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 90 to 140 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Lithic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 6 miles west of Banks; sec. 20, T. 9 N., R. 2 E.;

Dry Buck Valley Quadrangle; lat. 44°05'48" N., long. 116°15'01" W.; NAD 83

### ***Typical Pedon***

A—0 to 4 inches; brown (7.5YR 4/4) very stony loam, dark brown (7.5YR 3/2) moist; weak fine and medium subangular blocky structure parting to moderate medium granular; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 20 percent gravel, 15 percent cobbles, and 15 percent stones; neutral (pH 6.9); clear wavy boundary.

BA—4 to 7 inches; brown (7.5YR 4/4) very stony loam, dark brown (7.5YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine and fine irregular and tubular pores; 20 percent gravel, 15 percent cobbles, and 15 percent stones; neutral (pH 6.8); clear wavy boundary.

Bt—7 to 13 inches; brown (7.5YR 5/4) extremely cobbly clay loam, brown (7.5YR 4/3) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine tubular pores; common faint clay films on faces of peds; 30 percent gravel and 40 percent cobbles; neutral (pH 6.6); abrupt wavy boundary.

R—13 inches; fractured basalt.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0 to 15 percent

Thickness of mollic epipedon—7 to 15 inches

Depth to bedrock (lithic contact)—10 to 20 inches

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—25 to 35 percent

Content of rock fragments—40 to 90 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—3 or 4 dry and 2 or 3 moist

Content of rock fragments—35 to 90 percent total, with 10 to 50 percent gravel, 0 to 35 percent cobbles, and 0 to 15 percent stones

*Bt horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Content of clay—27 to 35 percent

Content of rock fragments—40 to 90 percent total, with 15 to 55 percent gravel,  
0 to 40 percent cobbles, and 0 to 10 percent stones**Hann Series***Depth class:* Very deep*Drainage class:* Well drained*Permeability class:* Slow*Landform:* Hillslopes, fan remnants, and structural benches*Parent material:* Clayey alluvium*Slope range:* 2 to 50 percent*Elevation:* 2,610 to 5,240 feet*Mean annual precipitation:* 14 to 22 inches*Mean annual air temperature:* 45 to 51 degrees F*Frost-free period:* 90 to 150 days*Taxonomic class:* Fine, smectitic, mesic Vertic Argixerolls**Typical Pedon Location**

Boise County, Idaho; about 6 miles west of Banks; sec. 20, T. 9 N., R. 2 E.;

Dry Buck Valley Quadrangle; lat. 44°06'25" N., long. 116°14'46" W.; NAD 83

**Typical Pedon**

- A—0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam, very dark brown (10YR 2/2) moist; strong medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; neutral (pH 6.8); clear smooth boundary.
- Bt1—3 to 6 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; few distinct clay films on faces of peds and in pores; cracks 5 to 15 millimeters wide; neutral (pH 6.7); clear smooth boundary.
- Bt2—6 to 13 inches; brown (10YR 4/3) silty clay, dark brown (10YR 3/3) moist; moderate medium and coarse prismatic structure parting to strong fine subangular blocky; very hard, firm, very sticky and very plastic; common very fine and fine roots; common very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; cracks 1 to 5 millimeters wide; neutral (pH 6.8); gradual wavy boundary.
- Bt3—13 to 25 inches; brown (10YR 5/3) silty clay, dark brown (10YR 3/3) moist; moderate coarse prismatic structure; very hard, firm, very sticky and very plastic; common very fine and fine roots; common very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; neutral (pH 6.7); clear wavy boundary.
- Bt4—25 to 44 inches; yellowish brown (10YR 5/4) silty clay loam, dark yellowish brown (10YR 3/4) moist; weak coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; neutral (pH 6.9); gradual wavy boundary.

Bt5—44 to 72 inches; light yellowish brown (10YR 6/4) silty clay loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; common faint clay films on faces of peds and in pores; neutral (pH 6.9).

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0 to 0.1 percent

Thickness of mollic epipedon—20 to 40 inches

Depth to bedrock—60 inches or more

#### *Particle-size control section:*

Content of clay—35 to 45 percent

Content of rock fragments—0 to 15 percent

#### *A horizon:*

Value—3 to 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—0 to 15 percent total, with 0 to 5 percent gravel, 0 to 15 percent cobbles, and 0 to 5 percent stones

Reaction—slightly acid or neutral

#### *Bt1 horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or silty clay loam

Content of clay—25 to 40 percent

Content of rock fragments—0 to 5 percent gravel

Width of cracks—5 to 15 millimeters

Reaction—moderately acid to neutral

#### *Bt2 and Bt3 horizons:*

Hue—10YR or 7.5YR

Value—4 or 5 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—clay or silty clay

Content of clay—40 to 55 percent

Content of rock fragments—0 to 15 percent gravel

Width of cracks—10 millimeters or less

Abundance of slickensides—none to common

Reaction—moderately acid to neutral

#### *Bt4 and Bt5 horizons:*

Hue—10YR or 7.5YR

Value—4 to 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—silty loam or silty clay loam

Content of clay—25 to 35 percent

Content of rock fragments—0 to 15 percent gravel

Reaction—neutral or slightly alkaline

## ***Hellake Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes, dissected fan remnants, relict lakebeds, and landslides

*Parent material:* Loamy lacustrine deposits over gravelly alluvium derived from igneous rock

*Slope range:* 0 to 35 percent

*Elevation:* 2,990 to 4,780 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Ultic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 2 miles west of Garden Valley; sec. 21, T. 9 N., R. 4 E.; Garden Valley Quadrangle; lat. 44°05'47" N., long. 115°58'57" W.; NAD 83

### **Typical Pedon**

- A—0 to 3 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak thin platy structure parting to moderate fine and medium granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine and fine irregular pores; 5 percent gravel; slightly acid (pH 6.3); clear smooth boundary.
- AB—3 to 10 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; common very fine and fine tubular and irregular pores; 5 percent gravel; moderately acid (pH 6.0); clear smooth boundary.
- Bt1—10 to 22 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine tubular pores; common faint clay films on faces of peds and in pores; 5 percent gravel; strongly acid (pH 5.4); clear smooth boundary.
- Bt2—22 to 36 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 3/4) moist; strong fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; 5 percent gravel; strongly acid (pH 5.3); clear smooth boundary.
- Bt3—36 to 43 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; 5 percent gravel; strongly acid (pH 5.2); clear smooth boundary.
- 2BC—43 to 53 inches; light yellowish brown (10YR 6/4) very gravelly loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; 35 percent gravel and 5 percent cobbles; strongly acid (pH 5.2); abrupt smooth boundary.
- 2C1—53 to 60 inches; brownish yellow (10YR 6/6) very gravelly sandy loam, dark yellowish brown (10YR 4/6) moist; massive; soft, very friable, nonsticky and nonplastic; few fine roots; 50 percent gravel and 5 percent cobbles; moderately acid (pH 6.0); abrupt smooth boundary.
- 2C2—60 to 66 inches; very pale brown (10YR 7/4) extremely gravelly loamy sand,

yellowish brown (10YR 5/4) moist; single grain; loose, nonsticky and nonplastic;  
60 percent gravel and 5 percent cobbles; moderately acid (pH 6.0).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 15 inches  
Depth to base of argillic horizon—30 to 45 inches  
Depth to strongly contrasting material (2BC horizon)—30 to 60 inches  
Depth to bedrock—60 inches or more  
Base saturation (some part between 10 and 30 inches)—50 to 75 percent

#### *Particle-size control section:*

Content of clay—25 to 32 percent  
Content of medium sand or coarser—less than 25 percent  
Content of rock fragments—0 to 10 percent

An O horizon is in some pedons.

#### *A horizon:*

Hue—7.5YR or 10YR  
Value—4 or 5 dry and 2 or 3 moist  
Chroma—2 or 3 dry or moist  
Content of rock fragments—0 to 10 percent gravel  
Reaction—moderately acid or slightly acid

#### *Bt1 and Bt2 horizons:*

Hue—7.5YR or 10YR  
Value—5 or 6 dry and 3 or 4 moist  
Chroma—3 or 4 dry or moist  
Texture—loam or clay loam  
Content of clay—24 to 30 percent  
Content of rock fragments—0 to 10 percent gravel  
Reaction—strongly acid or moderately acid

#### *Bt3 horizon:*

Hue—7.5YR or 10YR  
Value—6 or 7 dry and 4 or 5 moist  
Chroma—3 or 4 dry or moist  
Content of clay—27 to 35 percent  
Content of rock fragments—0 to 15 percent fine gravel  
Reaction—strongly acid or moderately acid

#### *2C horizon:*

Hue—7.5YR, 10YR, or 2.5Y  
Value—6 or 7 dry and 4 or 5 moist  
Chroma—2 to 6 dry or moist  
Texture—sandy loam or loamy sand  
Content of clay—4 to 18 percent  
Content of rock fragments—25 to 75 percent total, with 25 to 60 percent gravel and  
0 to 15 percent cobbles  
Reaction—strongly acid or moderately acid

## ***Hess Series***

*Depth class:* Deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes and mountain slopes

*Parent material:* Volcanic ash and colluvium derived from basalt and tuff

*Slope range:* 4 to 65 percent

*Elevation:* 3,860 to 5,890 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 41 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Fine-loamy, isotic, frigid Vitrandic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 3.5 miles southeast of Banks; sec. 2, T. 8 N., R. 3 E.;

Banks Quadrangle; lat. 44°03'12" N., long. 116°04'06" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; undecomposed and partially decomposed forest litter.

A1—1 to 4 inches; dark grayish brown (10YR 4/2) ashy loam, very dark brown (10YR 2/2) moist; moderate fine and medium granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 5 percent gravel and 5 percent paragravel; moderately acid (pH 5.9); clear smooth boundary.

A2—4 to 10 inches; brown (10YR 4/3) paragravelly ashy loam, very dark brown (10YR 2/2) moist; weak medium platy structure parting to moderate fine subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine irregular pores; 5 percent gravel and 10 percent paragravel; moderately acid (pH 6.0); clear wavy boundary.

BA—10 to 15 inches; brown (10YR 4/3) paragravelly ashy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine irregular pores; about 20 percent of surface of peds covered with coatings of silt; 5 percent gravel and 10 percent paragravel; slightly acid (pH 6.1); clear smooth boundary.

2Bt1—15 to 20 inches; brown (10YR 4/3) paragravelly clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, very friable, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; about 60 percent of surface of peds covered with coatings of silt; 5 percent gravel, 10 percent paragravel, and 2 percent paracobbles; slightly acid (pH 6.1); gradual wavy boundary.

2Bt2—20 to 29 inches; dark yellowish brown (10YR 4/4) paragravelly clay loam, dark yellowish brown (10YR 3/4) moist; strong medium subangular blocky structure; hard, friable, very sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine and few medium tubular pores; common distinct clay films on faces of peds and in pores; about 30 percent of surface of peds covered with coatings of silt; 5 percent gravel, 10 percent paragravel, and 2 percent paracobbles; slightly acid (pH 6.1); clear smooth boundary.

2Bt3—29 to 38 inches; reddish brown (2.5YR 4/4) very paragravelly clay loam, dark reddish brown (2.5YR 3/4) moist; weak fine and medium prismatic structure parting to strong fine and medium subangular blocky; very hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 10 percent gravel, 35 percent paragravel, and 2 percent paracobbles; slightly acid (pH 6.2); gradual wavy boundary.

2Bt4—38 to 44 inches; reddish brown (2.5YR 5/4) and strong brown (7.5YR 5/6) very paragravelly clay loam, reddish brown (2.5YR 4/4) moist; strong fine subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; few very fine and fine roots; few very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; 10 percent gravel, 40 percent paragravel, and 5 percent paracobbles; slightly acid (pH 6.2); gradual wavy boundary.

2R—44 inches; unweathered tuff.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches  
 Thickness of volcanic ash influence—10 to 20 inches  
 Depth to bedrock (lithic contact)—40 to 60 inches  
 Base saturation (10 to 30 inches)—50 to 75 percent  
 Reaction—slightly acid or moderately acid

#### *Particle-size control section:*

Content of clay—25 to 35 percent  
 Content of rock fragments—0 to 15 percent

#### *A horizon:*

Value—3 or 4 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—20 to 27 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Content of pararock fragments—0 to 15 percent paragravel  
 Content of volcanic glass—5 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

#### *2Bt1 horizon:*

Value—4 or 5 dry and 3 or 4 moist  
 Chroma—2 or 3 dry or moist  
 Texture—loam or clay loam  
 Content of clay—24 to 30 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Content of pararock fragments—0 to 15 percent paragravel and 0 to 15 percent paracobbles

#### *2Bt2, 2Bt3, and 2Bt4 horizons:*

Hue—5YR, 7.5YR, or 10YR  
 Value—4 or 5 dry and 3 or 4 moist  
 Chroma—4 to 6 dry or moist  
 Content of clay—27 to 35 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Content of pararock fragments—5 to 50 percent paragravel and 0 to 5 percent paracobbles

## ***Highvalley Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Mountain slopes

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

*Slope range:* 15 to 65 percent

*Elevation:* 3,780 to 6,780 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Fine-loamy, isotic, frigid Vitrandic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 5.5 miles northwest of Banks; sec. 11, T. 9 N., R. 2 E.; High Valley Quadrangle; lat. 44°08'04" N., long. 116°11'44" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 5 inches; very dark grayish brown (10YR 3/2) ashy loam, very dark brown (10YR 2/2) moist; moderate fine and medium granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 5 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.

AB—5 to 10 inches; brown (10YR 4/3) ashy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 1 percent fine gravel; slightly acid (pH 6.1); clear wavy boundary.

Bw1—10 to 24 inches; brown (10YR 4/3) ashy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; 5 percent fine gravel; slightly acid (pH 6.5); gradual wavy boundary.

Bw2—24 to 48 inches; dark yellowish brown (10YR 4/4) ashy loam, dark yellowish brown (10YR 3/4) moist; weak medium prismatic structure; slightly hard, very friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; many very fine, fine, and medium tubular pores; 2 percent fine gravel; slightly acid (pH 6.5); gradual wavy boundary.

Bw3—48 to 66 inches; dark yellowish brown (10YR 4/6) ashy loam, dark yellowish brown (10YR 3/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine, fine, and medium tubular pores; 2 percent fine gravel; slightly acid (pH 6.5).

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches

Depth to bedrock and volcanic ash influence thickness—60 inches or more

Base saturation—50 to 75 percent

Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—17 to 27 percent

Content of rock fragments—0 to 15 percent

#### *A horizon:*

Value—3 or 4 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—14 to 20 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Content of volcanic glass—10 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.8 to 1.2 percent

*AB horizon:*

Hue—10YR or 7.5YR  
 Value—4 or 5 dry and 3 or 4 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—16 to 25 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Content of volcanic glass—5 to 15 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

*Bw1 and Bw2 horizons:*

Hue—10YR or 7.5YR  
 Value—4 or 5 dry and 3 or 4 moist  
 Chroma—2 to 4 dry or moist  
 Content of clay—18 to 27 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Content of volcanic glass—5 to 10 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

*Bw3 horizon:*

Hue—10YR or 7.5YR  
 Value—4 or 5 dry and 3 or 4 moist  
 Chroma—3 to 6 dry or moist  
 Content of clay—15 to 25 percent  
 Content of rock fragments—0 to 35 percent total, with 0 to 15 percent gravel and 0 to 35 percent cobbles  
 Content of volcanic glass—5 to 10 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

## **Hillcreek Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Fan remnants and hillslopes

*Parent material:* Volcanic ash and colluvium derived from basalt

*Slope range:* 4 to 65 percent

*Elevation:* 2,580 to 5,220 feet

*Mean annual precipitation:* 14 to 22 inches

*Mean annual air temperature:* 45 to 49 degrees F

*Frost-free period:* 90 to 130 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Vitrandic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 8 miles north of Boise City; sec. 23, T. 5 N., R. 2 E.; Cartwright Canyon Quadrangle; lat. 43°45'46" N., long. 116°11'35" W.; NAD 83

### ***Typical Pedon***

- A1—0 to 2 inches; very dark grayish brown (10YR 3/2) ashy loam, very dark brown (10YR 2/2) moist; strong fine and medium granular structure; slightly hard, very friable, slightly sticky and moderately plastic; many very fine and fine and few medium roots; many very fine, fine, and medium irregular pores; neutral (pH 7.0); clear wavy boundary.
- A2—2 to 10 inches; very dark grayish brown (10YR 3/2) ashy loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure parting to moderate medium and coarse granular; slightly hard, very friable, moderately sticky and moderately plastic; many very fine and fine roots; many very fine, fine, and medium irregular pores; neutral (pH 6.9); clear wavy boundary.
- AB—10 to 27 inches; very dark grayish brown (10YR 3/2) ashy loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; many very fine and fine roots; many very fine and fine tubular pores; neutral (pH 6.9); clear wavy boundary.
- 2Bt1—27 to 43 inches; brown (10YR 4/3) clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; many very fine and fine roots; many very fine and fine tubular pores; common distinct clay films on faces of peds; 2 percent gravel; neutral (pH 7.3); gradual wavy boundary.
- 2Bt2—43 to 59 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; common very fine roots; many very fine and fine tubular pores; many distinct clay films on faces of peds; 5 percent gravel and 5 percent cobbles; neutral (pH 7.3); clear wavy boundary.
- 2Bt3—59 to 66 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and moderately plastic; common very fine roots; many very fine and fine tubular pores; common distinct clay films on faces of peds; 10 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.4).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 45 inches  
 Thickness of volcanic ash influence—20 to 36 inches  
 Depth to bedrock—60 inches or more

#### *Particle-size control section:*

Content of clay—27 to 35 percent  
 Content of rock fragments—0 to 15 percent

#### *A horizon:*

Value—3 to 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—0 to 5 percent gravel  
 Content of volcanic glass—5 to 15 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *AB horizon:*

Value—3 to 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Texture—ashy loam or ashy silt loam  
 Content of clay—20 to 27 percent

Content of rock fragments—0 to 10 percent gravel  
 Content of volcanic glass—5 to 15 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

*2Bt1 horizon:*

Value—4 to 6 dry and 3 or 4 moist  
 Chroma—2 to 4 dry or moist  
 Texture—clay loam or silty clay loam  
 Content of clay—27 to 35 percent  
 Content of rock fragments—0 to 10 percent gravel

*2Bt2 and 2Bt3 horizons:*

Value—5 to 7 dry and 3 to 5 moist  
 Chroma—3 or 4 dry or moist  
 Texture—loam, clay loam, or silty clay loam  
 Content of clay—25 to 35 percent  
 Reaction—neutral or slightly alkaline  
 Content of rock fragments—5 to 25 percent total, with 5 to 25 percent gravel and 0 to 10 percent cobbles

## **Hoff Series**

*Depth class:* Shallow

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes and mountain slopes

*Parent material:* Volcanic ash and colluvium derived from basalt

*Slope range:* 8 to 65 percent

*Elevation:* 3,820 to 7,050 feet

*Mean annual precipitation:* 24 to 36 inches

*Mean annual air temperature:* 39 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Lithic Ultic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 5 miles northwest of Banks; sec. 15, T. 9 N., R. 2 E.;  
 Dry Buck Valley Quadrangle; lat. 44°06'57" N., long. 116°12'34" W.; NAD 83

### **Typical Pedon**

A—0 to 6 inches; dark brown (7.5YR 3/3) gravelly ashy loam, very dark brown (7.5YR 2.5/2) moist; moderate fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, and medium irregular pores; 25 percent gravel; neutral (pH 6.9); clear wavy boundary.

AB—6 to 11 inches; brown (7.5YR 4/3) very gravelly ashy loam, very dark brown (7.5YR 2.5/3) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and moderately plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, and medium irregular pores; 40 percent gravel and 10 percent cobbles; slightly acid (pH 6.1); clear wavy boundary.

Bt—11 to 19 inches; brown (7.5YR 4/3) extremely cobbly ashy clay loam, dark brown (7.5YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; many very fine and fine and common medium and coarse roots; common very fine, fine, and

medium tubular and irregular pores; common faint clay films on faces of peds and in pores; 35 percent gravel and 40 percent cobbles; slightly acid (pH 6.2); clear wavy boundary.

R—19 inches; fractured basalt.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock (lithic contact) and volcanic ash influence thickness—10 to 20 inches

Base saturation—50 to 75 percent

Content of volcanic glass—5 to 20 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Value—3 or 4 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 15 to 35 percent gravel and 0 to 10 percent cobbles

Reaction—slightly acid or neutral

#### *Bt horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2.5 to 4 moist

Chroma—2 to 4 dry or moist

Texture—ashy loam or ashy clay loam

Content of clay—20 to 30 percent

Content of rock fragments—35 to 80 percent total, with 25 to 60 percent gravel and 0 to 50 percent cobbles

Reaction—moderately acid to neutral

## ***Hovelton Series***

*Depth class:* Moderately deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes and volcanic cones

*Parent material:* Volcanic ash, and colluvium and residuum derived from basalt and welded tuff

*Slope range:* 25 to 65 percent

*Elevation:* 2,580 to 5,750 feet

*Mean annual precipitation:* 13 to 22 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Vitrandic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 7 miles west of Banks; sec. 30, T. 9 N., R. 2 E.; Webb Creek Quadrangle; lat. 44°05'08" N., long. 116°16'05" W.; NAD 83

### ***Typical Pedon***

A—0 to 2 inches; brown (7.5YR 5/4) cobbly ashy loam, dark brown (10YR 3/3) moist; weak medium and thick platy structure parting to moderate fine granular; soft,

very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores and few very fine and fine tubular pores; 10 percent gravel, 10 percent cobbles, and 5 percent stones; neutral (pH 7.2); clear smooth boundary.

AB—2 to 6 inches; brown (10YR 5/3) cobbly ashy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to strong fine and medium granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 10 percent gravel, 10 percent cobbles, and 5 percent stones; neutral (pH 7.2); clear wavy boundary.

Bt1—6 to 13 inches; brown (7.5YR 5/4) very cobbly ashy loam, dark reddish brown (5YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; few distinct clay films on faces of peds; 20 percent gravel and 30 percent cobbles; neutral (pH 7.0); gradual wavy boundary.

Bt2—13 to 24 inches; reddish brown (5YR 5/4) extremely stony clay loam, dark reddish brown (5YR 3/4) moist; strong fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine and fine roots; few very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; 20 percent gravel, 25 percent cobbles, and 30 percent stones; neutral (pH 7.0); clear irregular boundary.

R—24 inches; fractured basalt.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0 to 3 percent

Thickness of mollic epipedon—10 to 20 inches

Thickness of volcanic ash influence—7 to 14 inches

Depth to bedrock (lithic contact)—20 to 40 inches

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—18 to 27 percent

Content of rock fragments—45 to 75 percent

#### *A and AB horizons:*

Hue—5YR, 7.5YR, or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 to 4 dry or moist

Content of rock fragments—15 to 35 percent total, with 10 to 30 percent gravel, 5 to 20 percent cobbles, and 0 to 10 percent stones

Content of volcanic glass—5 to 20 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *Bt1 horizon:*

Hue—5YR, 7.5YR, or 10YR

Value—4 to 6 dry and 2 to 4 moist

Chroma—2 to 4 dry or moist

Content of clay—18 to 27 percent

Content of rock fragments—35 to 60 percent total, with 20 to 40 percent gravel, 5 to 40 percent cobbles, and 0 to 10 percent stones

Content of volcanic glass—5 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

*Bt2 horizon:*

Hue—5YR, 7.5YR, or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 to 6 dry or moist

Texture—loam or clay loam

Content of clay—18 to 30 percent

Content of rock fragments—60 to 80 percent total, with 20 to 45 percent gravel,  
10 to 40 percent cobbles, and 0 to 30 percent stones**Hullsgulch Series***Depth class:* Very deep*Drainage class:* Well drained*Permeability class:* Moderate*Landform:* Hillslopes and landslides*Parent material:* Loamy lacustrine sediment*Slope range:* 5 to 65 percent*Elevation:* 2,670 to 3,890 feet*Mean annual precipitation:* 13 to 17 inches*Mean annual air temperature:* 48 to 51 degrees F*Frost-free period:* 120 to 150 days*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Aridic Argixerolls**Typical Pedon Location**Boise County, Idaho; about 2 miles northeast of Horseshoe Bend; sec. 24, T. 7 N.,  
R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°55'33" N., long. 116°09'21" W.;  
NAD 83**Typical Pedon**

- A1—0 to 2 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine irregular and tubular pores; neutral (pH 6.6); clear smooth boundary.
- A2—2 to 9 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine irregular and tubular pores; neutral (pH 6.7); clear wavy boundary.
- BA—9 to 15 inches; grayish brown (10YR 5/2) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; neutral (pH 6.9); clear wavy boundary.
- Bt1—15 to 29 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine, fine, and medium tubular pores; few distinct clay films on faces of peds, in pores, and bridging sand grains; neutral (pH 7.1); gradual wavy boundary.
- Bt2—29 to 46 inches; very pale brown (10YR 7/3) sandy clay loam, brown (10YR 5/3) moist; moderate medium and coarse subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine and fine tubular pores; common prominent clay films on faces

of peds, in pores, and bridging sand grains; neutral (pH 7.1); clear smooth boundary.

E&Bt1—46 to 58 inches; 80 percent E material that is very pale brown (10YR 7/4) fine gravelly coarse sandy loam, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; hard, friable, slightly sticky and nonplastic; few very fine and fine roots; common very fine and fine tubular pores; 15 percent fine gravel; neutral (pH 7.2); Bt material is continuous lamellae that are light yellowish brown (10YR 6/4) sandy clay loam, dark yellowish brown (10YR 4/4) moist, and are 2 to 10 millimeters thick and 4 to 8 inches apart; many distinct clay films bridging sand grains; clear smooth boundary.

E&Bt2—58 to 66 inches; 95 percent E material that is very pale brown (10YR 8/3) fine gravelly loamy coarse sand, pale brown (10YR 6/3) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; common very fine and fine tubular pores; 25 percent fine gravel; neutral (pH 7.3); Bt material is continuous lamellae that are light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 4/4) moist, and are 2 to 10 millimeters thick and 4 to 15 inches apart; common distinct clay films bridging sand grains.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock—60 inches or more

#### *Particle-size control section:*

Content of clay—18 to 30 percent

Content of medium and coarse sand—more than 20 percent

Content of gravel—0 to 15 percent, dominantly fine gravel

#### *A and BA horizons:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—loam or sandy loam

Content of rock fragments—0 to 10 percent gravel

Reaction—slightly acid or neutral

#### *Bt horizon:*

Value—5 to 7 dry and 3 to 5 moist

Chroma—3 or 4 dry or moist

Texture—sandy clay loam or coarse sandy loam

Content of clay—18 to 30 percent

Content of rock fragments—0 to 15 percent gravel

Reaction—slightly acid or neutral

#### *E&Bt1 horizon:*

Content of clay (weighed average)—10 to 20 percent

Content of rock fragments (weighed average)—10 to 25 percent gravel

#### *E material*

Percentage of horizon—70 to 85 percent

Value—7 or 8 dry and 5 or 6 moist

Chroma—3 or 4 dry or moist

Texture—coarse sandy loam or loamy coarse sand

Content of clay—8 to 18 percent

Reaction—slightly acid or neutral

#### *Bt material (lamellae)*

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist  
 Texture—sandy clay loam or loam  
 Content of clay—18 to 27 percent  
 Thickness—2 to 15 millimeters  
 Separation—4 to 10 inches apart

*E&Bt2 horizon:*

*E material*

Percentage of horizon—95 percent or more  
 Value—7 or 8 dry and 5 or 6 moist  
 Chroma—3 or 4 dry or moist  
 Texture—loamy coarse sand or coarse sand  
 Content of clay—5 to 12 percent  
 Content of rock fragments—15 to 35 percent gravel  
 Reaction—slightly acid to slightly alkaline

*Bt material (lamellae)*

Value—6 or 7 dry and 4 or 5 moist  
 Texture—sandy loam or sandy clay loam  
 Content of clay—12 to 22 percent  
 Thickness—2 to 15 millimeters  
 Separation—4 to 15 inches apart

## **Huston Series**

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Fan remnants

*Parent material:* Gravelly alluvium

*Slope range:* 8 to 65 percent

*Elevation:* 2,720 to 4,990 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 3 miles southwest of Crouch; sec. 20, T. 9 N., R. 4 E.;  
 Banks Quadrangle; lat. 44°05'33" N., long. 116°00'53" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 6 inches; grayish brown (10YR 5/2) gravelly coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure parting to moderate fine and medium granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine and fine and few medium irregular pores; 20 percent gravel and 5 percent cobbles; slightly acid (pH 6.3); clear smooth boundary.

A2—6 to 13 inches; grayish brown (10YR 5/2) gravelly coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to moderate fine and medium granular; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine and fine and few medium irregular and tubular pores;

20 percent gravel and 5 percent cobbles; slightly acid (pH 6.3); clear smooth boundary.

BA—13 to 26 inches; brown (10YR 5/3) very gravelly coarse sandy loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular pores; 25 percent gravel, 5 percent cobbles, and 5 percent stones; slightly acid (pH 6.1); clear wavy boundary.

Bw—26 to 46 inches; pale brown (10YR 6/3) very gravelly coarse sandy loam, brown (10YR 4/3) moist; moderate medium and coarse subangular blocky structure; hard, friable, nonsticky and nonplastic; few very fine, fine, and medium roots; common very fine and fine and few medium irregular and tubular pores; 35 percent gravel, 15 percent cobbles, and 5 percent stones; 25 percent pararock fragments; slightly acid (pH 6.1); clear smooth boundary.

C—46 to 60 inches; very pale brown (10YR 7/3), stratified very gravelly coarse sandy loam and very gravelly loamy coarse sand, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine and few medium irregular and tubular pores; 35 percent gravel, 10 percent cobbles, and 5 percent stones; 25 percent pararock fragments; between some strata are discontinuous lamellae that are yellowish brown (10YR 5/4) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist, and are 2 to 5 millimeters thick and 1 to 4 inches apart; slightly acid (pH 6.3); clear smooth boundary.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0.1 to 3.0 percent

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock—60 inches or more

Base saturation (10 to 30 inches)—50 to 75 percent

Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—7 to 18 percent

Content of rock fragments—35 to 60 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 10 to 25 percent gravel, 5 to 10 percent cobbles, and 0 to 10 percent stones and boulders

#### *Bw horizon:*

Hue—10YR or 2.5Y

Chroma—3 or 4 dry or moist

Texture—coarse sandy loam or sandy loam

Content of clay—7 to 18 percent

Content of rock fragments—35 to 60 percent total, with 15 to 35 percent gravel, 5 to 35 percent cobbles, and 0 to 10 percent stones and boulders

Content of pararock fragments—0 to 35 percent

#### *C horizon:*

Hue—10YR or 2.5Y

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—stratified fine sandy loam to loamy coarse sand

Content of clay—3 to 10 percent  
 Content of rock fragments—35 to 70 percent total, with 25 to 50 percent gravel,  
 10 to 35 percent cobbles, and 0 to 10 percent stones and boulders  
 Content of pararock fragments—0 to 35 percent  
 Presence of lamellae—absent in some pedons

### ***Immig Series***

*Depth class:* Moderately deep  
*Drainage class:* Well drained  
*Permeability class:* Slow  
*Landform:* Hillslopes and structural benches  
*Parent material:* Colluvium derived from basalt  
*Slope range:* 4 to 65 percent  
*Elevation:* 2,870 to 5,540 feet  
*Mean annual precipitation:* 13 to 20 inches  
*Mean annual air temperature:* 45 to 51 degrees F  
*Frost-free period:* 90 to 150 days

*Taxonomic class:* Clayey-skeletal, smectitic, mesic Typic Argixerolls

#### ***Typical Pedon Location***

Boise County, Idaho; about 6 miles west of Banks; sec. 20, T. 9 N., R. 2 E.;  
 Dry Buck Valley Quadrangle; lat. 44°05'52" N., long. 116°15'01" W.; NAD 83

#### ***Typical Pedon***

A—0 to 4 inches; brown (10YR 4/3) very stony loam, dark brown (10YR 3/3) moist; weak thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 5 percent gravel, 20 percent cobbles, and 20 percent stones; neutral (pH 7.0); clear wavy boundary.

Bt1—4 to 7 inches; brown (10YR 4/3) very cobbly clay loam, dark brown (7.5YR 3/2) moist; weak fine subangular blocky structure parting to moderate medium granular; slightly hard, friable, moderately sticky and moderately plastic; many very fine and fine and few medium roots; many very fine and fine tubular pores; few faint clay films on faces of peds and in pores; 15 percent gravel, 20 percent cobbles, and 5 percent stones; neutral (pH 6.8); gradual wavy boundary.

Bt2—7 to 17 inches; brown (7.5YR 4/3) very cobbly silty clay, dark brown (7.5YR 3/3) moist; strong fine subangular blocky structure; very hard, friable, very sticky and very plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; many prominent clay films on faces of peds; 25 percent gravel and 25 percent cobbles; neutral (pH 6.9); gradual wavy boundary.

Bt3—17 to 25 inches; dark yellowish brown (10YR 4/4) extremely cobbly silty clay, dark yellowish brown (10YR 3/4) moist; moderate fine subangular blocky structure; very hard, friable, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; many prominent clay films on faces of peds; 20 percent gravel, 50 percent cobbles, and 5 percent stones; neutral (pH 6.8); abrupt wavy boundary.

R—25 inches; fractured basalt.

#### ***Range in Characteristics***

*Profile:*  
 Percentage of surface covered with stones—0.1 to 50.0 percent  
 Thickness of mollic epipedon—10 to 20 inches  
 Depth to bedrock (lithic contact)—20 to 40 inches

*Particle-size control section:*

Content of clay—40 to 55 percent

Content of rock fragments—35 to 75 percent

*A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—35 to 75 percent total, with 5 to 35 percent gravel,  
5 to 45 percent cobbles, and 0 to 30 percent stones*Upper part of Bt horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—silty clay loam or clay loam

Content of clay—27 to 35 percent

Content of rock fragments—35 to 60 percent total, with 5 to 30 percent gravel,  
5 to 30 percent cobbles, and 0 to 10 percent stones*Lower part of Bt horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—clay, silty clay, silty clay loam, or clay loam

Content of clay—40 to 60 percent

Content of rock fragments—35 to 80 percent total, with 10 to 60 percent gravel,  
5 to 60 percent cobbles, and 0 to 10 percent stones***Jasseek Series****Depth class:* Very deep*Drainage class:* Well drained*Permeability class:* Slow*Landform:* Relict lakebeds*Parent material:* Clayey lacustrine deposits over sandy alluvium*Slope range:* 1 to 8 percent*Elevation:* 2,600 to 2,820 feet*Mean annual precipitation:* 13 to 14 inches*Mean annual air temperature:* 50 to 51 degrees F*Frost-free period:* 140 to 150 days*Taxonomic class:* Fine, smectitic, mesic Aridic Argixerolls***Typical Pedon Location***Boise County, Idaho; about 1.5 miles northeast of Horseshoe Bend; sec. 23,  
T. 7 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°56'11" N.,  
long. 116°10'56" W.; NAD 83***Typical Pedon***Ap—0 to 7 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR  
3/2) moist; moderate thin and medium platy structure parting to moderate fine  
subangular blocky; slightly hard, friable, moderately sticky and moderately plastic;  
many very fine and fine and few medium and coarse roots; many very fine and  
fine and few medium irregular pores; neutral (pH 6.7); clear smooth boundary.  
A—7 to 10 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR

3/2) moist; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; many very fine and fine and few medium tubular and irregular pores; neutral (pH 6.8); abrupt wavy boundary.

Bt1—10 to 18 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate fine and medium prismatic structure parting to strong fine and medium angular blocky; very hard, very firm, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine and few medium tubular pores; many distinct clay films on faces of peds and in pores; neutral (pH 6.8); abrupt wavy boundary.

Bt2—18 to 27 inches; brown (10YR 5/3) clay, brown (10YR 4/3) moist; strong fine and medium prismatic structure; very hard, very firm, very sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine and few medium tubular pores; many prominent clay films on faces of peds and in pores, few distinct stress surfaces; neutral (pH 6.8); clear smooth boundary.

Bt3—27 to 33 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; weak fine and medium prismatic structure parting to moderate fine and medium angular blocky; very hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine and fine tubular pores; common prominent clay films on faces of peds and in pores, few distinct stress surfaces; neutral (pH 6.9); abrupt wavy boundary.

Bt4—33 to 43 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; few very fine and fine tubular pores; common faint clay films on rock fragments and clay bridges between sand grains; neutral (pH 7.0); abrupt smooth boundary.

2C—43 to 60 inches; light yellowish brown (10YR 6/4) loamy sand, brown (10YR 5/3) moist; single grain; loose; neutral (pH 7.1).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to strongly contrasting textural stratification (2C horizon)—40 to 60 inches

Depth to bedrock—60 inches or more

Reaction—slightly acid or neutral

#### *A horizon:*

Chroma—2 or 3 dry or moist

#### *Upper part of Bt horizon:*

Chroma—2 or 3 dry or moist

Texture—clay loam or silty clay loam

Content of clay—27 to 35 percent

#### *Middle part of Bt horizon:*

Value—5 or 6 dry

Chroma—2 or 3 dry or moist

Texture—clay or clay loam

Content of clay—35 to 45 percent

Content of rock fragments—0 to 5 percent gravel

#### *Lower part of Bt horizon:*

Chroma—3 or 4 dry or moist

Texture—clay loam, loam, or sandy clay loam

Content of clay—22 to 35 percent

Content of rock fragments—0 to 10 percent gravel

*2C horizon:*

Value—6 or 7 dry and 5 or 6 moist

Chroma—3 or 4 dry or moist

Texture—loamy sand or sandy loam

Content of clay—5 to 20 percent

Content of rock fragments—0 to 35 percent total, with 0 to 35 percent gravel and 0 to 5 percent cobbles

**Jerusalem Series***Depth class:* Very deep*Drainage class:* Well drained*Permeability class:* Moderately slow*Landform:* Hillslopes*Parent material:* Colluvium derived from granodiorite*Slope range:* 25 to 65 percent*Elevation:* 2,600 to 4,000 feet*Mean annual precipitation:* 12 to 15 inches*Mean annual air temperature:* 50 to 52 degrees F*Frost-free period:* 140 to 155 days*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Aridic Argixerolls**Typical Pedon Location**

Boise County, Idaho; about 0.5 mile northeast of Gardena; sec. 2, T. 7 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°58'45" N., long. 116°11'14" W.; NAD 83

**Typical Pedon**

A—0 to 3 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; moderate thick platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine irregular pores; 5 percent fine gravel; neutral (pH 6.7); clear smooth boundary.

AB—3 to 12 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and moderately plastic; many very fine roots; many very fine tubular pores; 5 percent fine gravel; neutral (pH 6.8); clear wavy boundary.

Bt1—12 to 23 inches; yellowish brown (10YR 5/4) sandy clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular pores; common distinct clay films on faces of peds and in pores; 10 percent fine gravel; neutral (pH 6.9); gradual wavy boundary.

Bt2—23 to 38 inches; yellowish brown (10YR 5/4) sandy clay loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine roots; common very fine tubular pores; many distinct clay films on faces of peds and in pores; 10 percent fine gravel; neutral (pH 6.8); gradual wavy boundary.

Bt3—38 to 60 inches; yellowish brown (10YR 5/4) fine gravelly sandy loam, brown (10YR 4/3) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common distinct clay films on faces of peds and in pores; 20 percent fine gravel; neutral (pH 7.0).

**Range in Characteristics***Profile:*

Thickness of mollic epipedon—10 to 15 inches

Depth to bedrock—60 inches or more  
 Base saturation (some part between 10 and 30 inches)—50 to 75 percent  
 Reaction—slightly acid or neutral

*Particle-size control section:*

Content of clay—22 to 35 percent  
 Content of rock fragments—5 to 15 percent

*A and AB horizons:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—0 to 15 percent fine gravel

*Bt1 and Bt2 horizons:*

Value—5 or 6 dry and 3 or 4 moist  
 Chroma—3 or 4 dry or moist  
 Texture—sandy clay loam, clay loam, or loam  
 Content of clay—22 to 35 percent  
 Content of rock fragments—0 to 15 percent fine gravel

*Bt3 horizon:*

Value—5 to 7 dry and 3 to 5 moist  
 Chroma—3 or 4 dry or moist  
 Texture—sandy loam, sandy clay loam, or loam  
 Content of clay—18 to 27 percent  
 Content of rock fragments—10 to 35 percent fine gravel

## ***Josie Series***

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Mountain slopes

*Parent material:* Volcanic ash and colluvium derived from granodiorite

*Slope range:* 8 to 50 percent

*Elevation:* 6,010 to 7,090 feet

*Mean annual precipitation:* 28 to 32 inches

*Mean annual air temperature:* 37 to 39 degrees F

*Frost-free period:* 45 to 60 days

*Taxonomic class:* Coarse-loamy, isotic Vitrandic Dystrocryepts

### ***Typical Pedon Location***

Boise County, Idaho; about 9 miles northeast of Banks; sec. 11, T. 10 N., R. 3 E.;  
 Packer John Mountain Quadrangle; lat. 44°12'38" N., long. 116°04'08" W.;  
 NAD 83

### ***Typical Pedon***

A1—0 to 2 inches; brown (10YR 4/3) ashy sandy loam, dark brown (7.5YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 10 percent fine gravel; moderately acid (pH 5.9); clear smooth boundary.

A2—2 to 12 inches; brown (10YR 4/3) ashy sandy loam, dark brown (7.5YR 3/3) moist; weak fine subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium and few

coarse roots; many very fine, fine, and medium irregular pores; 10 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.

Bw1—12 to 33 inches; brown (10YR 5/3) ashy sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 10 percent fine gravel; moderately acid (pH 6.0); gradual smooth boundary.

Bw2—33 to 44 inches; light olive brown (2.5Y 5/4) ashy loamy sand, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 10 percent fine gravel; moderately acid (pH 5.8); gradual smooth boundary.

Bw3—44 to 60 inches; light yellowish brown (2.5Y 6/4) ashy loamy sand, olive brown (2.5Y 4/3) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 10 percent fine gravel; strongly acid (pH 5.3).

### ***Range in Characteristics***

#### *Profile:*

Thickness of umbric epipedon—10 to 20 inches

Depth to bedrock and volcanic ash influence thickness—60 inches or more

Base saturation—10 to 35 percent

Reaction—strongly acid or moderately acid

#### *Particle-size control section:*

Content of clay—4 to 10 percent

Content of rock fragments—5 to 35 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—5 to 35 percent total, with 5 to 25 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones

Content of volcanic glass—5 to 20 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *Bw1 and Bw2 horizons:*

Hue—7.5YR or 10YR

Value—4 to 6 dry and 2 to 4 moist

Chroma—3 or 4 dry or moist

Texture—ashy sandy loam, ashy loamy sand, or ashy coarse sandy loam

Content of clay—4 to 10 percent

Content of rock fragments—5 to 35 percent total, with 5 to 25 percent gravel, 0 to 10 percent cobbles, and 0 to 5 percent stones

Content of volcanic glass—5 to 20 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *Bw3 horizon:*

Hue—7.5YR, 10YR, or 2.5Y

Value—5 to 7 dry and 4 to 6 moist

Chroma—3 or 4 dry or moist

Texture—ashy loamy sand, ashy loamy coarse sand, or ashy coarse sand

Content of clay—0 to 5 percent

Content of rock fragments—5 to 35 percent total, with 5 to 30 percent gravel, 0 to 20 percent cobbles, and 0 to 5 percent stones

Content of volcanic glass—5 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.2 to 1.0 percent

### **Karney Series**

*Depth class:* Moderately deep

*Drainage class:* Well drained

*Permeability class:* Slow

*Landform:* Escarpments on buttes

*Parent material:* Colluvium derived from welded tuff and granodiorite

*Slope range:* 8 to 35 percent

*Elevation:* 3,880 to 4,300 feet

*Mean annual precipitation:* 16 to 18 inches

*Mean annual air temperature:* 47 to 48 degrees F

*Frost-free period:* 110 to 120 days

*Taxonomic class:* Fine, smectitic, mesic Vertic Argixerolls

#### **Typical Pedon Location**

Ada County, Idaho; about 5.5 miles north of Camel's Back Park in Boise City; sec. 3, T. 4 N., R. 2 E.; Boise North Quadrangle; lat. 43°42'54" N., long. 116°12'28" W.; NAD 83

#### **Typical Pedon**

- A—0 to 3 inches; grayish brown (10YR 5/2) loam, very dark gray (10YR 3/1) moist; strong thick platy structure; slightly hard, friable, moderately sticky and moderately plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent gravel and 5 percent cobbles; neutral (pH 6.8); abrupt smooth boundary.
- Bt1—3 to 6 inches; dark gray (10YR 4/1) clay loam, very dark gray (10YR 3/1) moist; strong thick platy structure parting to moderate medium subangular blocky; hard, friable, moderately sticky and moderately plastic; many very fine and fine and few medium and coarse roots; many very fine and fine tubular pores; common faint clay films on faces of peds and in pores; black (10YR 2/1) organic stains on faces of peds; continuous cracks 5 to 10 millimeters wide; 5 percent gravel and 5 percent cobbles; neutral (pH 6.9); clear wavy boundary.
- Bt2—6 to 12 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; moderate medium prismatic structure; extremely hard, firm, very sticky and very plastic; common very fine and fine and few medium and coarse roots; few very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; black (10YR 2/1) organic stains on faces of peds; continuous cracks 5 to 10 millimeters wide; 5 percent gravel; neutral (pH 7.1); clear wavy boundary.
- Bt3—12 to 20 inches; pale brown (10YR 6/3) clay, brown (10YR 5/3) moist; moderate medium prismatic structure parting to moderate medium and coarse subangular blocky; extremely hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores; many prominent clay films on faces of peds and in pores; 10 percent gravel; neutral (pH 7.2); gradual wavy boundary.
- Bt4—20 to 31 inches; pale brown (10YR 6/3) clay, brown (10YR 4/3) moist; strong medium and coarse subangular blocky structure; extremely hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine and fine tubular pores;

common prominent clay films on faces of peds and in pores; 10 percent gravel; neutral (pH 7.0); abrupt broken boundary.  
 2Cr—31 to 55 inches; moderately cemented very pale brown (10YR 7/3) granitic grus, brown (10YR 5/3) moist; few very fine and fine roots matted in fractures; abrupt smooth boundary.  
 2R—55 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 15 inches  
 Depth to bedrock (paralithic contact)—20 to 40 inches  
 Depth to bedrock (lithic contact)—40 to 60 inches

#### *Particle-size control section:*

Content of clay—35 to 55 percent  
 Content of fine sand or coarser—more than 20 percent  
 Content of rock fragments—0 to 15 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—1 or 2 dry or moist  
 Content of rock fragments—0 to 15 percent total, with 0 to 10 percent gravel and 0 to 5 percent cobbles

#### *Bt1 and Bt2 horizons:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—1 to 3 dry or moist  
 Texture—clay loam or clay  
 Content of clay—35 to 60 percent  
 Content of rock fragments—0 to 15 percent total, with 0 to 10 percent gravel and 0 to 5 percent cobbles  
 Width of cracks—5 to 15 millimeters

#### *Bt3 and Bt4 horizons:*

Hue—7.5Y or 10YR  
 Value—6 or 7 dry and 4 or 5 moist  
 Chroma—3 or 4 dry or moist  
 Texture—clay loam, clay, or sandy clay  
 Content of clay—35 to 50 percent  
 Content of rock fragments—0 to 15 percent total, with 0 to 10 percent gravel and 0 to 5 percent cobbles

## ***Kisky Series***

*Depth class:* Shallow

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls, mountain slopes, and hillslopes

*Parent material:* Colluvium derived from granodiorite and rhyolite

*Slope range:* 8 to 90 percent

*Elevation:* 2,640 to 6,530 feet

*Mean annual precipitation:* 13 to 26 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Sandy-skeletal, mixed, mesic Lithic Ultic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 1 mile east of Crouch; sec. 14, T. 9 N., R. 4 E.;  
Garden Valley Quadrangle; lat. 44°06'48" N., long. 115°56'28" W.; NAD 83

### ***Typical Pedon***

- A1—0 to 4 inches; grayish brown (10YR 5/2) fine gravelly loamy coarse sand, very dark grayish brown (10YR 3/2) moist; weak medium and coarse subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; many very fine and fine and few medium irregular pores; 30 percent fine gravel; slightly acid (pH 6.3); clear smooth boundary.
- A2—4 to 10 inches; brown (10YR 5/3) very gravelly loamy coarse sand, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; few very fine, fine, and medium tubular and irregular pores; 35 percent fine gravel; slightly acid (pH 6.4); clear wavy boundary.
- C—10 to 16 inches; pale brown (10YR 6/3) extremely gravelly loamy coarse sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; common very fine, fine, and medium roots; few very fine and fine irregular pores; 55 percent gravel and 5 percent cobbles; slightly acid (pH 6.5); abrupt wavy boundary.
- R—16 inches; fractured granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—7 to 10 inches  
Depth to bedrock (lithic contact)—10 to 20 inches  
Base saturation—50 to 75 percent  
Reaction—slightly acid or moderately acid

#### *Particle-size control section:*

Content of clay—2 to 8 percent  
Content of rock fragments—35 to 85 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
Chroma—2 or 3 dry or moist  
Texture—loamy coarse sand, loamy sand, or sandy loam  
Content of rock fragments—15 to 35 percent total, with 15 to 35 percent gravel and 0 to 15 percent cobbles

#### *C horizon:*

Hue—2.5Y or 10YR  
Value—5 or 6 dry and 4 or 5 moist  
Chroma—3 or 4 dry or moist  
Texture—loamy sand or loamy coarse sand  
Content of clay—2 to 8 percent  
Content of rock fragments—35 to 85 percent total, with 35 to 75 percent gravel and 5 to 50 percent cobbles

### ***Klicker Series***

*Depth class:* Moderately deep  
*Drainage class:* Well drained  
*Permeability class:* Moderately slow

*Landform:* Mountain slopes

*Parent material:* Volcanic ash and colluvium derived from basalt

*Slope range:* 15 to 65 percent

*Elevation:* 3,860 to 5,890 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 41 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Vitrandic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 4 miles southeast of Banks; sec. 11, T. 8 N., R. 3 E.;  
Banks Quadrangle; lat. 44°02'55" N., long. 116°03'43" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 8 inches; brown (10YR 5/3) ashy loam, dark brown (10YR 3/3) moist; moderate fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel; slightly acid (pH 6.1); clear smooth boundary.

ABt—8 to 12 inches; brown (7.5YR 5/3) gravelly ashy loam, dark brown (7.5YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium tubular pores; few faint clay films on faces of peds; 20 percent gravel; slightly acid (pH 6.1); clear wavy boundary.

Bt1—12 to 17 inches; brown (7.5YR 5/4) gravelly clay loam, dark brown (7.5YR 3/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and moderately plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium tubular pores; common faint clay films on faces of peds and in pores; 30 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

Bt2—17 to 26 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium and few coarse roots; many very fine, fine, and medium tubular pores; common distinct clay films on faces of peds and in pores; 45 percent gravel and 5 percent cobbles; moderately acid (pH 5.9); gradual wavy boundary.

R—26 inches; fractured basalt.

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Thickness of volcanic ash influence—10 to 20 inches

Depth to bedrock (lithic contact)—20 to 40 inches

Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—27 to 35 percent

Content of rock fragments—35 to 60 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—0 to 15 percent gravel  
 Content of volcanic glass—5 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 0.8 percent

*ABt horizon:*

Hue—7.5YR or 10YR  
 Chroma—2 or 3 dry or moist  
 Content of clay—12 to 18 percent  
 Content of rock fragments—10 to 25 percent gravel  
 Content of volcanic glass—5 to 15 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 0.8 percent

*Bt horizon:*

Hue—7.5YR or 10YR  
 Value—3 or 4 moist and 5 or 6 dry  
 Content of clay—27 to 35 percent  
 Content of rock fragments—35 to 60 percent total, with 25 to 60 percent gravel and 0 to 15 percent cobbles

## **Kosh Series**

*Depth class:* Shallow

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls, hillslopes, and mountain slopes and ridges

*Parent material:* Colluvium derived from granodiorite and rhyolite

*Slope range:* 8 to 90 percent

*Elevation:* 2,810 to 7,580 feet

*Mean annual precipitation:* 20 to 36 inches

*Mean annual air temperature:* 39 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Sandy-skeletal, mixed, frigid Lithic Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 7 miles east of Gardena; sec. 12, T. 7 N., R. 3 E.;  
 Harris Creek Summit Quadrangle; lat. 43°57'37" N., long. 116°02'40" W.;  
 NAD 83

### **Typical Pedon**

- A—0 to 10 inches; brown (10YR 4/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium and coarse granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 25 percent fine gravel; moderately acid (pH 5.8); clear wavy boundary.
- C—10 to 18 inches; brownish yellow (10YR 6/6) extremely gravelly loamy sand, dark yellowish brown (10YR 4/6) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 60 percent gravel and 5 percent cobbles; slightly acid (pH 6.1); gradual wavy boundary.
- R—18 inches; fractured granodiorite.

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—7 to 12 inches  
 Depth to bedrock (lithic contact)—10 to 20 inches  
 Base saturation—50 to 75 percent  
 Reaction—slightly acid or moderately acid

#### *Particle-size control section:*

Content of clay—2 to 8 percent  
 Content of rock fragments—35 to 85 percent

#### *A horizon:*

Value—3 to 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—15 to 35 percent fine gravel

#### *C horizon:*

Value—5 to 7 dry and 4 or 5 moist  
 Chroma—2 to 6 dry or moist  
 Content of clay—1 to 4 percent  
 Content of rock fragments—35 to 85 percent total, with 25 to 75 percent gravel and  
 0 to 50 percent cobbles

### **Lidos Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Slow

*Landform:* Hillslopes and mountain slopes

*Parent material:* Volcanic ash and colluvium derived from basalt over clayey alluvium

*Slope range:* 4 to 65 percent

*Elevation:* 3,850 to 5,900 feet

*Mean annual precipitation:* 26 to 32 inches

*Mean annual air temperature:* 41 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Fine-loamy, isotic, frigid Vitrandic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 4 miles southeast of Banks; sec. 11, T. 8 N., R. 3 E.;  
 lat. 44°02'33" N., long. 116°03'51" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 9 inches; dark grayish brown (10YR 4/2) ashy loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel; slightly acid (pH 6.2); clear wavy boundary.

Bt1—9 to 16 inches; brown (10YR 4/3) gravelly ashy silty clay loam, dark brown (10YR 3/3) moist; strong very fine subangular blocky structure; slightly hard, friable, very sticky and very plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; common distinct

- clay films on faces of peds and in pores; 15 percent gravel; slightly acid (pH 6.2); gradual wavy boundary.
- 2Bt2—16 to 22 inches; brown (10YR 5/3) gravelly silty clay loam, brown (10YR 4/3) moist; strong fine subangular blocky structure; hard, friable, very sticky and very plastic; common very fine, fine, and medium and few coarse roots; many very fine, fine, and medium tubular pores; common distinct clay films on faces of peds and in pores; 25 percent gravel; slightly acid (pH 6.1); gradual wavy boundary.
- 2Bt3—22 to 40 inches; yellowish brown (10YR 5/4) very gravelly silty clay loam, dark yellowish brown (10YR 4/4) moist; strong fine subangular blocky structure; hard, friable, very sticky and very plastic; common very fine, fine, and medium and few coarse roots; many very fine, fine, and medium tubular pores; many distinct clay films on faces of peds and in pores; 35 percent gravel and 5 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.
- 2Bt4—40 to 47 inches; light yellowish brown (10YR 6/4) very gravelly silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, friable, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine, fine, and medium tubular pores; common distinct clay films on faces of peds and in pores; 40 percent gravel and 5 percent cobbles; moderately acid (pH 5.9); clear wavy boundary.
- 3Eb—47 to 53 inches; very pale brown (10YR 7/4) gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and moderately plastic; few very fine, fine, medium, and coarse roots; common very fine, fine, and medium tubular pores; 20 percent gravel; moderately acid (pH 5.9); abrupt smooth boundary.
- 3Btb—53 to 60 inches; grayish brown (10YR 5/2) and very pale brown (10YR 7/3) silty clay, light yellowish brown (2.5Y 6/3) moist; moderate medium prismatic structure; very hard, firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; few very fine, fine, and medium tubular pores; many prominent clay films on faces of peds and in pores; moderately acid (pH 5.6).

### ***Range in Characteristics***

#### *Profile:*

- Thickness of mollic epipedon—10 to 20 inches  
 Thickness of volcanic ash influence—10 to 20 inches  
 Depth to bedrock—60 inches or more  
 Base saturation (10 to 30 inches)—50 to 75 percent

#### *Particle-size control section:*

- Content of clay—27 to 35 percent  
 Content of rock fragments—15 to 35 percent

#### *A horizon:*

- Value—3 to 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—12 to 20 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Content of volcanic glass—5 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent  
 Reaction—moderately acid or slightly acid

#### *Bt1 horizon:*

- Value—4 to 6 dry and 3 or 4 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—27 to 35 percent

Content of rock fragments—15 to 35 percent total, with 15 to 25 percent gravel and 0 to 10 percent cobbles

Content of volcanic glass—5 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

Reaction—moderately acid or slightly acid

*2Bt2 horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Content of clay—27 to 35 percent

Content of rock fragments—25 to 60 percent total, with 25 to 50 percent gravel and 0 to 10 percent cobbles

Reaction—moderately acid or slightly acid

*3Eb horizon:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Content of clay—10 to 18 percent

Content of rock fragments—15 to 35 percent gravel

*3Btb horizon:*

Hue—10YR or 2.5Y

Value—5 to 7 dry and 4 to 6 moist

Chroma—2 to 4 dry or moist

Content of clay—40 to 50 percent

Reaction—moderately acid or slightly acid

## ***Lithic Xerorthents***

*Depth class:* Shallow

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Structural benches

*Parent material:* Residuum derived from granodiorite

*Slope range:* 2 to 15 percent

*Elevation:* 3,690 to 5,200 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Lithic Xerorthents

### ***Representative Pedon Location***

Boise County, Idaho; about 0.5 mile southwest of Pioneerville; sec. 10, T. 7 N., R. 5 E.; Pioneerville Quadrangle; lat. 43°57'45" N., long. 115°51'32" W.; NAD 83

### ***Representative Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 3 inches; light brownish gray (10YR 6/2) extremely cobbly loamy coarse sand, dark grayish brown (10YR 4/2) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; common very fine, fine, and medium irregular pores; 30 percent gravel, 40 percent cobbles, and 5 percent stones; neutral (pH 6.9); clear wavy boundary.

C—3 to 11 inches; pale brown (10YR 6/3) extremely cobbly loamy coarse sand,

brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; few very fine, fine, and medium irregular pores; 30 percent gravel, 40 percent cobbles, and 5 percent stones; neutral (pH 6.6); abrupt wavy boundary.

R—11 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0 to 3 percent

Depth to bedrock (lithic contact)—5 to 20 inches

Reaction—moderately acid to neutral

#### *Particle-size control section:*

Content of clay—0 to 7 percent

Content of rock fragments—60 to 95 percent

#### *A horizon:*

Hue—10YR or 2.5Y

Value—5 or 6 dry and 3 or 4 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 85 percent total, with 15 to 60 percent gravel, 0 to 50 percent cobbles, and 0 to 20 percent stones

Average annual soil temperature—44 to 47 degrees F

#### *C horizon:*

Hue—10YR or 2.5Y

Value—5 to 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loamy sand, loamy coarse sand, or coarse sand

Content of clay—0 to 7 percent

Content of rock fragments—50 to 95 percent total, with 25 to 90 percent gravel, 0 to 50 percent cobbles, and 0 to 20 percent stones

## ***Longs Series***

*Depth class:* Deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Mountain slopes

*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff

*Slope range:* 15 to 65 percent

*Elevation:* 3,780 to 6,780 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Vitrandic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 6 miles northwest of Banks; sec. 11, T. 9 N., R. 2 E.;

High Valley Quadrangle; lat. 44°07'58" N., long. 116°11'41" W.; NAD 83

### ***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 9 inches; brown (10YR 4/3) ashy loam, dark brown (7.5YR 3/2) moist;

- moderate fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel; slightly acid (pH 6.2); gradual wavy boundary.
- AB—9 to 29 inches; yellowish brown (10YR 5/4) gravelly ashy loam, dark brown (7.5YR 3/3) moist; weak medium and coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, and medium irregular pores; 25 percent gravel and 5 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.
- 2Bt1—29 to 44 inches; brown (10YR 4/3) extremely gravelly loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and moderately plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular and tubular pores; few faint clay films on faces of peds; 50 percent gravel and 20 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.
- 2Bt2—44 to 49 inches; dark yellowish brown (10YR 4/4) extremely gravelly loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and moderately plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular and tubular pores; few faint clay films on faces of peds; 50 percent gravel and 20 percent cobbles; moderately acid (pH 6.0); gradual wavy boundary.
- 2R—49 inches; fractured basalt.

### ***Range in Characteristics***

#### *Profile:*

- Thickness of mollic epipedon—20 to 45 inches  
 Thickness of volcanic ash influence—20 to 35 inches  
 Depth to bedrock (lithic contact)—40 to 60 inches  
 Base saturation (10 to 30 inches)—50 to 75 percent  
 Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

- Content of clay—18 to 27 percent  
 Content of rock fragments—35 to 75 percent

#### *A horizon:*

- Hue—10YR, 7.5YR, or 2.5Y  
 Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—12 to 20 percent  
 Content of rock fragments—0 to 15 percent gravel  
 Content of volcanic glass—5 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

#### *AB horizon:*

- Hue—10YR, 7.5YR, or 2.5Y  
 Value—4 or 5 dry and 2 or 3 moist  
 Chroma—3 or 4 dry and 2 or 3 moist  
 Content of clay—16 to 25 percent  
 Content of rock fragments—10 to 35 percent total, with 0 to 5 percent cobbles and 10 to 30 percent gravel  
 Content of volcanic glass—5 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

*2Bt horizon:*

Hue—10YR, 7.5YR, or 2.5Y

Value—4 or 5 dry and 2 or 3 moist

Chroma—3 or 4 dry or moist

Content of clay—18 to 27 percent

Content of rock fragments—35 to 75 percent total, with 5 to 25 percent cobbles and 30 to 50 percent gravel

**McDaniel Series***Depth class:* Very deep*Drainage class:* Well drained*Permeability class:* Moderately slow*Landform:* Volcanic cones*Parent material:* Volcanic ash and colluvium derived from basalt and welded tuff*Slope range:* 35 to 65 percent*Elevation:* 3,650 to 4,850 feet*Mean annual precipitation:* 15 to 18 inches*Mean annual air temperature:* 47 to 49 degrees F*Frost-free period:* 110 to 130 days*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Vitrandic Argixerolls**Typical Pedon Location**Boise County, Idaho; about 7 miles southwest of Banks; sec. 9, T. 8 N., R. 2 E.;  
Dry Buck Valley Quadrangle; lat. 44°02'59" N., long. 116°13'49" W.; NAD 83**Typical Pedon**

- A1—0 to 4 inches; dark grayish brown (10YR 4/2) very gravelly ashy loam, very dark brown (10YR 2/2) moist; weak medium platy structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 45 percent gravel; neutral (pH 7.1); clear wavy boundary.
- A2—4 to 14 inches; dark grayish brown (10YR 4/2) very gravelly ashy loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine, fine, and medium tubular and irregular pores; 45 percent gravel; neutral (pH 7.1); gradual smooth boundary.
- 2BA1—14 to 23 inches; grayish brown (10YR 5/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine, fine, and medium tubular and irregular pores; few faint clay films on faces of peds; 45 percent gravel; neutral (pH 7.1); gradual wavy boundary.
- 2BA2—23 to 34 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and moderately plastic; common very fine, fine, and medium roots; many very fine, fine, and medium tubular pores; common faint clay films on faces of peds; 45 percent gravel; neutral (pH 7.0); clear wavy boundary.
- 2Bt—34 to 60 inches; light yellowish brown (10YR 6/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; many very fine, fine, and medium tubular pores;

many faint clay films on faces of peds and in pores; 40 percent gravel; neutral (pH 6.9).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches  
 Thickness of volcanic ash influence—10 to 20 inches  
 Depth to bedrock—60 inches or more

#### *Particle-size control section:*

Content of clay—27 to 35 percent  
 Content of rock fragments—35 to 60 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—35 to 60 percent total, with 35 to 50 percent gravel and 0 to 10 percent cobbles  
 Content of volcanic glass—5 to 25 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *2BA<sub>t</sub> horizon:*

Hue—7.5YR or 10YR  
 Chroma—2 or 3 dry or moist  
 Content of clay—20 to 27 percent  
 Content of rock fragments—35 to 60 percent total, with 30 to 50 percent gravel and 0 to 10 percent cobbles

#### *2B<sub>t</sub> horizon:*

Hue—7.5YR or 10YR  
 Value—5 or 6 dry and 3 or 4 moist  
 Content of clay—27 to 35 percent  
 Content of rock fragments—35 to 60 percent total, with 30 to 50 percent gravel and 0 to 10 percent cobbles

## ***McDesh Series***

*Depth class:* Moderately deep

*Drainage class:* Well drained

*Permeability class:* Slow

*Landform:* Hillslopes, structural benches, and escarpments on buttes

*Parent material:* Colluvium derived from basalt

*Slope range:* 4 to 65 percent

*Elevation:* 2,590 to 5,750 feet

*Mean annual precipitation:* 13 to 20 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Fine, smectitic, mesic Vertic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 6 miles west of Banks; sec. 29, T. 9 N., R. 2 E.;  
 Dry Buck Valley Quadrangle; lat. 44°05'39" N., long. 116°15'01" W.; NAD 83

### ***Typical Pedon***

- A—0 to 3 inches; brown (10YR 4/3) loam, dark brown (10YR 3/3) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; neutral (pH 6.6); clear wavy boundary.
- Bt1—3 to 11 inches; brown (10YR 4/3) clay loam, dark brown (10YR 3/3) moist; moderate very coarse prismatic structure parting to moderate coarse subangular blocky; hard, friable, moderately sticky and moderately plastic; common very fine and fine roots; many very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; cracks less than 5 millimeters wide; neutral (pH 6.8); gradual wavy boundary.
- Bt2—11 to 21 inches; dark yellowish brown (10YR 4/4) clay, dark brown (7.5YR 3/3) moist; moderate fine and medium prismatic structure parting to moderate medium subangular blocky; very hard, firm, very sticky and very plastic; few very fine roots; common very fine and fine tubular pores; many prominent clay films on faces of peds and in pores; 2 percent gravel; cracks less than 5 millimeters wide; neutral (pH 7.0); clear wavy boundary.
- Bt3—21 to 24 inches; yellowish brown (10YR 5/4) clay, brown (7.5YR 4/3) moist; weak medium prismatic structure parting to weak medium subangular blocky; very hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; many prominent clay films on faces of peds and in pores; 2 percent paragravel; neutral (pH 7.2); clear smooth boundary.
- R—24 inches; fractured welded tuff.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones and boulders—0 to 15 percent  
 Thickness of mollic epipedon—10 to 40 inches  
 Depth to bedrock (lithic contact)—20 to 40 inches

#### *Particle-size control section:*

Content of clay—35 to 50 percent  
 Content of rock fragments—0 to 25 percent

#### *A horizon:*

Hue—10YR or 7.5YR  
 Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—0 to 60 percent total, with 0 to 15 percent gravel, 0 to 20 percent cobbles, and 0 to 25 percent stones and boulders

#### *Bt1 horizon:*

Hue—10YR or 7.5YR  
 Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Texture—clay loam or silty clay loam  
 Content of clay—27 to 35 percent  
 Content of rock fragments—0 to 15 percent total, with 0 to 15 percent gravel and 0 to 5 percent cobbles  
 Width of cracks—1 to 5 millimeters

#### *Bt2 and Bt3 horizons:*

Hue—10YR or 7.5YR  
 Value—4 or 5 dry and 3 or 4 moist  
 Chroma—2 to 4 dry or moist  
 Texture—clay or silty clay

Content of clay—40 to 60 percent  
 Content of rock fragments—0 to 35 percent total, with 0 to 30 percent gravel and  
 0 to 5 percent cobbles  
 Content of pararock fragments—0 to 15 percent  
 Width of cracks—0 to 5 millimeters  
 Reaction—neutral or slightly alkaline

### ***Meclo Series***

*Depth class:* Moderately deep  
*Drainage class:* Well drained  
*Permeability class:* Slow  
*Landform:* Hillslopes and fan remnants  
*Parent material:* Silty lacustrine deposits  
*Slope range:* 4 to 50 percent  
*Elevation:* 3,350 to 3,800 feet  
*Mean annual precipitation:* 14 to 16 inches  
*Mean annual air temperature:* 49 to 51 degrees F  
*Frost-free period:* 130 to 150 days  
*Taxonomic class:* Fine, smectitic, mesic Calcic Argixerolls

#### ***Typical Pedon Location***

Boise County, Idaho; about 8 miles southwest of Horseshoe Bend; sec. 31, T. 6 N.,  
 R. 2 E.; Pearl Quadrangle; lat. 43°48'26" N., long. 116°16'15" W.; NAD 83

#### ***Typical Pedon***

A—0 to 4 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; slightly acid (pH 6.2); clear smooth boundary.  
 AB—4 to 8 inches; brown (10YR 5/3) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure parting to strong medium granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; about 20 percent of faces of peds covered with bleached silt grains; slightly acid (pH 6.5); abrupt wavy boundary.  
 Bt1—8 to 13 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; about 15 percent of faces of peds covered with bleached silt grains; neutral (pH 7.0); clear wavy boundary.  
 Bt2—13 to 22 inches; pale brown (10YR 6/3) silty clay loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; hard, friable, moderately sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; 2 percent gravel; neutral (pH 7.0); gradual wavy boundary.  
 Btk—22 to 31 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; slightly effervescent (about 5 percent calcium carbonates); few coatings of

carbonates on faces of peds and rock fragments; 5 percent gravel; slightly alkaline (pH 7.4); abrupt smooth boundary.  
 Crkq—31 to 41 inches; moderately cemented, stratified silty and loamy lacustrine deposits; very few discontinuous very thin coatings of carbonates and silica on horizontal planes and vertical seams; matted roots at top of horizon.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—7 to 14 inches  
 Depth to secondary calcium carbonates—15 to 30 inches  
 Depth to bedrock (paralithic contact)—20 to 40 inches

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—20 to 27 percent  
 Reaction—slightly acid or neutral

#### *Bt horizon:*

Value—5 or 6 dry and 3 or 4 moist  
 Chroma—2 to 4 dry or moist  
 Texture—silty clay loam, silty clay, or clay  
 Content of clay—35 to 45 percent  
 Content of rock fragments—0 to 5 percent gravel  
 Content of pararock fragments—0 to 25 percent  
 Reaction—neutral or slightly alkaline

#### *Btk horizon:*

Value—5 or 6 dry and 3 or 4 moist  
 Chroma—2 to 4 dry or moist  
 Texture—silty clay loam or clay loam  
 Content of clay—27 to 35 percent  
 Content of rock fragments—5 to 10 percent gravel  
 Content of pararock fragments—0 to 35 percent  
 Calcium carbonate equivalent—1 to 5 percent  
 Reaction—neutral or slightly alkaline

## ***Middlefork Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Fan remnants and terraces

*Parent material:* Loamy lacustrine deposits

*Slope range:* 3 to 50 percent

*Elevation:* 3,050 to 5,270 feet

*Mean annual precipitation:* 20 to 30 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Ultic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 3 miles north of Crouch; sec. 27, T. 10 N., R. 4 E.;  
 Pyle Creek Quadrangle; lat. 44°10'03" N., long. 115°58'37" W.; NAD 83

### ***Typical Pedon***

- Oi—0 to 1 inch; slightly decomposed forest litter.
- A1—1 to 4 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.
- A2—4 to 12 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 5 percent fine gravel; slightly acid (pH 6.3); clear smooth boundary.
- BA—12 to 15 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent fine gravel; moderately acid (pH 6.0); clear wavy boundary.
- Bt1—15 to 32 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; few distinct clay films in pores; 5 percent fine gravel; moderately acid (pH 5.9); gradual wavy boundary.
- Bt2—32 to 47 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; strong medium and coarse subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; light yellowish brown (10YR 6/4) continuous lamellae 4 to 10 millimeters thick and 2 to 4 inches apart; 5 percent fine gravel; moderately acid (pH 5.7); gradual wavy boundary.
- Bt3—47 to 60 inches; light gray (10YR 7/2) sandy clay loam, grayish brown (10YR 5/2) moist; moderate medium and coarse subangular blocky structure; very hard, firm, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine irregular pores; few distinct clay films on faces of peds and in pores; light yellowish brown (10YR 6/4) discontinuous lamellae 4 to 10 millimeters thick and 6 to 12 inches apart with varying orientation; 10 percent gravel; moderately acid (pH 5.8).

### ***Range in Characteristics***

#### *Profile:*

- Thickness of mollic epipedon—10 to 20 inches  
 Depth to base of argillic horizon—40 to 60 inches or more  
 Depth to bedrock—60 inches or more  
 Base saturation (some part between 10 and 30 inches)—50 to 75 percent

#### *Particle-size control section:*

- Content of clay—20 to 32 percent  
 Content of fine sand or coarser—more than 30 percent  
 Content of rock fragments—0 to 15 percent

#### *A horizon:*

- Hue—7.5YR or 10YR  
 Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—0 to 10 percent gravel  
 Reaction—moderately acid or slightly acid

*Bt horizon:*

Hue—7.5YR or 10YR

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loam, sandy clay loam, or clay loam

Content of clay—20 to 32 percent

Characteristics of lamellae—2 to 10 millimeters thick and 2 to 15 inches apart

Content of rock fragments—0 to 20 percent gravel

**Montchief Series***Depth class:* Moderately deep*Drainage class:* Excessively drained*Permeability class:* Rapid*Landform:* Canyon walls and mountain slopes*Parent material:* Volcanic ash and colluvium derived from granodiorite*Slope range:* 35 to 90 percent*Elevation:* 4,690 to 7,360 feet*Mean annual precipitation:* 28 to 36 inches*Mean annual air temperature:* 36 to 39 degrees F*Frost-free period:* 30 to 60 days*Taxonomic class:* Sandy-skeletal, isotic Vitrandic Dystrocryepts**Typical Pedon Location**

Boise County, Idaho; about 8 miles northeast of Horseshoe Bend; sec. 7, T. 7 N.,  
R. 4 E.; Harris Creek Summit Quadrangle; lat. 43°57'32" N., long. 116°01'48" W.;  
NAD 83

**Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 11 inches; brown (10YR 4/3) ashy sandy loam, dark brown (10YR 3/3)  
moist; weak medium and coarse subangular blocky structure; soft, very  
friable, nonsticky and slightly plastic; many very fine and fine, common medium  
and coarse, and few very coarse roots; many very fine, fine, and medium  
irregular pores; 10 percent fine gravel; slightly acid (pH 6.3); clear wavy  
boundary.

A2—11 to 16 inches; brown (10YR 5/3) very gravelly ashy sandy loam, brown (10YR  
4/3) moist; weak fine and medium subangular blocky structure; soft, very friable,  
nonsticky and slightly plastic; many very fine, fine, medium, and coarse roots;  
many very fine, fine, medium, and coarse irregular pores; 40 percent gravel and  
10 percent cobbles; slightly acid (pH 6.1); clear wavy boundary.

AC1—16 to 25 inches; brown (10YR 5/3) extremely cobbly ashy loamy sand, dark  
yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic;  
many very fine and fine and common medium roots; many very fine and fine  
irregular pores; 45 percent gravel and 25 percent cobbles; slightly acid (pH 6.3);  
clear wavy boundary.

AC2—25 to 33 inches; brownish yellow (10YR 6/6) extremely cobbly ashy loamy  
sand, yellowish brown (10YR 5/6) moist; single grain; loose, nonsticky and  
nonplastic; common very fine and fine and few medium roots; many very fine,  
fine, and medium and few coarse irregular pores; 40 percent gravel and 40  
percent cobbles; neutral (pH 6.6); clear wavy boundary.

R—33 inches; fractured granodiorite.

### ***Range in Characteristics***

*Profile:*

Thickness of umbric epipedon—10 to 20 inches

Depth to bedrock (lithic contact) and volcanic ash influence thickness—20 to 40 inches

Reaction—slightly acid or neutral

*Particle-size control section:*

Content of clay—1 to 6 percent

Content of rock fragments—35 to 85 percent

*A horizon:*

Value—3 or 4 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of clay—4 to 10 percent

Content of rock fragments—5 to 35 percent fine gravel

Content of volcanic glass—5 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

*AC horizon:*

Value—5 to 7 dry and 4 to 6 moist

Chroma—4 to 6 dry or moist

Texture—ashy loamy sand or ashy loamy coarse sand

Content of clay—1 to 4 percent

Content of rock fragments—35 to 85 percent total, with 25 to 50 percent gravel, 0 to 40 percent cobbles, and 0 to 25 percent stones

Content of volcanic glass—2 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.2 to 1.0 percent

### ***Northfork Series***

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls and mountain slopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 15 to 90 percent

*Elevation:* 2,750 to 6,880 feet

*Mean annual precipitation:* 24 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, frigid Pachic Ultic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 6 miles east of Horseshoe Bend; sec. 22, T. 7 N., R. 3 E.; Harris Creek Summit Quadrangle; lat. 43°55'54" N., long. 116°05'19" W.; NAD 83

### ***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 4 inches; very dark grayish brown (10YR 3/2) fine gravelly sandy loam, very

dark brown (10YR 2/2) moist; weak medium platy structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine, common medium and coarse, and few very coarse roots; many very fine and fine irregular pores; 20 percent fine gravel; slightly acid (pH 6.4); clear smooth boundary.

A2—4 to 14 inches; very dark grayish brown (10YR 3/2) fine gravelly sandy loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine, common medium and coarse, and few very coarse roots; many very fine and fine irregular pores; 25 percent fine gravel; slightly acid (pH 6.5); gradual wavy boundary.

Bw1—14 to 44 inches; dark grayish brown (10YR 4/2) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium, coarse, and very coarse roots; many very fine and fine irregular pores; 30 percent fine gravel; slightly acid (pH 6.3); clear wavy boundary.

Bw2—44 to 56 inches; brown (10YR 4/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and slightly plastic; common very fine and fine and few medium roots; many very fine and fine irregular pores; 30 percent fine gravel; slightly acid (pH 6.2); clear wavy boundary.

Bw3—56 to 66 inches; dark yellowish brown (10YR 4/4) very gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and slightly plastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; 30 percent fine gravel and 5 percent cobbles; slightly acid (pH 6.1).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 50 inches

Depth to bedrock—60 inches or more

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

#### *Particle-size control section:*

Content of clay—8 to 15 percent

Content of rock fragments—5 to 35 percent

#### *A horizon:*

Value—3 to 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of rock fragments—10 to 35 percent gravel, dominantly fine gravel

Reaction—slightly acid or neutral

#### *Bw1 horizon:*

Value—4 or 5 dry and 3 or 4 moist

Chroma—2 or 3 dry or moist

Texture—sandy loam or coarse sandy loam

Content of clay—8 to 15 percent

Content of rock fragments—5 to 35 percent total, with 0 to 10 percent cobbles and 5 to 35 percent gravel

Reaction—moderately acid or slightly acid

#### *Bw2 and Bw3 horizons:*

Hue—10YR or 2.5Y

Value—4 to 7 dry and 3 to 5 moist

Chroma—3 or 4 dry or moist

Texture—sandy loam, coarse sandy loam, or loamy coarse sand

Content of clay—5 to 15 percent

Content of rock fragments—15 to 60 percent total, with 0 to 10 percent cobbles and 15 to 55 percent gravel

Reaction—moderately acid or slightly acid

## ***Olaton Series***

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls and hillslopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 25 to 90 percent

*Elevation:* 2,640 to 6,420 feet

*Mean annual precipitation:* 13 to 22 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Pachic Ultic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 4 miles northeast of Boise; sec. 36, T. 5 N., R. 2 E.;  
Boise North Quadrangle; lat. 43°43'36" N., long. 116°09'28" W.; NAD 83

### ***Typical Pedon***

A—0 to 5 inches; very dark grayish brown (10YR 3/2) fine gravelly coarse sandy loam, black (10YR 2/1) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 15 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.

AB—5 to 22 inches; very dark grayish brown (10YR 3/2) fine gravelly coarse sandy loam, black (10YR 2/1) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine tubular and irregular pores; 15 percent fine gravel; moderately acid (pH 5.9); abrupt wavy boundary.

Bw1—22 to 38 inches; brown (10YR 5/3) fine gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine tubular and irregular pores; 15 percent fine gravel and 5 percent stones; moderately acid (pH 5.9); abrupt wavy boundary.

Bw2—38 to 55 inches; brown (10YR 5/3) fine gravelly loamy coarse sand, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine and fine tubular and irregular pores; 30 percent fine gravel; moderately acid (pH 5.9); abrupt wavy boundary.

C—55 to 65 inches; pale brown (10YR 6/3) very gravelly loamy coarse sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; common very fine irregular pores; 35 percent fine gravel and 10 percent cobbles; moderately acid (pH 6.0).

### ***Range in Characteristics***

*Profile:*

Thickness of mollic epipedon—20 to 55 inches

Depth to bedrock—60 inches or more  
 Base saturation (some part between 10 and 30 inches)—50 to 75 percent  
 Reaction—moderately acid or slightly acid

*Particle-size control section:*

Content of clay—5 to 10 percent  
 Content of rock fragments—5 to 35 percent

*A and AB horizons:*

Value—3 or 4 dry  
 Chroma—1 or 2 dry or moist  
 Content of rock fragments—5 to 35 percent gravel

*Bw horizon:*

Value—4 or 5 dry and 3 or 4 moist  
 Chroma—2 or 3 dry or moist  
 Texture—sandy loam or coarse sandy loam  
 Content of clay—5 to 15 percent  
 Content of rock fragments—5 to 35 percent total, with 5 to 35 percent gravel,  
 0 to 5 percent cobbles, and 0 to 5 percent stones

*C horizon:*

Value—5 or 6 dry and 4 or 5 moist  
 Chroma—2 or 3 dry or moist  
 Texture—sandy loam, coarse sandy loam, or loamy coarse sand  
 Content of clay—4 to 15 percent  
 Content of rock fragments—15 to 60 percent total, with 15 to 45 percent gravel,  
 0 to 15 percent cobbles, and 0 to 5 percent stones

## ***Oxyaquic Xerofluvents***

*Depth class:* Very deep  
*Drainage class:* Somewhat poorly drained  
*Permeability class:* Rapid  
*Landform:* Flood-plain steps and islands  
*Parent material:* Sandy and gravelly alluvium  
*Slope range:* 0 to 2 percent  
*Elevation:* 2,520 to 3,630 feet  
*Mean annual precipitation:* 13 to 16 inches  
*Mean annual air temperature:* 49 to 51 degrees F  
*Frost-free period:* 130 to 150 days  
*Taxonomic class:* Oxyaquic Xerofluvents

### ***Representative Pedon Location***

Boise County, Idaho; about 2 miles west of Horseshoe Bend; sec. 32, T. 7 N.,  
 R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°54'15" N., long. 116°14'54" W.;  
 NAD 83

### ***Representative Pedon***

Ap—0 to 5 inches; brown (10YR 5/3) loamy sand, dark brown (10YR 3/3) moist; weak  
 medium platy structure parting to weak fine and medium subangular blocky; soft,  
 very friable, nonsticky and nonplastic; many very fine and fine and few medium  
 and coarse roots; common very fine and fine irregular pores; 5 percent gravel;  
 slightly acid (pH 6.3); clear wavy boundary.

- C1—5 to 11 inches; very pale brown (10YR 8/2) loamy sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium roots; common very fine and fine irregular pores; 5 percent gravel; neutral (pH 7.1); clear smooth boundary.
- C2—11 to 18 inches; very pale brown (10YR 8/2) loamy sand, pale brown (10YR 6/3) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; common very fine and fine irregular pores; 5 percent gravel; neutral (pH 6.9); abrupt smooth boundary.
- 2C3—18 to 39 inches; very pale brown (10YR 7/3) extremely gravelly coarse sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine and fine and few medium irregular pores; 65 percent gravel; discontinuous band of dark grayish brown (10YR 4/2) loamy very fine sand 2 to 10 millimeters thick at a depth of 23 inches; slightly alkaline (pH 7.6); abrupt wavy boundary.
- 2C4—39 to 60 inches; very pale brown (10YR 7/3 to 8/2), stratified fine gravelly loamy sand to extremely gravelly coarse sand, brown (10YR 5/3 to 6/3) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium irregular pores; 20 to 65 percent gravel; many fine and medium distinct yellowish brown iron and manganese masses in matrix in lower part; slightly alkaline (pH 7.4 to 7.8).

### ***Range in Characteristics***

#### *Profile:*

Depth to sandy-skeletal material (2C horizon)—10 to 40 inches

Depth to redoximorphic features—20 to 40 inches

Depth to bedrock—60 inches or more

Frequency of flooding—occasional

Reaction—slightly acid to moderately alkaline

#### *Particle-size control section:*

Content of clay—0 to 10 percent

Content of rock fragments—0 to 50 percent

#### *Ap horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—0 to 15 percent total, with 0 to 15 percent gravel and 0 to 5 percent cobbles

#### *C horizon:*

Value—6 to 8 dry and 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture—loamy sand or loamy coarse sand

Content of clay—2 to 10 percent

Content of rock fragments—0 to 15 percent total, with 0 to 15 percent gravel and 0 to 5 percent cobbles

#### *2C horizon:*

Value—6 to 8 dry and 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture (stratified)—loamy sand to coarse sand

Content of clay—0 to 10 percent

Content of rock fragments—20 to 70 percent total, with 20 to 70 percent gravel and 0 to 5 percent cobbles

## ***Oxyaquic Xerorthents***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Permeability class:* Rapid

*Landform:* Drainageways

*Parent material:* Sandy and gravelly alluvium

*Slope range:* 0 to 3 percent

*Elevation:* 3,620 to 5,170 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Oxyaquic Xerorthents

### ***Representative Pedon Location***

Boise County, Idaho; about 0.5 mile north of Pioneerville; sec. 3, T. 7 N., R. 5 E.;  
Pioneerville Quadrangle; lat. 43°58'21" N., long. 115°50'42" W.; NAD 83

### ***Representative Pedon***

Oi—0 to 1 inch; decomposed forest litter.

A—1 to 11 inches; light brownish gray (10YR 6/2) extremely cobbly loamy coarse sand, dark grayish brown (10YR 4/2) moist; weak fine and medium subangular blocky structure parting to moderate fine and medium granular; slightly hard, very friable, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots; common very fine, fine, and medium irregular pores; 40 percent gravel, 30 percent cobbles, and 5 percent stones; neutral (pH 6.6); abrupt wavy boundary.

C1—11 to 22 inches; pale brown (10YR 6/3) extremely cobbly loamy sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; 10 percent voids; 50 percent gravel, 30 percent cobbles, and 5 percent stones; slightly acid (pH 6.1); clear smooth boundary.

C2—22 to 60 inches; rock fragments consisting of 50 percent gravel, 35 percent cobbles, and 10 percent stones; moderately acid (pH 6.0).

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0.1 to 3.0 percent

Depth to bedrock—60 inches or more

Frequency of flooding—rare

Reaction—moderately acid to neutral

#### *Particle-size control section:*

Content of clay—0 to 7 percent

Content of rock fragments—60 to 100 percent

#### *A horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—60 to 85 percent total, with 25 to 65 percent gravel, 5 to 40 percent cobbles, and 0 to 10 percent stones

#### *C horizon:*

Hue—10YR or 2.5Y

Value—6 to 8 dry and 4 to 6 moist

Chroma—1 to 3 dry or moist

Texture—loamy sand, loamy fine sand, coarse sand, or sand  
 Content of clay—0 to 7 percent  
 Content of rock fragments—60 to 100 percent total, with 25 to 70 percent gravel,  
 10 to 50 percent cobbles, and 0 to 15 percent stones  
 Percentage of voids—5 to 25 percent

### ***Pachic Argixerolls***

*Depth class:* Deep and very deep  
*Drainage class:* Well drained  
*Permeability class:* Moderately slow  
*Landform:* Canyon walls  
*Parent material:* Colluvium derived from basalt  
*Slope range:* 35 to 65 percent  
*Elevation:* 3,050 to 3,740 feet  
*Mean annual precipitation:* 14 to 24 inches  
*Mean annual air temperature:* 44 to 50 degrees F  
*Frost-free period:* 75 to 140 days  
*Taxonomic class:* Pachic Argixerolls

#### ***Representative Pedon Location***

Boise County, Idaho; about 10 miles southwest of Idaho City; sec. 2, T. 4 N.,  
 R. 4 E.; Dunnigan Creek Quadrangle; lat. 43°42'35" N., long. 115°56'54" W.;  
 NAD 83

#### ***Representative Pedon***

- Oi—0 to 1 inch; slightly decomposed forest litter.
- A—1 to 11 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine, common medium, and few coarse roots; many very fine and fine and few medium irregular pores; 10 percent gravel and 5 percent cobbles; neutral (pH 6.9); clear smooth boundary.
- AB—11 to 18 inches; brown (7.5YR 5/2) gravelly loam, dark brown (7.5YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine irregular and tubular pores; 5 percent gravel and 5 percent cobbles; neutral (pH 7.0); clear smooth boundary.
- Bt1—18 to 24 inches; brown (7.5YR 5/3) gravelly clay loam, dark brown (7.5YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, very sticky and very plastic; common very fine, fine, and medium roots; common very fine and fine tubular pores; many faint clay films on faces of peds and in pores; 15 percent gravel and 5 percent cobbles; neutral (pH 6.8); clear smooth boundary.
- Bt2—24 to 30 inches; light brown (7.5YR 6/3) gravelly clay loam, brown (7.5YR 4/3) moist; moderate fine and medium angular blocky structure; hard, firm, very sticky and very plastic; common very fine and fine roots; few very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; 20 percent gravel and 5 percent cobbles; neutral (pH 6.6); clear smooth boundary.
- Bt3—30 to 48 inches; brown (7.5YR 5/4) very cobbly clay loam, dark brown (7.5YR 3/4) moist; moderate fine and medium angular blocky structure; hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine and few medium tubular pores; common distinct clay films on faces of peds, in

pores, and bridging sand grains; 25 percent gravel, 20 percent cobbles, and 10 percent stones; neutral (pH 6.6); clear smooth boundary.

Bt4—48 to 60 inches; brown (7.5YR 5/4) extremely stony clay loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine and few medium tubular pores; common faint clay films on faces of peds, in pores, and bridging sand grains; 25 percent gravel, 20 percent cobbles, and 20 percent stones; slightly acid (pH 6.5).

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0.1 to 3.0 percent

Thickness of mollic epipedon—20 to 50 inches

Depth to bedrock (lithic contact)—40 to 80 inches

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—15 to 40 percent

Content of rock fragments—15 to 75 percent

#### *A and AB horizons:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 5 to 25 percent gravel, 5 to 20 percent cobbles, and 0 to 10 percent stones

#### *Bt horizon:*

Hue—7.5YR or 10YR

Value—4 to 6 dry and 2 to 4 moist

Chroma—3 or 4 dry or moist

Texture—clay loam or loam

Content of clay—12 to 40 percent

Content of rock fragments—15 to 75 percent total, with 10 to 50 percent gravel, 5 to 50 percent cobbles, and 0 to 20 percent stones

## ***Packerjohn Series***

*Depth class:* Very deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Mountain slopes and ridges

*Parent material:* Volcanic ash and colluvium derived from granodiorite

*Slope range:* 4 to 90 percent

*Elevation:* 3,200 to 7,010 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 39 to 44 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Sandy, isotic, frigid Vitrandic Dystroxerepts

### ***Typical Pedon Location***

Boise County, Idaho; about 3 miles northwest of Crouch; sec. 5, T. 9 N., R. 4 E.;  
Packer John Mountain Quadrangle; lat. 44°08'28" N., long. 116°00'34" W.;  
NAD 83

### ***Typical Pedon***

- Oi—0 to 2 inches; slightly decomposed forest litter.
- A1—2 to 10 inches; brown (10YR 4/3) ashy coarse sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, medium, and coarse irregular pores; 10 percent fine gravel; neutral (pH 6.7); clear wavy boundary.
- A2—10 to 19 inches; brown (10YR 5/3) fine gravelly ashy coarse sandy loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine, fine, medium, and coarse irregular pores; 20 percent fine gravel; neutral (pH 6.7); clear wavy boundary.
- Bw—19 to 33 inches; pale brown (10YR 6/3) fine gravelly ashy loamy coarse sand, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine, fine, medium, and coarse irregular pores; 20 percent fine gravel; slightly acid (pH 6.2); gradual smooth boundary.
- 2C1—33 to 44 inches; light yellowish brown (10YR 6/4) fine gravelly loamy coarse sand, yellowish brown (10YR 5/4) moist; single grain; loose, nonsticky and nonplastic; common very fine, fine, medium, and coarse roots; many very fine, fine, medium, and coarse irregular pores; 25 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.
- 2C2—44 to 60 inches; light yellowish brown (10YR 6/4) very gravelly loamy coarse sand, yellowish brown (10YR 5/4) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, medium, and coarse roots; common very fine, fine, medium, and coarse irregular pores; 35 percent fine gravel; few distinct dark grayish brown (10YR 4/2) discontinuous lamellae 2 to 5 millimeters wide; moderately acid (pH 6.0); clear smooth boundary.
- 2C3—60 to 66 inches; pale yellow (2.5Y 7/3) very gravelly coarse sand, light yellowish brown (2.5Y 6/4) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; common very fine, fine, and medium irregular pores; 50 percent gravel; few distinct dark yellowish brown (10YR 4/4) discontinuous lamellae 2 to 10 millimeters wide; moderately acid (pH 5.9).

### ***Range in Characteristics***

#### *Profile:*

- Thickness of umbric epipedon—10 to 20 inches  
 Thickness of volcanic ash influence—10 to 35 inches  
 Depth to bedrock—60 inches or more

#### *Particle-size control section:*

- Content of clay—2 to 7 percent  
 Content of rock fragments—10 to 35 percent

#### *A horizon:*

- Value—4 or 5 dry  
 Chroma—2 to 4 dry and 2 or 3 moist  
 Texture—sandy loam or coarse sandy loam  
 Content of rock fragments—0 to 20 percent fine gravel  
 Reaction—slightly acid or neutral  
 Content of volcanic glass—5 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

*Bw horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—ashy sandy loam, ashy coarse sandy loam, ashy loamy sand, or ashy loamy coarse sand

Content of clay—3 to 8 percent

Content of rock fragments—10 to 35 percent gravel

Reaction—moderately acid or slightly acid

Content of volcanic glass—2 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.2 to 1.0 percent

*2C horizon:*

Hue—10YR or 2.5Y

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loamy sand or loamy coarse sand

Content of clay—1 to 4 percent

Content of rock fragments—10 to 35 percent gravel

Reaction—moderately acid or slightly acid

**Painter Series**

*Depth class:* Moderately deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls and hillslopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 35 to 90 percent

*Elevation:* 2,580 to 4,540 feet

*Mean annual precipitation:* 12 to 16 inches

*Mean annual air temperature:* 49 to 52 degrees F

*Frost-free period:* 130 to 155 days

*Taxonomic class:* Mixed, mesic Xeric Torripsamments

**Typical Pedon Location**

Boise County, Idaho; about 0.5 mile northwest of Horseshoe Bend; sec. 27,

T. 7 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°55'17" N.,

long. 116°12'37" W.; NAD 83

**Typical Pedon**

A—0 to 2 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine irregular pores; 2 percent fine gravel; neutral (pH 7.2); clear smooth boundary.

Bw—2 to 18 inches; brown (10YR 5/3) loamy sand, brown (10YR 4/3) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine roots; many very fine irregular pores; 1 percent fine gravel; neutral (pH 7.3); abrupt irregular boundary.

C—18 to 24 inches; light yellowish brown (2.5Y 6/3) loamy sand, light olive brown (2.5Y 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; common very fine irregular pores; 2 percent fine gravel; neutral (pH 7.3); gradual smooth boundary.

Cr—24 to 36 inches; moderately cemented weathered granodiorite.  
R—36 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Content of organic matter—less than 1 percent  
Depth to bedrock (paralithic contact)—20 to 30 inches  
Depth to bedrock (lithic contact)—24 to 40 inches

#### *Particle-size control section:*

Content of clay—2 to 6 percent  
Content of rock fragments—0 to 35 percent

#### *A horizon:*

Value—5 or 6 dry and 3 or 4 moist  
Chroma—2 or 3 dry or moist  
Content of rock fragments—0 to 15 percent fine gravel

#### *Bw horizon:*

Value—5 or 6 dry and 4 or 5 moist  
Chroma—2 or 3 dry or moist  
Texture—loamy sand or sand  
Content of clay—2 to 6 percent  
Content of rock fragments—0 to 35 percent fine gravel

#### *C horizon:*

Hue—10YR or 2.5Y  
Value—5 to 7 dry and 4 or 5 moist  
Chroma—2 to 4 dry or moist  
Texture—loamy sand or sand  
Content of clay—2 to 6 percent  
Content of rock fragments—0 to 35 percent fine gravel

## ***Pajo Series***

*Depth class:* Moderately deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls and mountain slopes

*Parent material:* Volcanic ash and colluvium derived from granodiorite

*Slope range:* 35 to 90 percent

*Elevation:* 3,200 to 6,950 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 39 to 44 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Sandy-skeletal, isotic, frigid Vitrandic Dystroxerepts

### ***Typical Pedon Location***

Boise County, Idaho; about 5 miles north of Banks; sec. 33, T. 10 N., R. 3 E.; Packer  
John Mountain Quadrangle; lat. 44°08'57" N., long. 116°06'09" W.; NAD 83

### ***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 8 inches; brown (10YR 4/3) fine gravelly ashy coarse sandy loam, very dark

grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, medium, and coarse irregular pores; 25 percent fine gravel; slightly acid (pH 6.5); clear wavy boundary.

AC—8 to 16 inches; olive brown (2.5Y 4/3) fine gravelly ashy loamy coarse sand, dark olive brown (2.5Y 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, fine, medium, and coarse irregular pores; 25 percent fine gravel and 5 percent cobbles; slightly acid (pH 6.4); clear wavy boundary.

2C—16 to 27 inches; light olive brown (2.5Y 5/3) extremely gravelly coarse sand, olive brown (2.5Y 4/3) moist; single grain; loose, nonsticky and nonplastic; many very fine, fine, medium, and coarse roots; many very fine, fine, medium, and coarse irregular pores; 50 percent gravel, 10 percent cobbles, and 20 percent stones; slightly acid (pH 6.3); gradual wavy boundary.

2R—27 inches; fractured granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of umbric epipedon—10 to 20 inches

Thickness of volcanic ash influence—10 to 24 inches

Depth to bedrock (lithic contact)—20 to 40 inches

#### *Particle-size control section:*

Content of clay—2 to 7 percent

Content of rock fragments—35 to 85 percent

#### *A horizon:*

Hue—2.5Y or 10YR

Value—3 or 4 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of rock fragments—15 to 35 percent fine gravel

Reaction—slightly acid or neutral

Content of volcanic glass—5 to 20 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *AC horizon:*

Hue—2.5Y or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—ashy sandy loam, ashy loamy sand, or ashy loamy coarse sand

Content of clay—3 to 8 percent

Content of rock fragments—20 to 45 percent total, with 15 to 35 percent gravel and 0 to 10 percent cobbles

Reaction—slightly acid or neutral

Content of volcanic glass—2 to 10 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *2C horizon:*

Hue—2.5Y or 10YR

Value—5 or 6 dry and 4 or 5 moist

Chroma—2 to 4 dry or moist

Texture—loamy sand, loamy coarse sand, or coarse sand

Content of clay—0 to 3 percent

Content of rock fragments—35 to 85 percent total, with 25 to 50 percent gravel, 0 to 50 percent cobbles, and 0 to 25 percent stones

Reaction—moderately acid or slightly acid

## ***Pay Series***

*Depth class:* Very deep

*Drainage class:* Poorly drained

*Permeability class:* Rapid

*Landform:* Flood-plain steps

*Parent material:* Sandy alluvium

*Slope range:* 0 to 1 percent

*Elevation:* 2,940 to 3,720 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

*Taxonomic class:* Mixed, mesic Mollic Psammaquents

### ***Typical Pedon Location***

Boise County, Idaho; about 2.5 miles north of Crouch; sec. 3, T. 9 N., R. 4 E.; Pyle Creek Quadrangle; lat. 44°08'24" N., long. 115°58'00" W.; NAD 83

### ***Typical Pedon***

- A1—0 to 3 inches; grayish brown (10YR 5/2) loamy fine sand, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 2 percent gravel; slightly acid (pH 6.2); clear wavy boundary.
- A2—3 to 7 inches; grayish brown (10YR 5/2) loamy fine sand, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; common distinct masses of iron that are yellowish brown (10YR 5/4), dark yellowish brown (10YR 3/4) moist, and are in pores and on faces of peds; 2 percent gravel; slightly acid (pH 6.2); clear smooth boundary.
- AC—7 to 11 inches; light brownish gray (10YR 6/2) loamy fine sand, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; common distinct masses of iron that are yellowish brown (10YR 5/6), dark yellowish brown (10YR 3/4) moist, and are in pores and on faces of peds; few faint depletions that are gray (10YR 6/1) dry, dark gray (10YR 4/1) moist; 2 percent gravel; slightly acid (pH 6.1); clear wavy boundary.
- C1—11 to 26 inches; light gray (10YR 7/2) loamy fine sand, grayish brown (10YR 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; common distinct masses of iron that are yellowish brown (10YR 5/6) dry, dark yellowish brown (10YR 3/4) moist, and are in pores and on faces of peds; many faint depletions that are gray (10YR 6/1), dark gray (10YR 4/1) moist; 2 percent gravel; slightly acid (pH 6.1); clear smooth boundary.
- C2—26 to 41 inches; very pale brown (10YR 8/2) fine gravelly coarse sand, light brownish gray (10YR 6/2) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine, fine, medium, and coarse

irregular pores; many distinct masses of iron that are yellowish brown (10YR 5/6), dark yellowish brown (10YR 3/4) moist, and are in lenses that are 0.25 to 0.50 inch thick; 15 percent fine gravel; moderately acid (pH 5.6); abrupt wavy boundary.

C3—41 to 60 inches; light gray (10YR 7/2) very gravelly coarse sand, gray (10YR 6/1) moist; single grain; loose, nonsticky and nonplastic; many very fine, fine, medium, and coarse irregular pores; many distinct masses of iron that are yellowish brown (10YR 5/6), dark yellowish brown (10YR 3/4) moist, and are in lenses that are 0.25 to 0.50 inch thick; 45 percent gravel; moderately acid (pH 6.0).

### ***Range in Characteristics***

#### *Profile:*

Depth to redoximorphic features—2 to 6 inches

Depth to bedrock—60 inches or more

Frequency of flooding—occasional

Reaction—slightly acid or moderately acid

#### *Particle-size control section:*

Content of clay—0 to 10 percent

Content of rock fragments—0 to 15 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 or 2 dry or moist

Content of clay—5 to 10 percent

Content of rock fragments—0 to 5 percent gravel

Characteristics of redoximorphic features—few or common, faint or distinct masses of iron

#### *AC horizon:*

Chroma—1 or 2 dry or moist

Content of clay—5 to 10 percent

Content of rock fragments—0 to 5 percent gravel

Characteristics of redoximorphic features—common, distinct or prominent masses of iron; common or many, faint depletions

#### *C1 horizon:*

Value—6 to 8 dry and 4 to 6 moist

Chroma—1 or 2 dry or moist

Texture—loamy fine sand, loamy sand, or loamy coarse sand

Content of clay—3 to 8 percent

Content of rock fragments—0 to 15 percent gravel

Characteristics of redoximorphic features—common, distinct or prominent masses of iron; common or many, faint depletions

#### *C2 and C3 horizons:*

Value—6 to 8 dry and 4 to 6 moist

Chroma—1 or 2 dry or moist

Texture—sand or coarse sand

Content of clay—0 to 5 percent

Content of rock fragments—15 to 55 percent total, with 15 to 45 percent gravel and 0 to 10 percent cobbles

Characteristics of redoximorphic features—common or many, distinct or prominent masses of iron in lenses

## ***Picketpin Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Hillslopes

*Parent material:* Loamy alluvium

*Slope range:* 25 to 65 percent

*Elevation:* 2,680 to 4,430 feet

*Mean annual precipitation:* 14 to 20 inches

*Mean annual air temperature:* 46 to 48 degrees F

*Frost-free period:* 100 to 120 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Typic Argixerolls

### ***Typical Pedon Location***

Ada County, Idaho; about 5.5 miles northeast of Eagle; sec. 30, T. 5 N., R. 2 E.;  
Eagle Quadrangle; lat. 43°44'40" N., long. 116°16'07" W.; NAD 83

### ***Typical Pedon***

- A—0 to 5 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent gravel; neutral (pH 6.8); clear wavy boundary.
- Bt1—5 to 11 inches; brown (10YR 5/3) sandy clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent gravel; neutral (pH 7.0); gradual wavy boundary.
- Bt2—11 to 17 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; strong medium subangular blocky structure; hard, very friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 10 percent gravel; neutral (pH 7.1); clear smooth boundary.
- Bt3—17 to 35 inches; yellowish brown (10YR 5/4) sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; few distinct clay films bridging sand grains; discontinuous lamellae 5 to 15 millimeters thick and 1 to 5 inches apart; 10 percent gravel; neutral (pH 7.2); abrupt wavy boundary.
- E&Bt—35 to 60 inches; 80 percent E material that is very pale brown (10YR 7/4) fine gravelly coarse sandy loam, light yellowish brown (10YR 6/4) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine irregular pores; 30 percent gravel; slightly alkaline (pH 7.4); Bt material is continuous lamellae that are light yellowish brown (10YR 6/4) fine gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist, and are 2 to 5 millimeters thick and 10 to 15 inches apart; few distinct clay films bridging sand grains; 25 percent gravel; slightly alkaline (pH 7.4).

### ***Range in Characteristics***

*Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock—60 inches or more

Reaction—neutral or slightly alkaline

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of clay—18 to 25 percent

Content of rock fragments—0 to 15 percent gravel

*Bt horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—loam, clay loam, or sandy clay loam

Content of clay—20 to 30 percent

Content of rock fragments—5 to 15 percent gravel

Characteristics of lamellae in lower part—0 to 25 millimeters thick and 1 to 5 inches apart

*E&Bt horizon:*

Clay content (weighted average)—10 to 20 percent

Rock fragments (weighted average)—15 to 35 percent gravel

*E material*

Percentage of horizon—75 to 90 percent

Value—6 to 8 dry and 5 or 6 moist

Chroma—3 or 4 dry or moist

Texture—sandy loam, coarse sandy loam, or loamy coarse sand

*Bt material (lamellae)*

Thickness—2 to 5 millimeters

Separation—7 to 15 inches apart

### ***Piercepark Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Fan remnants

*Parent material:* Loamy alluvium

*Slope range:* 2 to 25 percent

*Elevation:* 2,520 to 4,790 feet

*Mean annual precipitation:* 13 to 17 inches

*Mean annual air temperature:* 47 to 51 degrees F

*Frost-free period:* 110 to 150 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Pachic Argixerolls

#### ***Typical Pedon***

Ada County, Idaho; about 5.5 miles northeast of Eagle; sec. 30, T. 5 N., R. 2 E.;

Eagle Quadrangle; lat. 43°44'57" N., long. 116°15'50" W.; NAD 83

#### ***Typical Pedon***

A1—0 to 2 inches; grayish brown (10YR 5/2) coarse sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, slightly sticky

and slightly plastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 10 percent gravel; neutral (pH 6.6); clear smooth boundary.

- A2—2 to 6 inches; grayish brown (10YR 5/2) coarse sandy loam, very dark brown (10YR 2/2) moist; weak thin platy structure parting to moderate medium granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 10 percent gravel; neutral (pH 6.6); clear wavy boundary.
- A3—6 to 10 inches; dark grayish brown (10YR 4/2) coarse sandy loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 10 percent gravel; neutral (pH 6.6); clear wavy boundary.
- AB—10 to 16 inches; dark grayish brown (10YR 4/2) coarse sandy loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; 10 percent gravel; neutral (pH 6.9); clear smooth boundary.
- BA—16 to 27 inches; brown (10YR 4/3) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; 10 percent gravel; neutral (pH 7.1); clear wavy boundary.
- Bt1—27 to 34 inches; yellowish brown (10YR 5/4) sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; few distinct clay films in pores and bridging sand grains; 10 percent gravel; neutral (pH 7.0); gradual wavy boundary.
- Bt2—34 to 60 inches; yellowish brown (10YR 5/4) fine gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds, in pores, and bridging sand grains; lamellae that are light yellowish brown (10YR 6/4) sandy clay loam, dark yellowish brown (10YR 4/4) moist, and are 2 to 12 millimeters thick and 3 to 5 inches apart; 20 percent gravel; neutral (pH 7.0).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 50 inches  
Depth to bedrock—60 inches or more

#### *Particle-size control section:*

Content of clay—18 to 27 percent  
Content of medium sand or coarser—25 to 30 percent  
Content of rock fragments—10 to 20 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
Chroma—2 or 3 dry or moist  
Texture—loam or coarse sandy loam  
Content of clay—10 to 22 percent  
Content of rock fragments—0 to 15 percent gravel

*AB and BA horizons:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—sandy loam, coarse sandy loam, or loam

Content of clay—14 to 24 percent

Content of rock fragments—0 to 15 percent gravel

*Bt horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—sandy clay loam or coarse sandy loam

Content of clay—18 to 27 percent

Content of rock fragments—10 to 25 percent gravel

Reaction—neutral or slightly alkaline

Thickness of lamellae—0 to 15 millimeters

***Pinney Series****Depth class:* Very deep*Drainage class:* Well drained*Permeability class:* Moderately slow*Landform:* Mountain slopes, fan remnants, and terraces*Parent material:* Volcanic ash over loamy lacustrine deposits*Slope range:* 15 to 65 percent*Elevation:* 3,070 to 4,820 feet*Mean annual precipitation:* 26 to 30 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 60 to 90 days*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Vitrandic Argixerolls***Typical Pedon Location***Boise County, Idaho; about 3 miles north of Crouch; sec. 28, T. 10 N., R. 4 E.;  
Pyle Creek Quadrangle; lat. 44°10'08" N., long. 115°58'47" W.; NAD 83***Typical Pedon***

Oi—0 to 2 inches; slightly decomposed forest litter.

A1—2 to 5 inches; dark grayish brown (10YR 4/2) ashy silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 5 percent fine gravel; slightly acid (pH 6.3); clear smooth boundary.

A2—5 to 13 inches; grayish brown (10YR 5/2) ashy silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 5 percent fine gravel; slightly acid (pH 6.3); clear wavy boundary.

2Bt1—13 to 23 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; 5 percent fine gravel; slightly acid (pH 6.1); clear wavy boundary.

2Bt2—23 to 30 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; strong fine and medium subangular blocky structure; hard, firm, moderately sticky

and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent fine gravel; slightly acid (pH 6.1); abrupt smooth boundary.

2Bt3—30 to 49 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 3/4) moist; strong fine and medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent fine gravel; moderately acid (pH 6.0); gradual wavy boundary.

2Bt4—49 to 60 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; very hard, firm, slightly sticky and slightly plastic; few very fine, fine, medium, and coarse roots; common very fine and fine and few medium tubular pores; few distinct clay films in pores; light yellowish brown (10YR 6/4) discontinuous lamella 2 to 5 millimeters thick; 5 percent gravel; moderately acid (pH 5.7).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches  
 Thickness of volcanic ash influence—8 to 20 inches  
 Depth to bedrock—60 inches or more  
 Base saturation (10 to 30 inches)—50 to 75 percent  
 Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—20 to 32 percent  
 Content of fine sand or coarser—more than 30 percent  
 Content of rock fragments—0 to 15 percent

#### *A horizon:*

Hue—7.5YR or 10YR  
 Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—15 to 24 percent  
 Content of rock fragments—0 to 5 percent gravel  
 Content of volcanic glass—5 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *2Bt horizon:*

Hue—7.5YR or 10YR  
 Value—5 or 6 dry and 3 or 4 moist  
 Chroma—3 or 4 dry or moist  
 Texture—loam, sandy clay loam, or clay loam  
 Content of clay—20 to 32 percent  
 Content of rock fragments—0 to 35 percent gravel (less than 15 percent in upper part)  
 Characteristics of lamellae (lower part)—2 to 10 millimeters thick and 2 to 15 inches apart

## ***Pioneervil Series***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Permeability class:* Moderately rapid

*Landform:* Flood-plain steps

*Parent material:* Coarse-loamy alluvium

*Slope range:* 0 to 3 percent

*Elevation:* 3,390 to 4,640 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, frigid Fluventic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 3 miles southwest of Placerville; sec. 28, T. 7 N.,  
R. 4 E.; Placerville Quadrangle; lat. 43°54'37" N., long. 115°58'34" W.; NAD 83

### **Typical Pedon**

- Oi—0 to 1 inch; slightly decomposed pine needles and other plant material.
- A1—1 to 6 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine and fine and few medium irregular pores; 10 percent fine gravel; neutral (pH 6.8); clear smooth boundary.
- A2—6 to 12 inches; brown (10YR 5/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular pores; 15 percent fine gravel; neutral (pH 6.6); abrupt smooth boundary.
- Bw1—12 to 19 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular and irregular pores; 5 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.
- Bw2—19 to 25 inches; pale brown (10YR 6/3) fine gravelly sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; common very fine and fine and few medium irregular pores; 20 percent fine gravel; slightly acid (pH 6.3); abrupt wavy boundary.
- BC—25 to 31 inches; light yellowish brown (2.5Y 6/3) very fine sandy loam, olive brown (2.5Y 4/3) moist; weak medium platy structure parting to moderate fine and medium subangular blocky; slightly hard, friable, moderately sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and fine and few medium tubular pores; 5 percent fine gravel; slightly acid (pH 6.1); abrupt smooth boundary.
- Ab—31 to 35 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; few fine faint masses of iron that are brown (10YR 4/3) moist and have a diffuse boundary; 5 percent gravel; slightly acid (pH 6.1); abrupt smooth boundary.
- C1—35 to 41 inches; light yellowish brown (10YR 6/4) sand, yellowish brown (10YR 5/4) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine and fine and few medium irregular pores; highly oxidized matrix; 5 percent fine gravel; neutral (pH 6.7); abrupt wavy boundary.
- C2—41 to 52 inches; very pale brown (10YR 7/3) gravelly sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine tubular and irregular pores; few

discontinuous lamellae 2 to 5 millimeters thick; common fine and medium distinct masses of iron that are dark yellowish brown (10YR 4/6) moist; 15 percent gravel; neutral (pH 6.7); clear smooth boundary.

- C3—52 to 60 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; few very fine and fine tubular pores; common fine faint masses of iron that are dark yellowish brown (10YR 4/4) moist, common fine and medium faint depletions that are grayish brown (10YR 5/2) moist; common organic stains; few discontinuous lamellae 2 to 5 millimeters thick; neutral (pH 6.9); clear smooth boundary.
- C4—60 to 72 inches; pale brown (10YR 6/3) loamy sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine irregular pores; common fine and medium distinct masses of iron that are dark yellowish brown (10YR 4/6) moist, common fine and medium faint depletions that are grayish brown (10YR 5/2) moist; 5 percent fine gravel; neutral (pH 7.0); abrupt smooth boundary.
- C5—72 to 75 inches; variegated fine gravelly coarse sand; single grain; loose, nonsticky and nonplastic; many very fine and fine and few medium irregular pores; 20 percent fine gravel; neutral (pH 7.2).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches  
 Depth to redoximorphic features—40 to 60 inches  
 Depth to relict redoximorphic features—typically more than 40 inches  
 Depth to bedrock—60 inches or more  
 Frequency of flooding—rare

#### *Particle-size control section:*

Content of clay—5 to 18 percent  
 Content of fine sand or coarser—50 to 70 percent  
 Content of rock fragments—0 to 25 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—10 to 18 percent  
 Content of rock fragments—0 to 25 percent gravel  
 Reaction—slightly acid or neutral

#### *Bw horizon:*

Value—5 or 6 dry and 3 or 4 moist  
 Chroma—3 or 4 dry or moist  
 Texture—fine sandy loam, sandy loam, or loam  
 Content of clay—10 to 20 percent  
 Content of rock fragments—0 to 25 percent gravel  
 Reaction—moderately acid or slightly acid

#### *Ab horizon (where present):*

Value—5 or 6 dry and 3 or 4 moist  
 Chroma—2 or 3 dry or moist  
 Texture—coarse sandy loam, sandy loam, or loamy fine sand  
 Content of clay—6 to 18 percent  
 Content of rock fragments—0 to 15 percent gravel

#### *C horizon:*

Hue—7.5YR or 10YR  
 Value—5 to 7 dry and 3 to 5 moist

Chroma—2 to 4 dry or moist  
 Texture (stratified)—fine sandy loam to coarse sand  
 Content of clay—0 to 12 percent  
 Content of rock fragments—0 to 35 percent total, with 0 to 35 percent gravel and  
 0 to 10 percent cobbles  
 Reaction—moderately acid to neutral  
 Characteristics of redoximorphic features (below a depth of 40 inches)—common or  
 many, faint to prominent masses of iron; none to common, faint or distinct  
 depletions  
 Other features—common thin discontinuous lenses of sandy or loamy material with  
 varying organic matter content

### **Porter Series**

*Depth class:* Very deep  
*Drainage class:* Moderately well drained  
*Permeability class:* Moderately rapid  
*Landform:* Flood-plain steps  
*Parent material:* Coarse-loamy alluvium  
*Slope range:* 1 to 4 percent  
*Elevation:* 2,610 to 3,360 feet  
*Mean annual precipitation:* 13 to 16 inches  
*Mean annual air temperature:* 49 to 51 degrees F  
*Frost-free period:* 130 to 150 days  
*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Cumulic Haploxerolls

#### **Typical Pedon Location**

Boise County, Idaho; about 3 miles northeast of Horseshoe Bend; sec. 12, T. 7 N.,  
 R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°57'15" N., long. 116°09'58" W.;  
 NAD 83

#### **Typical Pedon**

Ap1—0 to 4 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown  
 (10YR 2/2) moist; moderate medium platy structure parting to weak fine  
 subangular blocky; slightly hard, friable, slightly sticky and slightly plastic;  
 common very fine, fine, and medium and few coarse roots; common very fine and  
 fine and few medium irregular pores; 10 percent fine gravel; slightly acid (pH 6.5);  
 clear smooth boundary.

Ap2—4 to 11 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown  
 (10YR 2/2) moist; moderate fine and medium subangular blocky structure; slightly  
 hard, friable, slightly sticky and slightly plastic; common very fine, fine, and  
 medium roots; common very fine, fine, and medium and few coarse irregular and  
 tubular pores; 10 percent fine gravel; slightly acid (pH 6.4); clear smooth  
 boundary.

A—11 to 22 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown  
 (10YR 2/2) moist; moderate fine and medium subangular blocky structure; slightly  
 hard, friable, slightly sticky and slightly plastic; common very fine, fine, and  
 medium roots; common very fine and fine and few medium and coarse irregular  
 and tubular pores; 10 percent fine gravel; slightly acid (pH 6.4); clear smooth  
 boundary.

Bw—22 to 34 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown  
 (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard,  
 friable, slightly sticky and slightly plastic; common very fine and fine roots;

common very fine and fine and few medium tubular pores; 10 percent fine gravel; neutral (pH 6.6); clear smooth boundary.

BC—34 to 48 inches; brown (10YR 5/3) coarse sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine tubular pores; 10 percent fine gravel; neutral (pH 6.8); clear irregular boundary.

C—48 to 72 inches; pale brown (10YR 6/3) gravelly loamy coarse sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine irregular and tubular pores; lower part has common fine distinct masses of iron that are brown (7.5YR 4/4) moist; 15 percent fine gravel; neutral (pH 7.0).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—24 to 48 inches

Depth to redoximorphic features—40 to 72 inches

Depth to bedrock—60 inches or more

Frequency of flooding—rare

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—10 to 18 percent

Content of rock fragments—5 to 25 percent

#### *Ap and A horizons:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 or 2 dry or moist

Content of rock fragments—0 to 15 percent

#### *Bw horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—loam or sandy loam

Content of clay—10 to 18 percent

Content of rock fragments—5 to 25 percent, mostly fine gravel

#### *C horizon:*

Hue—2.5Y or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—coarse sandy loam or loamy coarse sand

Content of clay—4 to 12 percent

Content of rock fragments—10 to 35 percent total, with 10 to 35 percent gravel and 0 to 5 percent cobbles

## ***Pumpkin Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Stream terraces and structural benches

*Parent material:* Loamy alluvium

*Slope range:* 8 to 25 percent

*Elevation:* 3,670 to 5,840 feet

*Mean annual precipitation:* 24 to 34 inches

*Mean annual air temperature:* 41 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, frigid Pachic Ultic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 5 miles southeast of Banks; sec. 23, T. 8 N., R. 3 E.;  
lat. 44°01'06" N., long. 116°04'27" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 3 inches; dark grayish brown (10YR 4/2) stony loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 5 percent stones, 5 percent cobbles, and 10 percent gravel; moderately acid (pH 5.7); clear smooth boundary.

AB—3 to 9 inches; dark grayish brown (10YR 4/2) stony loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to moderate medium granular; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 5 percent stones, 5 percent cobbles, and 10 percent gravel; moderately acid (pH 5.7); clear wavy boundary.

Bt1—9 to 14 inches; dark grayish brown (10YR 4/2) gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine angular blocky structure; hard, firm, moderately sticky and moderately plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium tubular pores; many distinct clay films on faces of peds and in pores; 5 percent cobbles and 15 percent gravel; moderately acid (pH 5.7); clear wavy boundary.

Bt2—14 to 22 inches; olive brown (2.5Y 4/4) very gravelly loam, dark olive brown (2.5Y 3/3) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; many distinct clay films on faces of peds and in pores; 5 percent stones, 5 percent cobbles, and 45 percent gravel; moderately acid (pH 5.7); gradual wavy boundary.

BCt—22 to 44 inches; light olive brown (2.5Y 5/4) extremely gravelly sandy loam, olive brown (2.5Y 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; common distinct clay films on faces of peds and in pores; 5 percent stones, 5 percent cobbles, and 50 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.

C—44 to 60 inches; olive brown (2.5Y 4/4) extremely gravelly sandy loam, very dark grayish brown (2.5Y 3/2) moist; massive; soft, very friable, nonsticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; 5 percent stones, 10 percent cobbles, and 60 percent gravel; moderately acid (pH 6.0).

### **Range in Characteristics**

#### *Profile:*

Percentage of surface covered with stones—0.01 to 0.1 percent

Thickness of mollic epipedon—20 to 50 inches

Depth to base of argillic horizon—20 to 40 inches

Depth to bedrock—60 inches or more

Base saturation (10 to 30 inches)—50 to 75 percent  
 Reaction—strongly acid or moderately acid

*Particle-size control section:*

Content of clay—25 to 35 percent  
 Content of rock fragments—35 to 50 percent

*A horizon:*

Value—3 or 4 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—18 to 25 percent  
 Content of rock fragments—15 to 35 percent total, with 5 to 15 percent gravel, 0 to 15 percent cobbles, and 5 to 15 percent stones

*Bt1 horizon:*

Value—3 or 4 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Texture—clay loam or loam  
 Content of clay—25 to 30 percent  
 Content of rock fragments—15 to 35 percent total, with 10 to 30 percent gravel, 5 to 10 percent cobbles, and 0 to 5 percent stones

*Bt2 horizon:*

Hue—2.5Y or 10YR  
 Value—4 or 5 dry  
 Chroma—2 to 4 dry or moist  
 Texture—clay loam or loam  
 Content of clay—25 to 35 percent  
 Content of rock fragments—35 to 60 percent total, with 20 to 50 percent gravel, 5 to 25 percent cobbles, and 0 to 5 percent stones

*C horizon:*

Hue—2.5Y or 10YR  
 Value—4 or 5 dry  
 Chroma—2 to 4 dry or moist  
 Content of clay—10 to 15 percent  
 Content of rock fragments—60 to 80 percent total, with 45 to 70 percent gravel, 5 to 15 percent cobbles, and 0 to 10 percent stones

## **Quartzburg Series**

*Depth class:* Moderately deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls and mountain slopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 35 to 90 percent

*Elevation:* 3,280 to 5,940 feet

*Mean annual precipitation:* 22 to 30 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Sandy-skeletal, mixed, frigid Dystric Xerorthents

### **Typical Pedon Location**

Boise County, Idaho; about 4 miles north of Crouch; sec. 28, T. 10 N., R. 4 E.;  
 Pyle Creek Quadrangle; lat. 44°10'04" N., long. 115°59'18" W.; NAD 83

### ***Typical Pedon***

- O<sub>i</sub>—0 to 1 inch; slightly decomposed forest litter.
- A<sub>1</sub>—1 to 5 inches; grayish brown (10YR 5/2) fine gravelly loamy coarse sand, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to moderate fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine and fine and few medium irregular pores; 20 percent fine gravel; slightly acid (pH 6.2); clear smooth boundary.
- A<sub>2</sub>—5 to 10 inches; brown (10YR 5/3) fine gravelly loamy coarse sand, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to moderate fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; common very fine and fine and few medium irregular pores; 20 percent fine gravel; slightly acid (pH 6.4); clear wavy boundary.
- AC—10 to 25 inches; light brownish gray (10YR 6/2) very gravelly loamy coarse sand, dark grayish brown (10YR 4/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; few very fine and fine tubular and irregular pores; 35 percent gravel and 5 percent cobbles; slightly acid (pH 6.4); clear wavy boundary.
- C—25 to 37 inches; pale brown (10YR 6/3) very gravelly loamy coarse sand, brown (10YR 4/3) moist; massive parting to single grain; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; few very fine, fine, and medium irregular pores; 45 percent gravel; slightly acid (pH 6.5); abrupt wavy boundary.
- Cr—37 to 42 inches; moderately cemented, weathered granodiorite.
- R—42 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Depth to bedrock (paralithic contact)—20 to 40 inches

Depth to bedrock (lithic contact)—23 to 55 inches

Base saturation—35 to 60 percent

Reaction—moderately acid to neutral

#### *Particle-size control section:*

Content of clay—2 to 8 percent

Content of rock fragments—35 to 80 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 15 to 35 percent gravel and 0 to 5 percent cobbles

#### *AC and C horizons:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—2 to 4 dry or moist

Texture—loamy coarse sand or loamy sand

Content of clay—2 to 8 percent

Content of rock fragments—35 to 75 percent total, with 35 to 75 percent gravel and 0 to 5 percent cobbles

## ***Ralsen Series***

*Depth class:* Very deep

*Drainage class:* Poorly drained

*Permeability class:* Moderate

*Landform:* Flood-plain steps

*Parent material:* Coarse-loamy alluvium

*Slope range:* 0 to 1 percent

*Elevation:* 2,940 to 3,720 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls

### ***Typical Pedon Location***

Boise County, Idaho; about 2.5 miles north of Crouch; sec. 3, T. 9 N., R. 4 E.;  
Pyle Creek Quadrangle; lat. 44°08'26" N., long. 115°58'02" W.; NAD 83

### ***Typical Pedon***

- A1—0 to 2 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium roots; many very fine and fine irregular and tubular pores; neutral (pH 6.6); clear smooth boundary.
- A2—2 to 10 inches; gray (10YR 5/1) fine sandy loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine and fine irregular and tubular pores; common fine distinct yellowish brown masses of iron on faces of peds, few fine faint gray iron depletions in matrix; neutral (pH 6.6); clear wavy boundary.
- Bg1—10 to 17 inches; gray (10YR 5/1) fine sandy loam, very dark gray (10YR 3/1) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine irregular and tubular pores; common fine and medium distinct yellowish brown masses of iron on faces of peds and along pores, common fine and medium faint gray iron depletions in matrix; slightly acid (pH 6.3); clear smooth boundary.
- Bg2—17 to 19 inches; gray (10YR 6/1) loamy fine sand, dark gray (10YR 4/1) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; common very fine, fine, and medium irregular pores; common fine and medium distinct yellowish brown masses of iron on faces of peds and along pores, many medium faint gray iron depletions in matrix; slightly acid (pH 6.3); clear smooth boundary.
- Bg3—19 to 24 inches; gray (10YR 5/1) fine sandy loam, very dark gray (10YR 3/1) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine and fine irregular pores; common fine and medium prominent reddish yellow masses of iron on faces of peds and along pores, many medium faint gray iron depletions in matrix; slightly acid (pH 6.3); abrupt smooth boundary.
- 2C1—24 to 29 inches; pinkish gray (7.5YR 6/2) coarse sand, brown (7.5YR 4/2) moist; single grain; loose, nonsticky and nonplastic; many fine and medium

irregular pores; many fine and medium prominent reddish yellow masses of iron in matrix; moderately acid (pH 6.0); abrupt smooth boundary.

2C2—29 to 41 inches; light gray (10YR 7/1) fine sandy loam, dark gray (10YR 4/1) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine irregular pores; many fine and medium prominent reddish yellow masses of iron on faces of peds and along pores, many medium and coarse faint gray depletions in matrix; moderately acid (pH 5.7); clear wavy boundary.

2Cg—41 to 60 inches; light greenish gray (10Y 7/1) fine sandy loam, greenish gray (10Y 5/1) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine irregular pores; few fine prominent reddish yellow masses of iron in reduced matrix; moderately acid (pH 5.6).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Depth to redoximorphic features—at the surface to a depth of 12 inches

Depth to bedrock—60 inches or more

Frequency of flooding—occasional

#### *Particle-size control section:*

Content of clay—7 to 14 percent

Content of rock fragments—0 to 10 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—1 or 2 dry or moist

Content of rock fragments—0 to 5 percent gravel

Reaction—slightly acid or neutral

#### *Bg horizon:*

Value—5 or 6 dry and 3 or 4 moist

Texture—fine sandy loam or loamy fine sand

Content of clay—6 to 14 percent

Content of rock fragments—0 to 10 percent gravel

#### *2C and 2Cg horizons:*

Hue—7.5YR, 10YR, or 10Y

Value—6 or 7 dry and 4 or 5 moist

Chroma—1 to 3 dry or moist

Texture (stratified)—coarse sand to fine sandy loam

Content of clay—6 to 12 percent

Content of rock fragments—0 to 15 percent gravel

Reaction—moderately acid or slightly acid

## ***Republic Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Dissected fan remnants

*Parent material:* Volcanic ash and coarse-loamy lacustrine deposits

*Slope range:* 25 to 65 percent

*Elevation:* 4,480 to 5,070 feet

*Mean annual precipitation:* 26 to 28 inches

*Mean annual air temperature:* 42 to 44 degrees F

*Frost-free period:* 60 to 75 days

*Taxonomic class:* Coarse-loamy, isotic, frigid Vitrandic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 2 miles west of Placerville; sec. 21, T. 7 N., R. 4 E.;  
Placerville Quadrangle; lat. 43°55'57" N., long. 115°59'36" W.; NAD 83

### ***Typical Pedon***

Oi—0 to 2 inches; slightly decomposed forest litter.

A1—2 to 7 inches; dark grayish brown (10YR 4/2) ashy sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; many very fine and fine and few medium irregular pores; 5 percent fine gravel; neutral (pH 7.0); clear smooth boundary.

A2—7 to 14 inches; brown (10YR 5/3) ashy sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; common very fine and fine tubular pores; neutral (pH 7.2); clear smooth boundary.

Bw1—14 to 23 inches; light brown (7.5YR 6/3) sandy loam, brown (7.5YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium tubular pores; neutral (pH 6.9); clear smooth boundary.

Bw2—23 to 42 inches; light brown (7.5YR 6/4) sandy loam, brown (7.5YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few very fine, fine, medium, and coarse roots; common very fine and fine and few medium tubular pores; slightly acid (pH 6.4); clear smooth boundary.

C—42 to 60 inches; light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 4/4) moist; massive; hard, friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine and few medium tubular pores; slightly acid (pH 6.2).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Thickness of volcanic ash influence—10 to 20 inches

Depth to bedrock—60 inches or more

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—7 to 14 percent

Content of rock fragments—0 to 15 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—0 to 15 percent gravel

Content of volcanic glass—5 to 20 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

*Bw horizon:*

Hue—7.5YR or 10YR  
 Value—5 or 6 dry and 3 or 4 moist  
 Chroma—3 or 4 dry or moist  
 Texture—loam or sandy loam  
 Content of clay—8 to 14 percent  
 Content of rock fragments—0 to 15 percent gravel

*C horizon:*

Hue—7.5YR or 10YR  
 Value—6 or 7 dry and 4 or 5 moist  
 Chroma—3 or 4 dry or moist  
 Content of clay—6 to 10 percent  
 Content of rock fragments—0 to 15 percent

**Riverpoint Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Fan remnants and relict lakebeds

*Parent material:* Gravelly alluvium or loamy lacustrine deposits over gravelly alluvium

*Slope range:* 2 to 25 percent

*Elevation:* 2,970 to 3,890 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Ultic Argixerolls

**Typical Pedon Location**

Boise County, Idaho; about 1 mile northwest of Garden Valley; sec. 22, T. 9 N., R. 4 E.; Garden Valley Quadrangle; lat. 44°06'00" N., long. 115°58'04" W.; NAD 83

**Typical Pedon**

- A—0 to 6 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; common very fine and fine and few medium irregular pores; 10 percent gravel; moderately acid (pH 6.0); clear smooth boundary.
- AB—6 to 11 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine and few medium tubular pores; 10 percent gravel; moderately acid (pH 5.8); clear smooth boundary.
- Bt1—11 to 14 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine and few medium tubular pores; many faint clay films on faces of peds and in pores; 10 percent gravel; moderately acid (pH 5.7); clear wavy boundary.
- Bt2—14 to 19 inches; light yellowish brown (10YR 6/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular and angular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine and few medium

tubular pores; many distinct clay films on faces of pedes and in pores; 35 percent gravel and 5 percent cobbles; 10 percent pararock fragments; moderately acid (pH 5.8); gradual smooth boundary.

2Bt3—19 to 31 inches; light yellowish brown (10YR 6/4) very gravelly coarse sandy loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine tubular and irregular pores; common distinct clay films in pores and bridging sand grains; 50 percent gravel and 5 percent cobbles; 10 percent pararock fragments; moderately acid (pH 6.0); gradual smooth boundary.

2CBt—31 to 41 inches; light yellowish brown (10YR 6/4) very gravelly coarse sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine tubular and irregular pores; common faint clay films in pores and bridging sand grains; 50 percent gravel and 5 percent cobbles; 10 percent pararock fragments; slightly acid (pH 6.1); clear wavy boundary.

2C—41 to 60 inches; brownish yellow (10YR 6/6) extremely gravelly loamy coarse sand, dark yellowish brown (10YR 4/6) moist; single grain; loose, nonsticky and nonplastic; 60 percent gravel and 5 percent cobbles; 10 percent pararock fragments; slightly acid (pH 6.2).

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0 to 3 percent

Thickness of mollic epipedon—10 to 15 inches

Depth to base of argillic horizon—25 to 40 inches

Depth to strongly contrasting material (2Bt horizon)—15 to 40 inches

Depth to bedrock—60 inches or more

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—18 to 27 percent

Content of rock fragments—35 to 60 percent

An O horizon is present in some pedons.

#### *A horizon:*

Hue—7.5YR or 10YR

Chroma—2 or 3 dry or moist

Content of rock fragments—0 to 25 percent total, with 0 to 15 percent gravel and 0 to 5 percent cobbles and stones

#### *Bt1 horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—loam or clay loam

Content of clay—22 to 30 percent

Content of rock fragments—0 to 35 percent total, with 10 to 25 percent gravel, 0 to 5 percent cobbles, and 0 to 5 percent stones

#### *Bt2 horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Texture—loam or clay loam

Content of clay—22 to 30 percent

Content of rock fragments—35 to 60 percent total, with 25 to 40 percent gravel,  
0 to 15 percent cobbles, and 0 to 15 percent stones  
Content of pararock fragments—0 to 15 percent

*2Bt3 horizon:*

Hue—7.5YR or 10YR  
Value—6 or 7 dry and 4 or 5 moist  
Chroma—4 to 6 dry or moist  
Texture—sandy loam, coarse sandy loam, or sandy clay loam  
Content of clay—10 to 22 percent  
Content of rock fragments—50 to 75 percent total, with 25 to 50 percent gravel,  
5 to 20 percent cobbles, and 0 to 20 percent stones  
Content of pararock fragments—0 to 15 percent

*2C horizon:*

Hue—7.5YR or 10YR  
Value—6 or 7 dry and 4 or 5 moist  
Chroma—4 to 6 dry or moist  
Texture—sandy loam, coarse sandy loam, loamy sand, or loamy coarse sand  
Content of clay—2 to 12 percent  
Content of rock fragments—60 to 85 percent total, with 35 to 60 percent gravel,  
5 to 35 percent cobbles, and 0 to 25 percent stones  
Content of pararock fragments—0 to 25 percent

## ***Robbscreek Series***

*Depth class:* Moderately deep  
*Drainage class:* Well drained  
*Permeability class:* Moderate  
*Landform:* Escarpments on buttes, canyon walls, and hillslopes  
*Parent material:* Colluvium derived from granodiorite  
*Slope range:* 8 to 65 percent  
*Elevation:* 2,520 to 5,820 feet  
*Mean annual precipitation:* 13 to 22 inches  
*Mean annual air temperature:* 45 to 51 degrees F  
*Frost-free period:* 90 to 150 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Ultic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 7.5 miles south of Horseshoe Bend; sec. 32, T. 6 N.,  
R. 2 E.; Cartwright Canyon Quadrangle; lat. 43°48'40" N., long. 116°14'16" W.;  
NAD 83

### ***Typical Pedon***

A1—0 to 2 inches; grayish brown (10YR 5/2) fine gravelly coarse sandy loam, very  
dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very  
friable, slightly sticky and slightly plastic; many very fine and fine and common  
medium and coarse roots; many very fine and fine irregular pores; 20 percent  
gravel; slightly acid (pH 6.2); clear smooth boundary.  
A2—2 to 6 inches; grayish brown (10YR 5/2) fine gravelly coarse sandy loam, very  
dark brown (10YR 2/2) moist; weak medium platy structure parting to moderate  
fine and medium subangular blocky; slightly hard, very friable, slightly sticky and  
slightly plastic; many very fine and fine and common medium and coarse roots;

many very fine and fine tubular pores; 15 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

BA—6 to 13 inches; brown (10YR 5/3) fine gravelly coarse sandy loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 15 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

Bt1—13 to 19 inches; yellowish brown (10YR 5/4) fine gravelly sandy clay loam, dark brown (10YR 3/3) moist; strong medium subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 15 percent gravel; slightly acid (pH 6.5); gradual wavy boundary.

Bt2—19 to 26 inches; brown (7.5YR 5/4) fine gravelly sandy clay loam, brown (10YR 4/3) moist; strong medium and coarse subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 20 percent gravel; neutral (pH 6.6); abrupt wavy boundary.

Bt3—26 to 30 inches; light brown (7.5YR 6/4) fine gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; weak medium prismatic structure parting to strong medium and coarse subangular blocky; very hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 30 percent gravel; neutral (pH 6.8); abrupt wavy boundary.

R—30 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—7 to 14 inches

Depth to bedrock (lithic contact)—20 to 40 inches

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

#### *Particle-size control section:*

Content of clay—18 to 27 percent

Content of medium sand or coarser—more than 25 percent

Content of rock fragments—15 to 35 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—12 to 18 percent

Content of rock fragments—15 to 25 percent fine gravel

Reaction—moderately acid or slightly acid

#### *Bt horizon:*

Hue—10YR or 7.5YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—loam or sandy clay loam

Content of clay—18 to 27 percent

Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel and 0 to 5 percent cobbles

Reaction—slightly acid or neutral

## **Roney Series**

*Depth class:* Moderately deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls and hillslopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 8 to 90 percent

*Elevation:* 2,640 to 6,420 feet

*Mean annual precipitation:* 13 to 22 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 10 miles northeast of Horseshoe Bend; sec. 8,  
T. 8 N., R. 3 E.; Banks Quadrangle; lat. 44°03'01" N., long. 116°07'32" W.;  
NAD 83

### **Typical Pedon**

A—0 to 10 inches; dark grayish brown (10YR 4/2) fine gravelly coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak coarse granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine irregular pores; 15 percent fine gravel; moderately acid (pH 5.6); clear smooth boundary.

Bw—10 to 24 inches; brown (10YR 5/3) fine gravelly coarse sandy loam, brown (10YR 4/3) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine roots; many very fine irregular pores; 15 percent fine gravel; moderately acid (pH 5.8); gradual wavy boundary.

C—24 to 30 inches; brown (10YR 5/3) fine gravelly loamy coarse sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; common very fine irregular pores; 25 percent fine gravel; slightly acid (pH 6.2); abrupt wavy boundary.

R—30 inches; unweathered granodiorite.

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—7 to 15 inches

Depth to bedrock (lithic contact)—20 to 40 inches

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—strongly acid to slightly acid

#### *Particle-size control section:*

Content of clay—7 to 13 percent

Content of rock fragments—15 to 35 percent, dominantly fine gravel

#### *A horizon:*

Value—4 or 5 dry and 3 or 4 moist

Chroma—1 to 3 dry or moist

Content of clay—8 to 15 percent

Content of rock fragments—15 to 25 percent fine gravel

#### *Bw horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—2 or 3 dry or moist

Texture—sandy loam or coarse sandy loam  
 Content of clay—8 to 15 percent  
 Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel and  
 0 to 5 percent cobbles

*C horizon:*

Value—5 to 7 dry and 4 to 6 moist  
 Chroma—2 to 4 dry or moist  
 Texture—loamy coarse sand or coarse sandy loam  
 Content of clay—5 to 10 percent  
 Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel and  
 0 to 5 percent cobbles

## **Schiller Series**

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls and hillslopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 15 to 90 percent

*Elevation:* 2,710 to 5,990 feet

*Mean annual precipitation:* 13 to 22 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Pachic Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 3 miles east of Horseshoe Bend; sec. 29, T. 7 N.,  
 R. 3 E.; Horseshoe Bend Quadrangle; lat. 43°55'00" N., long. 116°08'02" W.;  
 NAD 83

### **Typical Pedon**

- A—0 to 3 inches; brown (10YR 5/3) gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak thin platy structure parting to moderate fine and medium granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 30 percent gravel; neutral (pH 6.7); clear smooth boundary.
- AB—3 to 13 inches; brown (10YR 5/3) very gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine and fine irregular pores; 35 percent gravel; slightly acid (pH 6.1); clear wavy boundary.
- Bw1—13 to 21 inches; brown (10YR 5/3) very gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine irregular pores and few fine tubular pores; 40 percent gravel; slightly acid (pH 6.5); gradual wavy boundary.
- Bw2—21 to 27 inches; yellowish brown (10YR 5/4) very gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine irregular pores and few very fine and fine tubular pores; 30 percent gravel and 10 percent cobbles; slightly acid (pH 6.4); gradual wavy boundary.

**Bw3**—27 to 46 inches; yellowish brown (10YR 5/4) extremely cobbly coarse sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; 25 percent gravel and 50 percent cobbles; slightly acid (pH 6.4); gradual wavy boundary.

**BC**—46 to 60 inches; brownish yellow (10YR 6/6) extremely cobbly loamy coarse sand, dark yellowish brown (10YR 4/6) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; few very fine roots; many very fine irregular pores; 25 percent gravel, 60 percent cobbles, and 5 percent stones; slightly acid (pH 6.3).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—20 to 40 inches

Depth to bedrock—60 inches or more

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—neutral or slightly acid

#### *Particle-size control section:*

Content of clay—8 to 15 percent

Content of rock fragments—35 to 65 percent

#### *A horizon:*

Value—3 to 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel, 0 to 5 percent cobbles, and 0 to 5 percent stones

#### *Bw1 and Bw2 horizons:*

Value—3 to 5 dry and 2 or 3 moist

Chroma—2 to 4 dry or moist

Content of clay—8 to 15 percent

Content of rock fragments—35 to 60 percent total, with 30 to 50 percent gravel and 0 to 10 percent cobbles

#### *Bw3 and BC horizons:*

Hue—10YR or 2.5Y

Value—4 to 6 dry and 3 or 4 moist

Chroma—2 to 6 dry or moist

Texture—loamy coarse sand, coarse sandy loam, sandy loam, or loamy sand

Content of clay—4 to 12 percent

Content of rock fragments—50 to 85 percent total, with 15 to 60 percent gravel, 0 to 60 percent cobbles, and 0 to 25 percent stones

## ***Searles Series***

*Depth class:* Moderately deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Hillslopes

*Parent material:* Colluvium derived from basalt

*Slope range:* 25 to 65 percent

*Elevation:* 2,590 to 3,810 feet

*Mean annual precipitation:* 13 to 15 inches

*Mean annual air temperature:* 50 to 51 degrees F

*Frost-free period:* 140 to 150 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Aridic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 1.5 miles east of Horseshoe Bend; sec. 25, T. 7 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°54'51" N., long. 116°09'43" W.; NAD 83

### ***Typical Pedon***

- A—0 to 3 inches; dark grayish brown (10YR 4/2) cobbly loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to strong fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; common very fine, fine, and medium irregular pores; 15 percent gravel and 15 percent cobbles; neutral (pH 7.0); clear smooth boundary.
- Bt1—3 to 8 inches; brown (10YR 4/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure parting to moderate fine angular blocky; hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine and fine irregular and tubular pores; common distinct clay films on faces of peds and in pores; 35 percent gravel and 5 percent cobbles; neutral (pH 7.1); clear smooth boundary.
- Bt2—8 to 15 inches; brown (7.5YR 4/3) extremely gravelly clay loam, dark brown (7.5YR 3/3) moist; moderate fine angular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; 50 percent gravel, 5 percent cobbles, and 5 percent stones; neutral (pH 7.3); clear smooth boundary.
- BC—15 to 25 inches; brown (10YR 5/3) extremely gravelly loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; 50 percent gravel, 10 percent cobbles, and 5 percent stones; slightly alkaline (pH 7.4); clear wavy boundary.
- R—25 inches; unweathered, fractured basalt.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0.1 to 3.0 percent

Thickness of mollic epipedon—10 to 18 inches

Depth to bedrock (lithic contact)—20 to 40 inches

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 5 to 15 percent gravel, 10 to 20 percent cobbles, and 0 to 5 percent stones

#### *Bt horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Content of clay—27 to 35 percent

Content of rock fragments—50 to 70 percent total, with 35 to 60 percent gravel, 0 to 15 percent cobbles, and 0 to 10 percent stones

*BC horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loam or clay loam

Content of clay—25 to 35 percent

Content of rock fragments—50 to 80 percent total, with 25 to 60 percent gravel,

0 to 30 percent cobbles, and 0 to 10 percent stones

Reaction—neutral or slightly alkaline

**Shafer Series***Depth class:* Moderately deep*Drainage class:* Well drained*Permeability class:* Very slow*Landform:* Escarpments on buttes, structural benches, and hillslopes*Parent material:* Clayey lacustrine deposits and colluvium derived from welded tuff and basalt*Slope range:* 4 to 35 percent*Elevation:* 2,680 to 5,240 feet*Mean annual precipitation:* 14 to 20 inches*Mean annual air temperature:* 45 to 50 degrees F*Frost-free period:* 90 to 140 days*Taxonomic class:* Fine, smectitic, mesic Leptic Haploxererts**Typical Pedon Location**

Boise County, Idaho; about 6 miles northeast of Horseshoe Bend; sec. 17, T. 7 N., R. 3 E.; Harris Creek Summit Quadrangle; lat. 43°56'37" N., long. 116°07'02" W.; NAD 83

**Typical Pedon**

- A—0 to 1 inch; dark reddish gray (5YR 4/2) clay loam, dark reddish brown (5YR 3/2) moist; moderate thin and medium platy structure parting to strong medium and coarse granular; hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; many very fine and fine tubular pores; cracks 5 millimeters to 15 centimeters wide; neutral (pH 7.2); abrupt smooth boundary.
- BA—1 to 7 inches; dark reddish gray (5YR 4/2) clay, dark reddish brown (5YR 3/2) moist; moderate coarse and very coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; cracks 5 millimeters to 15 centimeters wide; slightly acid (pH 6.3); clear smooth boundary.
- Btss1—7 to 18 inches; dark reddish gray (5YR 4/2) clay, dark reddish brown (5YR 3/2) moist; strong very coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; common intersecting slickensides; common wedge-shaped aggregates oriented 30 to 40 degrees from horizontal; cracks 5 millimeters to 3 centimeters wide; slightly acid (pH 6.3); clear smooth boundary.
- Btss2—18 to 22 inches; brown (7.5YR 5/4) clay loam, brown (7.5YR 4/4) moist; strong medium subangular blocky structure; extremely hard, very firm, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; common prominent clay

films on faces of peds and in pores; common intersecting slickensides; common wedge-shaped aggregates oriented 30 to 40 degrees from horizontal; cracks 1 millimeter to 2 centimeters wide; 10 percent gravel; neutral (pH 6.7); abrupt wavy boundary.

Crt—22 to 25 inches; moderately cemented, weathered welded tuff; common distinct clay films on top of horizon and in fractures; abrupt smooth boundary.

R—25 inches; unweathered welded tuff.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0 to 3 percent

Thickness of mollic epipedon—7 to 20 inches

Depth to bedrock (paralithic contact)—20 to 38 inches

Depth to bedrock (lithic contact)—20 to 40 inches

Reaction—slightly acid or neutral

Characteristics of surface cracks—5 millimeters to 15 centimeters wide and open from July through October in most years

#### *A horizon:*

Hue—5YR to 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—27 to 40 percent

Content of rock fragments—0 to 60 percent total, with 0 to 15 percent stones, 0 to 30 percent cobbles, and 0 to 15 percent gravel

#### *BA horizon:*

Hue—5YR to 10YR

Value—4 to 7 dry and 3 to 5 moist

Chroma—2 to 4 dry or moist

Texture—silty clay loam, silty clay, clay, or clay loam

Content of clay—35 to 60 percent

Content of rock fragments—0 to 30 percent total, with 0 to 15 percent cobbles and 0 to 15 percent gravel

#### *Btss horizon:*

Hue—5YR to 10YR

Value—4 to 7 dry and 3 to 5 moist

Chroma—2 to 4 dry or moist

Texture—silty clay loam, silty clay, clay, or clay loam

Content of clay—35 to 60 percent

Content of rock fragments—0 to 30 percent total, with 0 to 15 percent cobbles and 0 to 15 percent gravel

Abundance of slickensides—few or common

Characteristics of wedge-shaped aggregates—few to common and oriented 30 to 60 degrees from horizontal

Width of cracks—1 millimeter to 4 centimeters

## ***Shawmount Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Flood-plain steps, stream terraces, and relict lakebeds

*Parent material:* Gravelly alluvium and colluvium

*Slope range:* 1 to 35 percent  
*Elevation:* 2,520 to 3,210 feet  
*Mean annual precipitation:* 13 to 15 inches  
*Mean annual air temperature:* 50 to 51 degrees F  
*Frost-free period:* 140 to 150 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Aridic Argixerolls

### **Typical Pedon Location**

Boise County, Idaho; about 2.5 miles north of Horseshoe Bend; sec. 14, T. 7 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°56'55" N., long. 116°10'44" W.; NAD 83

### **Typical Pedon**

- A—0 to 4 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; common very fine and fine and few medium tubular and irregular pores; 20 percent gravel and 5 percent cobbles; slightly acid (pH 6.1); clear smooth boundary.
- Bt1—4 to 9 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many very fine and fine roots; common very fine and fine and few medium tubular pores; 35 percent gravel, 5 percent cobbles, and 5 percent stones; slightly acid (pH 6.4); clear smooth boundary.
- Bt2—9 to 14 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; weak medium prismatic structure parting to moderate fine and medium subangular blocky; very hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine tubular pores; continuous distinct clay films on faces of peds and in pores; 35 percent gravel, 5 percent cobbles, and 5 percent stones; slightly acid (pH 6.4); clear smooth boundary.
- Bt3—14 to 26 inches; yellowish brown (10YR 5/4) very gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; hard, friable, slightly sticky and nonplastic; few very fine and fine roots; common very fine and fine tubular and irregular pores; common distinct clay films on faces of peds, in pores, and bridging sand grains; 35 percent gravel, 10 percent cobbles, and 5 percent stones; neutral (pH 6.6); clear smooth boundary.
- E&Bt—26 to 35 inches; 95 percent E material that is light yellowish brown (10YR 6/4) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; few very fine and fine tubular and irregular pores; 40 percent gravel, 5 percent cobbles, and 5 percent stones; neutral (pH 6.6); Bt material consists of continuous lamellae that are dark yellowish brown (10YR 4/4) sandy clay loam, dark yellowish brown (10YR 3/4) moist, and are 2 to 10 millimeters thick and 2 to 5 inches apart; many distinct clay films bridging sand grains; clear wavy boundary.
- C—35 to 60 inches; light yellowish brown (10YR 6/4) extremely cobbly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; 35 percent gravel, 30 percent cobbles, and 10 percent stones; neutral (pH 6.6).

### **Range in Characteristics**

*Profile:*

Percentage of surface covered with stones—0.01 to 0.1 percent

Thickness of mollic epipedon—7 to 12 inches

Depth to bedrock—60 inches or more

Frequency of flooding—none or very rare

Reaction—slightly acid or neutral

*Particle-size control section:*

Content of clay—18 to 30 percent

Content of rock fragments—35 to 60 percent

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel,  
5 to 10 percent cobbles, and 0 to 5 percent stones

*Bt horizon:*

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—loam, clay loam, or sandy clay loam

Content of clay—18 to 30 percent

Content of rock fragments—35 to 60 percent total, with 35 to 50 percent gravel,  
5 to 10 percent cobbles, and 0 to 5 percent stones

*E&Bt horizon:*

Clay content (weighted average)—5 to 15 percent

Rock fragments (weighted average)—50 to 60 percent

*E material*

Percentage of horizon—more than 90 percent

Value—6 or 7 dry and 4 or 5 moist

Texture—sandy loam or loamy sand

Content of clay—5 to 15 percent

Content of rock fragments—50 to 60 percent total, with 35 to 55 percent gravel,  
5 to 20 percent cobbles, and 0 to 5 percent stones

*Bt material (lamellae)*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—4 to 6 dry or moist

Texture—sandy loam or sandy clay loam

Content of clay—12 to 22 percent

Thickness—2 to 15 millimeters

Separation—1 to 8 inches apart

*C horizon:*

Value—6 or 7 dry and 4 or 5 moist

Texture—sandy loam or loamy sand

Content of clay—4 to 15 percent

Content of rock fragments—60 to 85 percent total, with 35 to 70 percent gravel,  
5 to 30 percent cobbles, and 0 to 10 percent stones

## ***Shilling Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderate

*Landform:* Mountain slopes

*Parent material:* Volcanic ash and colluvium derived from basalt

*Slope range:* 15 to 65 percent

*Elevation:* 3,820 to 6,710 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Vitrandic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 3 miles south of Banks; sec. 16, T. 8 N., R. 3 E.;

Banks Quadrangle; lat. 44°01'30" N., long. 116°06'27" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 5 inches; dark grayish brown (2.5Y 4/2) gravelly ashy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 25 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

AB—5 to 10 inches; olive brown (2.5Y 4/3) gravelly ashy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to weak coarse granular; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular pores; 25 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

Bw1—10 to 19 inches; light olive brown (2.5Y 5/3) very gravelly loam, dark olive brown (2.5Y 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; many very fine, fine, and medium and few coarse roots; many very fine and fine irregular and tubular pores; about 75 percent of faces of peds covered with coatings of silt; 35 percent gravel; slightly acid (pH 6.2); gradual wavy boundary.

Bw2—19 to 35 inches; light olive brown (2.5Y 5/4) very gravelly loam, olive brown (2.5Y 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular and tubular pores; about 25 percent of faces of peds covered with coatings of silt; 45 percent gravel; slightly acid (pH 6.1); gradual wavy boundary.

Bw3—35 to 54 inches; light olive brown (2.5Y 5/4) very gravelly loam, olive brown (2.5Y 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium tubular pores; about 10 percent of faces of peds covered with coatings of silt; 40 percent gravel; slightly acid (pH 6.1); gradual wavy boundary.

Bw4—54 to 60 inches; light olive brown (2.5Y 5/4) very gravelly loam, olive brown (2.5Y 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; common very fine, fine, and medium tubular pores; about 20 percent of faces of peds covered with coatings of silt; 30 percent gravel and 5 percent cobbles; slightly acid (pH 6.1).

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches

Thickness of volcanic ash influence—7 to 12 inches

Depth to bedrock—60 inches or more

Base saturation (10 to 30 inches)—50 to 75 percent  
 Reaction—moderately acid or slightly acid

*Particle-size control section:*

Content of clay—18 to 27 percent  
 Content of rock fragments—35 to 60 percent

*A and AB horizons:*

Hue—10YR or 2.5Y  
 Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—10 to 15 percent  
 Content of rock fragments—15 to 35 percent gravel  
 Content of volcanic glass—5 to 20 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

*Bw horizon:*

Hue—10YR or 2.5Y  
 Value—4 or 5 dry and 3 or 4 moist  
 Chroma—3 or 4 dry or moist  
 Content of clay—18 to 27 percent  
 Content of rock fragments—35 to 75 percent total, with 0 to 40 percent cobbles and 30 to 55 percent gravel

## ***Shimo Series***

*Depth class:* Moderately deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls and hillslopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 25 to 90 percent

*Elevation:* 2,520 to 6,290 feet

*Mean annual precipitation:* 13 to 22 inches

*Mean annual air temperature:* 45 to 51 degrees F

*Frost-free period:* 90 to 150 days

*Taxonomic class:* Sandy-skeletal, mixed, mesic Entic Ultic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 2 miles northeast of Banks; sec. 23, T. 9 N., R. 3 E.;  
 Banks Quadrangle; lat. 44°06'03" N., long. 116°04'12" W.; NAD 83

### ***Typical Pedon***

A1—0 to 4 inches; brown (10YR 5/3) very stony loamy sand, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 20 percent gravel, 5 percent cobbles, and 20 percent stones; neutral (pH 6.6); clear wavy boundary.

A2—4 to 12 inches; brown (10YR 5/3) cobbly loamy sand, very dark grayish brown (10YR 3/2) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 10 percent gravel and 20 percent cobbles; neutral (pH 6.6); clear wavy boundary.

C1—12 to 20 inches; brown (10YR 5/3) very cobbly loamy sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine and few medium roots; many very fine and fine irregular pores; 25 percent gravel and 25 percent cobbles; slightly acid (pH 6.5); gradual wavy boundary.

C2—20 to 24 inches; pale brown (10YR 6/3) very cobbly loamy sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; 25 percent gravel and 15 percent cobbles; slightly acid (pH 6.4); abrupt broken boundary.

R—24 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Percentage of surface covered with stones—0 to 15 percent

Thickness of mollic epipedon—7 to 14 inches

Depth to bedrock (lithic contact)—20 to 40 inches

Base saturation (10 to 30 inches)—50 to 75 percent

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—2 to 7 percent

Content of rock fragments—35 to 85 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—20 to 60 percent total, with 10 to 40 percent gravel, 0 to 20 percent cobbles, and 0 to 20 percent stones

#### *C horizon:*

Hue—10YR or 2.5Y

Value—5 to 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loamy sand or loamy coarse sand

Content of clay—2 to 7 percent

Content of rock fragments—35 to 85 percent total, with 15 to 70 percent gravel and 0 to 50 percent cobbles

## ***Shirts Series***

*Depth class:* Moderately deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls and mountain slopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 4 to 90 percent

*Elevation:* 2,750 to 7,250 feet

*Mean annual precipitation:* 20 to 36 inches

*Mean annual air temperature:* 39 to 45 degrees F

*Frost-free period:* 50 to 90 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, frigid Ultic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 4 miles northwest of Banks; sec. 11, T. 9 N., R. 2 E.; High Valley Quadrangle; lat. 44°07'43" N., long. 116°10'37" W.; NAD 83

### ***Typical Pedon***

- O<sub>i</sub>—0 to 1 inch; slightly decomposed forest litter.
- A—1 to 3 inches; dark grayish brown (10YR 4/2) coarse sandy loam, very dark brown (10YR 2/2) moist; weak thin platy structure parting to moderate fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; many very fine and fine irregular pores; 10 percent fine gravel; moderately acid (pH 5.8); clear smooth boundary.
- AB—3 to 10 inches; grayish brown (10YR 5/2) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to moderate fine and medium granular; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 10 percent fine gravel; moderately acid (pH 6.0); clear wavy boundary.
- Bw<sub>1</sub>—10 to 15 inches; brown (10YR 5/3) fine gravelly coarse sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine and fine irregular pores and few very fine and fine tubular pores; 15 percent fine gravel; slightly acid (pH 6.2); gradual wavy boundary.
- Bw<sub>2</sub>—15 to 25 inches; light brownish gray (10YR 6/2) fine gravelly coarse sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; many very fine and fine irregular pores and few very fine and fine tubular pores; 15 percent fine gravel; slightly acid (pH 6.3); gradual wavy boundary.
- C—25 to 29 inches; light brownish gray (10YR 6/2) fine gravelly loamy coarse sand, brown (10YR 4/3) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; 25 percent fine gravel; slightly acid (pH 6.2); abrupt irregular boundary.
- R—29 inches; granodiorite.

### ***Range in Characteristics***

#### *Profile:*

- Thickness of mollic epipedon—10 to 20 inches  
 Depth to bedrock (lithic contact)—20 to 40 inches  
 Base saturation (some part between 10 and 30 inches)—50 to 75 percent  
 Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

- Content of clay—4 to 10 percent  
 Content of rock fragments—5 to 25 percent

#### *A horizon:*

- Value—3 to 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Texture—sandy loam or coarse sandy loam  
 Content of clay—5 to 12 percent  
 Content of rock fragments—0 to 20 percent gravel

#### *Bw horizon:*

- Value—5 or 6 dry and 4 or 5 moist  
 Chroma—2 to 4 dry or moist  
 Texture—sandy loam or coarse sandy loam

Content of clay—5 to 12 percent  
 Content of rock fragments—0 to 35 percent gravel

*C horizon:*

Hue—10YR or 2.5Y  
 Value—5 to 7 dry and 4 or 5 moist  
 Chroma—2 to 4 dry or moist  
 Structure—massive or single grain  
 Texture—sandy loam, coarse sandy loam, loamy coarse sand, or coarse sand  
 Content of clay—2 to 7 percent  
 Content of rock fragments—0 to 35 percent total, with 0 to 35 percent gravel and  
 0 to 5 percent cobbles

## ***Shoebend Series***

*Depth class:* Moderately deep  
*Drainage class:* Well drained  
*Permeability class:* Moderately slow  
*Landform:* Hillslopes  
*Parent material:* Colluvium derived from granodiorite  
*Slope range:* 25 to 65 percent  
*Elevation:* 2,600 to 4,000 feet  
*Mean annual precipitation:* 12 to 15 inches  
*Mean annual air temperature:* 50 to 52 degrees F  
*Frost-free period:* 140 to 155 days  
*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Aridic Argixerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 0.5 mile northeast of Gardena; sec. 35, T. 8 N., R. 2 E.;  
 Horseshoe Bend Quadrangle; lat. 43°58'47" N., long. 116°11'06" W.; NAD 83

### ***Typical Pedon***

- A—0 to 7 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; weak medium and coarse granular structure; soft, very friable, slightly sticky and moderately plastic; many very fine and fine and few medium roots; many very fine, fine, and medium irregular pores; 10 percent fine gravel; neutral (pH 7.2); clear smooth boundary.
- AB—7 to 14 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and moderately plastic; many very fine and fine and few medium roots; many very fine, fine, and medium irregular and tubular pores; 5 percent fine gravel; neutral (pH 7.2); clear smooth boundary.
- Bt1—14 to 20 inches; brown (10YR 5/3) clay loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent fine gravel; neutral (pH 7.3); clear wavy boundary.
- Bt2—20 to 28 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse subangular blocky structure; very hard, friable, very sticky and very plastic; common very fine and fine and few medium roots; common very fine tubular pores; many distinct clay films on faces of peds and in pores; 5 percent fine gravel; neutral (pH 6.6); abrupt wavy boundary.

Cr—28 to 34 inches; moderately cemented, weathered granodiorite; gradual wavy boundary.

R—34 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—7 to 15 inches

Depth to bedrock (paralithic contact)—20 to 40 inches

Depth to bedrock (lithic contact)—30 to 60 inches

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—slightly acid or neutral

#### *Particle-size control section:*

Content of clay—22 to 35 percent

Content of rock fragments—0 to 15 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—0 to 15 percent total, with 0 to 15 percent gravel and 0 to 5 percent cobbles

#### *Bt horizon:*

Hue—7.5YR or 10YR

Value—5 to 7 dry and 3 to 5 moist

Chroma—3 to 6 dry or moist

Texture—loam, sandy clay loam, or clay loam

Content of clay—20 to 35 percent

Content of rock fragments—10 to 35 percent total, with 10 to 35 percent gravel and 0 to 5 percent cobbles

## ***Siphonlake Series***

*Depth class:* Deep

*Drainage class:* Well drained

*Permeability class:* Moderately rapid

*Landform:* Hillslopes

*Parent material:* Sandy lacustrine deposits

*Slope range:* 35 to 65 percent

*Elevation:* 2,760 to 4,550 feet

*Mean annual precipitation:* 14 to 20 inches

*Mean annual air temperature:* 46 to 50 degrees F

*Frost-free period:* 100 to 140 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Typic Haploxerolls

### ***Typical Pedon Location***

Boise County, Idaho; about 3.5 miles southwest of Horseshoe Bend; sec. 4, T. 6 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°53'16" N., long. 116°13'21" W.; NAD 83

### ***Typical Pedon***

A1—0 to 2 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse

- roots; many very fine and fine irregular pores; 5 percent fine gravel; slightly acid (pH 6.2); clear smooth boundary.
- A2—2 to 6 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; weak medium platy structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent fine gravel; slightly acid (pH 6.1); gradual wavy boundary.
- BA—6 to 19 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; 5 percent fine gravel; moderately acid (pH 6.0); clear wavy boundary.
- Bt—19 to 31 inches; light yellowish brown (10YR 6/4) coarse sandy loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; few faint clay films bridging sand grains and in pores; few continuous lamellae 2 to 5 millimeters thick with common distinct clay films bridging sand grains, on faces of peds, and in pores; 10 percent fine gravel; slightly acid (pH 6.2); gradual wavy boundary.
- BC—31 to 42 inches; very pale brown (10YR 7/4) coarse sandy loam, yellowish brown (10YR 5/4) moist; moderate fine and medium subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; 10 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.
- C—42 to 47 inches; very pale brown (10YR 8/2) fine gravelly loamy coarse sand, grayish brown (10YR 5/2) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; 15 percent fine gravel; moderately acid (pH 6.0); abrupt wavy boundary.
- Cr—47 to 60 inches; moderately cemented, very pale brown (10YR 8/2), stratified sandy lacustrine deposits.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches  
 Depth to bedrock (paralithic contact)—40 to 60 inches

#### *Particle-size control section:*

Content of clay—8 to 18 percent  
 Content of rock fragments—0 to 10 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—10 to 18 percent  
 Content of rock fragments—0 to 5 percent fine gravel  
 Reaction—slightly acid or neutral

#### *BA horizon:*

Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Texture—loam or sandy loam  
 Content of clay—8 to 18 percent  
 Content of rock fragments—0 to 5 percent fine gravel  
 Reaction—moderately acid to neutral

*Bt horizon:*

Value—4 to 6 dry and 3 to 5 moist  
 Chroma—2 to 4 dry or moist  
 Texture—loam, sandy loam, or coarse sandy loam  
 Content of clay—10 to 18 percent  
 Content of rock fragments—0 to 10 percent fine gravel  
 Reaction—moderately acid to neutral

*BC horizon:*

Value—6 to 8 dry and 4 or 5 moist  
 Chroma—2 to 4 dry or moist  
 Texture—coarse sandy loam or sandy loam  
 Content of clay—7 to 15 percent  
 Content of rock fragments—0 to 20 percent fine gravel  
 Reaction—moderately acid to neutral

**Solarview Series**

*Depth class:* Shallow

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Hillslopes

*Parent material:* Sandy lacustrine deposits

*Slope range:* 35 to 65 percent

*Elevation:* 2,680 to 4,550 feet

*Mean annual precipitation:* 13 to 17 inches

*Mean annual air temperature:* 48 to 51 degrees F

*Frost-free period:* 120 to 150 days

*Taxonomic class:* Mixed, mesic, shallow Xeric Torripsamments

**Typical Pedon Location**

Boise County, Idaho; about 4 miles southwest of Horseshoe Bend; sec. 4, T. 6 N., R. 2 E.; Horseshoe Bend Quadrangle; lat. 43°51'23" N., long. 116°14'06" W.; NAD 83

**Typical Pedon**

- A—0 to 2 inches; grayish brown (10YR 5/2) coarse sandy loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, slightly sticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine irregular pores; 10 percent fine gravel; neutral (pH 7.0); clear smooth boundary.
- AC—2 to 12 inches; pale brown (10YR 6/3) loamy coarse sand, brown (10YR 4/3) moist; weak fine granular structure parting to single grain; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; many very fine irregular pores; 10 percent fine gravel; neutral (pH 7.0); clear wavy boundary.
- C—12 to 16 inches; very pale brown (10YR 7/3) fine gravelly coarse sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; many very fine irregular pores; 30 percent fine gravel; neutral (pH 6.8); abrupt wavy boundary.
- Cr—16 to 60 inches; moderately cemented, stratified sandy lacustrine deposits.

### **Range in Characteristics**

*Profile:*

Depth to bedrock (paralithic contact)—14 to 20 inches

*Particle-size control section:*

Content of clay—2 to 8 percent

Content of rock fragments—10 to 35 percent

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—7 to 12 percent

Content of rock fragments—0 to 15 percent fine gravel

*AC horizon:*

Value—5 or 6 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Content of clay—5 to 10 percent

Content of rock fragments—10 to 20 percent fine gravel

*C horizon:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—loamy coarse sand or coarse sand

Content of clay—0 to 5 percent

Content of rock fragments—15 to 35 percent fine gravel

### **Staircase Series**

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Permeability class:* Moderately rapid

*Landform:* Flood-plain steps and relict lakebeds

*Parent material:* Coarse-loamy alluvium

*Slope range:* 0 to 4 percent

*Elevation:* 3,020 to 4,520 feet

*Mean annual precipitation:* 16 to 26 inches

*Mean annual air temperature:* 45 to 48 degrees F

*Frost-free period:* 90 to 120 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Cumulic Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 4.5 miles north of Crouch; sec. 23, T. 10 N., R. 4 E.; Pyle Creek Quadrangle; lat. 44°10'54" N., long. 115°57'01" W.; NAD 83

### **Typical Pedon**

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; weak thin and medium platy structure parting to moderate fine and medium subangular blocky; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; common very fine and fine and few medium irregular pores; 10 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.

A1—4 to 14 inches; dark grayish brown (10YR 4/2) fine gravelly sandy loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure;

- soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; many very fine and fine and few medium irregular pores; 20 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.
- A2—14 to 22 inches; grayish brown (10YR 5/2) fine gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine and few medium roots; common very fine and fine and few medium irregular pores; 20 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.
- A3—22 to 32 inches; brown (10YR 5/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; common very fine and fine roots; few very fine and fine irregular pores; 20 percent fine gravel; moderately acid (pH 5.8); clear smooth boundary.
- A4—32 to 42 inches; grayish brown (10YR 5/2) fine gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; common very fine and fine roots; few very fine and fine irregular pores; 25 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.
- AB—42 to 50 inches; pale brown (10YR 6/3) fine gravelly sandy loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine and fine roots; few very fine and fine irregular pores; 25 percent fine gravel; moderately acid (pH 6.0); clear wavy boundary.
- Bw1—50 to 58 inches; very pale brown (10YR 7/3) fine gravelly sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; few very fine and fine irregular pores; few fine faint masses of iron that are brown (10YR 4/3) moist; 25 percent fine gravel; slightly acid (pH 6.3); clear smooth boundary.
- Bw2—58 to 72 inches; very pale brown (10YR 7/3) gravelly loamy sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine irregular pores; few fine and medium distinct masses of iron that are yellowish brown (10YR 5/6) moist; 30 percent gravel; slightly acid (pH 6.5).

### ***Range in Characteristics***

#### *Profile:*

- Thickness of mollic epipedon—24 to 48 inches  
 Depth to redoximorphic features—40 to 60 inches  
 Depth to bedrock—60 inches or more  
 Frequency of flooding—rare  
 Base saturation (some part between 10 and 30 inches)—50 to 75 percent  
 Reaction—moderately acid to neutral

#### *Particle-size control section:*

- Content of clay—8 to 18 percent  
 Content of rock fragments—5 to 25 percent

#### *Ap and A horizons:*

- Value—4 or 5 dry and 2 or 3 moist  
 Chroma—1 to 3 dry or moist  
 Texture—sandy loam or loam  
 Content of clay—8 to 18 percent  
 Content of rock fragments—0 to 25 percent fine gravel

#### *AB and Bw horizons:*

- Hue—2.5Y or 10YR  
 Value—5 to 7 dry and 3 to 5 moist

Chroma—2 or 3 dry or moist  
 Content of organic matter—0 to 1 percent, with an irregular decrease as depth increases  
 Texture—sandy loam, coarse sandy loam, loamy sand, or loamy coarse sand  
 Content of clay—4 to 12 percent  
 Content of rock fragments—5 to 35 percent gravel  
 Characteristics of redoximorphic concentrations—few or common, distinct or prominent soft masses  
 A buried A horizon and/or lenses of sand are in some pedons.

### ***Stardust Series***

*Depth class:* Very deep  
*Drainage class:* Well drained  
*Permeability class:* Moderate  
*Landform:* Fan remnants and landslides  
*Parent material:* Loamy alluvium  
*Slope range:* 1 to 25 percent  
*Elevation:* 2,720 to 4,990 feet  
*Mean annual precipitation:* 20 to 26 inches  
*Mean annual air temperature:* 45 to 48 degrees F  
*Frost-free period:* 90 to 120 days  
*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Ultic Argixerolls

#### ***Typical Pedon Location***

Boise County, Idaho; about 1 mile southwest of Crouch; sec. 16, T. 9 N., R. 4 E.;  
 Garden Valley Quadrangle; lat. 44°06'35" N., long. 115°59'04" W.; NAD 83

#### ***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.  
 A1—1 to 3 inches; grayish brown (10YR 5/2) fine gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to moderate fine and medium granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine and fine and few medium irregular and tubular pores; 15 percent fine gravel; slightly acid (pH 6.5); clear smooth boundary.  
 A2—3 to 9 inches; grayish brown (10YR 5/2) fine gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine and few medium tubular pores; 15 percent fine gravel; slightly acid (pH 6.1); clear smooth boundary.  
 Bt1—9 to 18 inches; brown (10YR 5/3) fine gravelly loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine and fine and few medium tubular pores; common faint clay films on faces of peds and in pores; 15 percent fine gravel; moderately acid (pH 5.7); clear smooth boundary.  
 Bt2—18 to 38 inches; yellowish brown (10YR 5/4) fine gravelly sandy clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; many faint clay films on faces of peds and in pores; 15 percent fine gravel; moderately acid (pH 5.6); clear smooth boundary.

- Bt3**—38 to 54 inches; pale brown (10YR 6/3) gravelly sandy clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; many faint clay films on faces of peds and in pores; 20 percent gravel; moderately acid (pH 5.6); clear smooth boundary.
- BC**—54 to 67 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine, fine, and medium tubular pores; 25 percent gravel; moderately acid (pH 5.6).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—10 to 20 inches  
 Depth to base of argillic horizon—45 inches or more  
 Depth to bedrock—60 inches or more  
 Base saturation (some part between 10 and 30 inches)—50 to 75 percent  
 Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—18 to 30 percent  
 Content of medium sand or coarser—more than 25 percent  
 Content of rock fragments—5 to 30 percent

#### *A horizon:*

Hue—7.5YR or 10YR  
 Value—4 or 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of clay—15 to 25 percent  
 Content of rock fragments—15 to 25 percent fine gravel

#### *Bt1 horizon:*

Hue—7.5Y or 10YR  
 Value—5 or 6 dry and 3 or 4 moist  
 Chroma—3 or 4 dry or moist  
 Texture—loam or sandy clay loam  
 Content of clay—18 to 30 percent  
 Content of rock fragments—5 to 25 percent gravel

#### *Bt2 horizon:*

Hue—7.5Y or 10YR  
 Value—6 or 7 dry and 4 or 5 moist  
 Chroma—3 or 4 dry or moist  
 Texture—loam or sandy clay loam  
 Content of clay—18 to 30 percent  
 Content of rock fragments—5 to 35 percent gravel

## ***Timberbutte Series***

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderate

*Landform:* Volcanic cones

*Parent material:* Volcanic ash and colluvium derived from welded tuff

*Slope range:* 35 to 65 percent

*Elevation:* 4,090 to 5,040 feet

*Mean annual precipitation:* 26 to 30 inches

*Mean annual air temperature:* 43 to 45 degrees F

*Frost-free period:* 75 to 90 days

*Taxonomic class:* Ashy-skeletal over loamy-skeletal, glassy over isotic, frigid Humic Vitrixerands

### **Typical Pedon Location**

Boise County, Idaho; about 9 miles north of Horseshoe Bend; sec. 5, T. 8 N., R. 2 E.; 44°03'12" N., long. 116°14'12" W.; NAD 83

### **Typical Pedon**

Oi—0 to 2 inches; undecomposed and partially decomposed forest litter.

A—2 to 12 inches; dark grayish brown (10YR 4/2) very gravelly ashy silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular and tubular pores; 40 percent gravel; slightly acid (pH 6.4); diffuse wavy boundary.

Bw1—12 to 21 inches; brown (10YR 5/3) very gravelly ashy silt loam, dark brown (10YR 3/3) moist; weak very fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular and tubular pores; 45 percent gravel and 10 percent cobbles; slightly acid (pH 6.3); gradual wavy boundary.

Bw2—21 to 29 inches; brown (10YR 5/3) very gravelly ashy loam, dark brown (10YR 3/3) moist; weak very fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular and tubular pores; 45 percent gravel and 10 percent cobbles; slightly acid (pH 6.3); gradual wavy boundary.

2Bw3—29 to 39 inches; brown (10YR 5/3) extremely gravelly sandy loam, brown (10YR 4/3) moist; weak very fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular and tubular pores; 55 percent gravel and 10 percent cobbles; moderately acid (pH 6.0); gradual wavy boundary.

2C—39 to 60 inches; light brownish gray (10YR 6/2) extremely gravelly sandy loam, brown (10YR 5/3) moist; single grain; loose, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine, fine, and medium irregular and tubular pores; 65 percent gravel and 15 percent cobbles; moderately acid (pH 6.0).

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—20 to 30 inches

Depth to bedrock—60 inches or more

Base saturation (upper 30 inches)—50 to 75 percent

#### *Particle-size control section:*

Content of clay—7 to 12 percent

Content of rock fragments—60 to 80 percent

#### *Volcanic ash mantle:*

Thickness—14 to 30 inches

Content of volcanic glass—30 to 50 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.2 percent

15-bar water retention (air-dried samples)—10 to 12 percent

*A horizon:*

Value—3 to 4 dry and 2 or 3 moist

Chroma—1 or 2 dry or moist

Content of rock fragments—35 to 60 percent gravel

*Bw horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—ashy loam or ashy silt loam

Content of clay—7 to 12 percent

Content of rock fragments—35 to 60 percent total, with 30 to 50 percent gravel and 5 to 10 percent cobbles

*2Bw horizon:*

Value—4 or 5 dry and 3 or 4 moist

Chroma—2 or 3 dry or moist

Texture—loam or sandy loam

Content of clay—7 to 12 percent

Content of rock fragments—60 to 75 percent total, with 50 to 65 percent gravel and 5 to 15 percent cobbles

Reaction—moderately acid or slightly acid

*2C horizon:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—2 or 3 dry or moist

Texture—loam or sandy loam

Content of clay—5 to 10 percent

Content of rock fragments—60 to 85 percent total, with 55 to 70 percent gravel and 5 to 15 percent cobbles

Reaction—moderately acid or slightly acid

## ***Tripod Series***

*Depth class:* Very deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls and mountain slopes

*Parent material:* Volcanic ash and colluvium derived from granodiorite

*Slope range:* 4 to 90 percent

*Elevation:* 3,200 to 7,010 feet

*Mean annual precipitation:* 26 to 36 inches

*Mean annual air temperature:* 39 to 44 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Sandy-skeletal, isotic, frigid Vitrandic Dystroxerepts

### ***Typical Pedon Location***

Boise County, Idaho; about 2.5 miles northwest of Crouch; sec. 6, T. 9 N., R. 4 E.;

Packer John Mountain Quadrangle; lat. 44°08'41" N., long. 116°01'09" W.;

NAD 83

### ***Typical Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 6 inches; dark grayish brown (10YR 4/2) fine gravelly ashy coarse sandy

- loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine, fine, medium, and coarse irregular pores; 20 percent fine gravel; neutral (pH 6.6); gradual smooth boundary.
- A2—6 to 13 inches; brown (10YR 5/3) fine gravelly ashy coarse sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine, fine, medium, and coarse irregular pores; 25 percent fine gravel and 5 percent cobbles; slightly acid (pH 6.4); clear smooth boundary.
- 2AC—13 to 23 inches; light brownish gray (10YR 6/2) very cobbly loamy coarse sand, dark grayish brown (2.5Y 4/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots; many very fine, fine, medium, and coarse irregular pores; 25 percent gravel and 30 percent cobbles; slightly acid (pH 6.2); gradual wavy boundary.
- 2C1—23 to 50 inches; light gray (10YR 7/2) very gravelly coarse sand, grayish brown (2.5Y 5/2) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, medium, and coarse roots; common very fine, fine, medium, and coarse irregular pores; 40 percent gravel and 10 percent cobbles; moderately acid (pH 5.9); clear smooth boundary.
- 2C2—50 to 60 inches; white (10YR 8/1) very cobbly coarse sand, gray (2.5Y 6/1) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine, fine, medium, and coarse roots; common very fine, fine, medium, and coarse irregular pores; 30 percent gravel and 20 percent cobbles; moderately acid (pH 5.9).

### ***Range in Characteristics***

#### *Profile:*

Thickness of umbric epipedon—10 to 20 inches

Thickness of volcanic ash influence—10 to 20 inches

Depth to bedrock—60 inches or more

Depth to sandy-skeletal material (2AC or 2C horizon)—10 to 20 inches

#### *Particle-size control section:*

Content of clay—2 to 7 percent

Content of rock fragments—35 to 75 percent

#### *A horizon:*

Hue—10YR or 2.5Y

Value—3 to 5 dry and 2 or 3 moist

Chroma—1 to 3 dry or moist

Texture—ashy sandy loam or ashy coarse sandy loam

Content of rock fragments—15 to 35 percent total, with 15 to 35 percent fine gravel and

0 to 5 percent cobbles

Reaction—slightly acid or neutral

Content of volcanic glass—5 to 20 percent

Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *2C horizon:*

Hue—10YR or 2.5Y

Value—5 to 8 dry and 4 to 6 moist

Chroma—1 to 4 dry or moist

Texture—loamy sand, loamy coarse sand, sand, or coarse sand

Content of clay—0 to 4 percent

Content of rock fragments—35 to 75 percent total, with 15 to 50 percent gravel, 5 to 30 percent cobbles, and 0 to 25 percent stones  
 Reaction—moderately acid or slightly acid

### ***Typic Haploxerolls***

*Depth class:* Moderately deep, deep, and very deep

*Drainage class:* Well drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls

*Parent material:* Colluvium derived from basalt

*Slope range:* 35 to 65 percent

*Elevation:* 3,050 to 3,740 feet

*Mean annual precipitation:* 14 to 24 inches

*Mean annual air temperature:* 44 to 50 degrees F

*Frost-free period:* 75 to 140 days

*Taxonomic class:* Typic Haploxerolls

### ***Representative Pedon Location***

Boise County, Idaho; about 13 miles southwest of Idaho City; sec. 21, T. 4 N., R. 4 E.; Dunnigan Creek Quadrangle; lat. 43°39'49" N., long. 115°58'37" W.; NAD 83

### ***Representative Pedon***

- A1—0 to 8 inches; grayish brown (10YR 5/2) cobbly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; common very fine and fine irregular pores; 10 percent gravel, 10 percent cobbles, and 5 percent stones; neutral (pH 6.6); clear smooth boundary.
- A2—8 to 18 inches; brown (10YR 5/3) cobbly sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; common very fine and fine and few medium tubular and irregular pores; 10 percent gravel, 10 percent cobbles, and 5 percent stones; neutral (pH 6.7); clear smooth boundary.
- Bw1—18 to 26 inches; yellowish brown (10YR 5/4) very cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine and few medium roots; common very fine and fine and few medium tubular pores; 20 percent gravel, 20 percent cobbles, and 5 percent stones; neutral (pH 6.6); clear wavy boundary.
- Bw2—26 to 60 inches; yellowish brown (10YR 5/4) extremely cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine and few medium tubular pores; 30 percent gravel, 40 percent cobbles, and 10 percent stones; neutral (pH 6.6).

### ***Range in Characteristics***

*Profile:*

Percentage of surface covered with stones—3 to 15 percent

Thickness of mollic epipedon—10 to 20 inches

Depth to bedrock (lithic contact)—30 to 80 inches

Reaction—slightly acid or neutral

*Particle-size control section:*

Content of clay—15 to 34 percent

Content of rock fragments—45 to 75 percent

*A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 50 percent total, with 10 to 30 percent gravel,  
5 to 20 percent cobbles, and 0 to 10 percent stones

*Bw horizon:*

Hue—7.5YR or 10YR

Value—5 or 6 dry and 3 or 4 moist

Chroma—3 or 4 dry or moist

Content of clay—15 to 24 percent

Content of rock fragments—35 to 80 percent total, with 20 to 40 percent gravel,  
5 to 40 percent cobbles, and 0 to 15 percent stones

### ***Ultic Haploxeralfs***

*Depth class:* Moderately deep, deep, and very deep

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Landform:* Terraces

*Parent material:* Loamy lacustrine deposits

*Slope range:* 8 to 35 percent

*Elevation:* 3,690 to 5,200 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Ultic Haploxeralfs

#### ***Representative Pedon Location***

Boise County, Idaho; about 1 mile northeast of New Centerville; sec. 32, T. 7 N.,  
R. 5 E.; Placerville Quadrangle; lat. 43°53'40" N., long. 115°53'45" W.; NAD 83

#### ***Representative Pedon***

Oi—0 to 1 inch; slightly decomposed forest litter.

A—1 to 5 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; common very fine and fine irregular pores; 20 percent gravel; neutral (pH 6.6); clear smooth boundary.

Bt1—5 to 11 inches; yellowish brown (10YR 5/4) gravelly loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; 15 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

Bt2—11 to 15 inches; brownish yellow (10YR 6/6) gravelly sandy clay loam, dark yellowish brown (10YR 4/6) moist; weak fine subangular blocky structure; slightly

hard, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; few very fine and fine tubular and irregular pores; common faint clay films on faces of peds and in pores; many fine and medium faint reddish yellow masses of iron in matrix; 20 percent gravel; slightly acid (pH 6.4); clear smooth boundary.

Bt3—15 to 25 inches; very pale brown (10YR 7/3) fine gravelly sandy clay loam, brown (10YR 5/3) moist; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and slightly plastic; few very fine, fine, medium, and coarse roots; few very fine and fine tubular and irregular pores; common faint clay films on faces of peds and in pores; 15 percent fine gravel; moderately acid (pH 5.6); clear smooth boundary.

CBt—25 to 34 inches; pale yellow (2.5Y 7/3) fine gravelly sandy clay loam, light olive brown (2.5Y 5/3) moist; massive; hard, firm, very sticky and moderately plastic; few very fine and fine roots; common very fine and fine tubular and irregular pores; few faint clay films in pores; light yellowish brown (10YR 6/4) discontinuous lamellae that are 1 to 4 millimeters thick and 3 to 12 inches apart and have varying orientation; 15 percent fine gravel; moderately acid (pH 5.6); gradual smooth boundary.

C1—34 to 43 inches; pale yellow (2.5Y 7/3) fine gravelly sandy clay loam, light olive brown (2.5Y 5/3) moist; massive; hard, friable, slightly sticky and nonplastic; few very fine and fine roots; few very fine and fine tubular and irregular pores; 25 percent fine gravel; moderately acid (pH 5.7); abrupt smooth boundary.

C2—43 to 45 inches; pale yellow (2.5Y 8/2) loam, light brownish gray (2.5Y 6/2) moist; weak thick platy structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine and fine roots; few very fine and fine tubular pores; 5 percent gravel; moderately acid (pH 5.7); abrupt smooth boundary.

C3—45 to 60 inches; pale yellow (2.5Y 7/3) fine gravelly sandy clay loam, light olive brown (2.5Y 5/3) moist; massive; hard, friable, slightly sticky and nonplastic; few very fine and fine roots; few very fine and fine tubular and irregular pores; 25 percent fine gravel; moderately acid (pH 5.7).

### ***Range in Characteristics***

#### *Profile:*

Depth to bedrock (lithic contact)—30 to 80 inches

Base saturation (some part between 10 and 30 inches)—50 to 75 percent

Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—20 to 32 percent

Content of rock fragments—10 to 35 percent

#### *A horizon:*

Hue—7.5YR or 10YR

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—10 to 35 percent total, with 10 to 35 percent gravel and 0 to 5 percent cobbles

#### *Bt horizon:*

Hue—7.5YR or 10YR

Value—5 to 7 dry and 3 to 5 moist

Chroma—3 to 6 dry or moist

Texture—loam, sandy clay loam, or clay loam

Content of clay—20 to 35 percent

Content of rock fragments—10 to 35 percent total, with 10 to 35 percent gravel and 0 to 5 percent cobbles

*CBt and C horizons:*

Hue—10YR or 2.5Y

Value—6 or 7 dry and 4 or 5 moist

Chroma—2 to 4 dry or moist

Texture (stratified)—loam, sandy clay loam, or clay loam

Content of clay—10 to 25 percent

Content of rock fragments—0 to 35 percent total, with 0 to 35 percent gravel and  
0 to 5 percent cobbles***Van Dusen Series****Depth class:* Very deep*Drainage class:* Well drained*Permeability class:* Moderate*Landform:* Hillslopes*Parent material:* Loamy lacustrine deposits*Slope range:* 35 to 65 percent*Elevation:* 2,760 to 4,330 feet*Mean annual precipitation:* 15 to 20 inches*Mean annual air temperature:* 46 to 48 degrees F*Frost-free period:* 100 to 120 days*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Pachic Argixerolls***Typical Pedon Location***Ada County, Idaho; about 4 miles northeast of Eagle; sec. 30, T. 5 N., R. 2 E.; Eagle  
Quadrangle; lat. 43°44'39" N., long. 116°16'08" W.; NAD 83***Typical Pedon***

- A—0 to 7 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent gravel; neutral (pH 6.8); clear smooth boundary.
- BA—7 to 23 inches; grayish brown (10YR 5/2) loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent gravel; neutral (pH 7.0); gradual wavy boundary.
- Bt1—23 to 39 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; common faint clay films on faces of peds and in pores; 5 percent gravel; neutral (pH 7.1); abrupt wavy boundary.
- Bt2—39 to 49 inches; yellowish brown (10YR 5/4) clay loam, brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; hard, very friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent gravel; neutral (pH 7.0); clear smooth boundary.
- Bt3—49 to 60 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine tubular pores; few distinct clay films

on faces of peds, in pores, and bridging sand grains; 5 percent gravel; neutral (pH 7.2).

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—30 to 60 inches  
Depth to bedrock—60 inches or more

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
Chroma—1 to 3 dry or moist  
Content of rock fragments—0 to 10 percent gravel

#### *Bt horizon:*

Hue—7.5YR or 10YR  
Value—4 to 6 dry and 3 to 5 moist  
Chroma—2 to 4 dry or moist  
Texture—clay loam, sandy clay loam, or loam  
Content of clay—18 to 30 percent  
Content of rock fragments—0 to 10 percent gravel

## ***Whisk Series***

*Depth class:* Shallow

*Drainage class:* Somewhat excessively drained

*Permeability class:* Moderately rapid

*Landform:* Canyon walls, hillslopes, and mountain slopes

*Parent material:* Colluvium derived from granodiorite

*Slope range:* 8 to 90 percent

*Elevation:* 3,010 to 5,630 feet

*Mean annual precipitation:* 14 to 26 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 90 to 140 days

*Taxonomic class:* Loamy, mixed, superactive, mesic Lithic Ultic Haploxerolls

### ***Typical Pedon***

Boise County, Idaho; about 9 miles north of Horseshoe Bend; sec. 4, T. 8 N., R. 2 E.; Dry Buck Valley Quadrangle; lat. 44°03'09" N., long. 116°13'28" W.; NAD 83

### ***Typical Pedon***

A—0 to 3 inches: brown (10YR 5/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; moderate thin platy structure parting to weak coarse granular; soft, very friable, nonsticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; 20 percent fine gravel; moderately acid (pH 6.0); clear wavy boundary.

Bw1—3 to 11 inches; brown (10YR 5/3) fine gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; few very fine and fine roots; common very fine and fine irregular and tubular pores; 15 percent fine gravel; moderately acid (pH 5.8); gradual wavy boundary.

Bw2—11 to 14 inches; yellowish brown (10YR 5/4) fine gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and slightly plastic; few very fine and fine

roots; common very fine and fine irregular and tubular pores; 20 percent fine gravel; moderately acid (pH 5.8); gradual wavy boundary.  
R—14 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—7 to 12 inches  
Depth to bedrock (lithic contact)—10 to 20 inches  
Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—6 to 12 percent  
Content of rock fragments—15 to 35 percent

#### *A horizon:*

Value—4 or 5 dry and 2 or 3 moist  
Chroma—2 or 3 dry or moist  
Content of rock fragments—15 to 35 percent gravel

#### *Bw horizon:*

Value—5 or 6 dry and 3 or 4 moist  
Chroma—2 to 4 dry or moist  
Texture—sandy loam or coarse sandy loam  
Content of clay—6 to 12 percent  
Content of rock fragments—15 to 35 percent total, with 15 to 30 percent gravel and 0 to 5 percent cobbles

## ***Yad Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Very slow

*Landform:* Hillslopes, structural benches, and escarpments on buttes

*Parent material:* Clayey alluvium over loamy lacustrine deposits

*Slope range:* 4 to 35 percent

*Elevation:* 2,640 to 4,350 feet

*Mean annual precipitation:* 14 to 18 inches

*Mean annual air temperature:* 47 to 50 degrees F

*Frost-free period:* 110 to 140 days

*Taxonomic class:* Fine, smectitic, mesic Chromic Haploxererts

### ***Typical Pedon Location***

Ada County, Idaho; about 5 miles north of Camel's Back Park in Boise City;  
sec. 3, T. 4 N., R. 2 E.; Boise North Quadrangle; lat. 43°42'34" N.,  
long. 116°12'46" W.; NAD 83

### ***Typical Pedon***

A—0 to 2 inches; brown (10YR 4/3) clay loam, dark brown (10YR 3/3) moist; moderate fine and medium granular structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; many very fine and fine and few medium and coarse tubular pores; cracks 5 millimeters to 4 centimeters wide; neutral (pH 7.1); clear smooth boundary.  
BA—2 to 6 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky structure; very hard, friable, very sticky and very plastic; common very fine and fine and few medium roots; many very fine

and fine and few medium and coarse tubular pores; cracks 5 millimeters to 4 centimeters wide; neutral (pH 7.2); clear smooth boundary.

Btss1—6 to 14 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; weak coarse prismatic structure parting to strong medium and coarse subangular blocky; extremely hard, very firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; common intersecting slickensides; cracks 2 millimeters to 2 centimeters wide; few wedge-shaped aggregates oriented 30 to 60 degrees from horizontal; 5 percent gravel; neutral (pH 7.1); clear smooth boundary.

Btss2—14 to 25 inches; pale brown (10YR 6/3) clay, brown (10YR 4/3) moist; strong medium and coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; common prominent clay films on faces of peds and in pores; common intersecting slickensides; cracks 2 millimeters to 2 centimeters wide; few wedge-shaped aggregates oriented 30 to 60 degrees from horizontal; 5 percent gravel; neutral (pH 7.2); clear smooth boundary.

2Bt1—25 to 41 inches; yellowish brown (10YR 5/4) clay loam, dark brown (7.5YR 3/4) moist; strong fine and medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 10 percent gravel; slightly alkaline (pH 7.4); clear smooth boundary.

2Bt2—41 to 52 inches; yellowish brown (10YR 5/4) gravelly sandy clay loam, brown (7.5YR 4/4) moist; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; few distinct clay films on faces of peds, in pores, and bridging sand grains; 20 percent gravel; slightly alkaline (pH 7.4); clear wavy boundary.

2Bt3—52 to 60 inches; light yellowish brown (10YR 6/4) clay loam, brown (7.5YR 4/4) moist; moderate fine and medium subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; few very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; 10 percent gravel; slightly alkaline (pH 7.4).

### ***Range in Characteristics***

#### *Profile:*

Depth to loamy lacustrine deposits (2Bt horizon)—25 to 40 inches

Characteristics of surface cracks—5 millimeters to 4 centimeters wide; open from July through October in most years

#### *Particle-size control section:*

Content of clay—35 to 60 percent

Content of rock fragments—0 to 5 percent

#### *A and BA horizons:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of clay—27 to 35 percent

Content of rock fragments—0 to 5 percent gravel

Width of cracks—5 millimeters to 5 centimeters

#### *Btss horizon:*

Value—6 or 7 dry and 3 to 5 moist

Chroma—2 to 4 dry or moist

Texture—clay loam or clay

Content of clay—35 to 60 percent  
 Content of rock fragments—0 to 5 percent gravel  
 Abundance of intersecting slickensides—few or common  
 Abundance of wedge-shaped aggregates—few or common (oriented 30 to 60 degrees from horizontal)  
 Width of cracks—1 millimeter to 4 centimeters wide

*2Bt horizon:*

Hue—7.5YR or 10YR  
 Value—5 to 7 dry and 3 or 4 moist  
 Chroma—3 or 4 dry or moist  
 Texture—silty clay loam or clay loam  
 Content of clay—25 to 40 percent  
 Content of rock fragments—5 to 20 percent gravel  
 Reaction—neutral or slightly alkaline

## **Zan Series**

*Depth class:* Very deep

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Landform:* Canyon walls and mountain slopes

*Parent material:* Volcanic ash and colluvium derived from granodiorite

*Slope range:* 4 to 90 percent

*Elevation:* 4,690 to 7,360 feet

*Mean annual precipitation:* 28 to 40 inches

*Mean annual air temperature:* 36 to 39 degrees F

*Frost-free period:* 30 to 60 days

*Taxonomic class:* Sandy, isotic Vitrandic Dystrocryepts

### **Typical Pedon**

Boise County, Idaho; about 7 miles east of Horseshoe Bend; sec. 26, T. 7 N., R. 3 E.; Harris Creek Summit Quadrangle; lat. 43°55'06" N., long. 116°04'08" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 3 inches; very dark grayish brown (10YR 3/2) fine gravelly ashy coarse sandy loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 15 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.

A2—3 to 14 inches; very dark grayish brown (10YR 3/2) fine gravelly ashy coarse sandy loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 20 percent fine gravel; moderately acid (pH 5.8); gradual smooth boundary.

AB—14 to 24 inches; brown (10YR 4/3) fine gravelly ashy loamy coarse sand, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 25 percent fine gravel; moderately acid (pH 5.8); clear smooth boundary.

Bw—24 to 35 inches; brown (10YR 5/3) fine gravelly ashy loamy coarse sand, dark

olive brown (2.5Y 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 20 percent fine gravel; moderately acid (pH 5.7); gradual wavy boundary.  
 2C—35 to 60 inches; light yellowish brown (2.5Y 6/3) very gravelly loamy coarse sand, olive brown (2.5Y 4/4) moist; single grain; loose, nonsticky and nonplastic; common very fine and fine roots; many very fine, fine, and medium irregular pores; 35 percent gravel and 10 percent cobbles; moderately acid (pH 5.9).

### ***Range in Characteristics***

#### *Profile:*

Thickness of volcanic ash influence—17 to 35 inches  
 Thickness of umbric epipedon—14 to 30 inches  
 Depth to bedrock—60 inches or more  
 Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—2 to 8 percent  
 Content of rock fragments—15 to 35 percent

#### *A horizon:*

Value—3 to 5 dry and 2 or 3 moist  
 Chroma—2 or 3 dry or moist  
 Content of rock fragments—15 to 35 percent fine gravel  
 Base saturation (by ammonium acetate)—30 to 50 percent  
 Content of volcanic glass—5 to 10 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *AB horizon:*

Hue—10YR or 2.5Y  
 Value—4 or 5 dry  
 Chroma—2 or 3 dry or moist  
 Texture—ashy loamy coarse sand or ashy coarse sandy loam  
 Content of clay—4 to 10 percent  
 Content of rock fragments—15 to 35 percent fine gravel  
 Base saturation (by ammonium acetate)—30 to 50 percent  
 Content of volcanic glass—5 to 10 percent  
 Acid oxalate extractable aluminum plus  $\frac{1}{2}$  the acid oxalate extractable iron—0.4 to 1.0 percent

#### *Bw horizon:*

Hue—10YR or 2.5Y  
 Value—4 to 6 dry and 3 to 5 moist  
 Chroma—3 or 4 dry or moist  
 Content of clay—2 to 8 percent  
 Content of rock fragments—15 to 35 percent fine gravel

#### *2C horizon:*

Hue—10YR or 2.5Y  
 Value—5 to 7 dry and 4 to 6 moist  
 Chroma—3 to 6 dry or moist  
 Texture—loamy coarse sand or coarse sand  
 Content of clay—2 to 5 percent  
 Content of rock fragments—20 to 60 percent total, with 20 to 50 percent gravel and 0 to 15 percent cobbles

## **Zeb Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Permeability class:* Moderately rapid

*Landform:* Dissected fan remnants and terraces

*Parent material:* Gravelly alluvium

*Slope range:* 8 to 65 percent

*Elevation:* 3,040 to 5,660 feet

*Mean annual precipitation:* 22 to 30 inches

*Mean annual air temperature:* 42 to 45 degrees F

*Frost-free period:* 60 to 90 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, frigid Ultic Haploxerolls

### **Typical Pedon Location**

Boise County, Idaho; about 2.5 miles south of Garden Valley; sec. 2, T. 8 N., R. 4 E.; Garden Valley Quadrangle; lat. 44°03'09" N., long. 115°57'19" W.; NAD 83

### **Typical Pedon**

Oi—0 to 1 inch; slightly decomposed forest litter.

A1—1 to 8 inches; dark grayish brown (10YR 4/2) gravelly sandy loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; common very fine and fine irregular pores; 15 percent gravel; neutral (pH 6.9); abrupt smooth boundary.

A2—8 to 13 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure parting to moderate fine and medium granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; common very fine and fine irregular and tubular pores; 20 percent gravel; neutral (pH 7.0); abrupt wavy boundary.

Bw—13 to 23 inches; pale brown (10YR 6/3) very gravelly coarse sandy loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; few very fine and fine irregular and tubular pores; 40 percent gravel and 10 percent cobbles; neutral (pH 6.8); clear wavy boundary.

C1—23 to 43 inches; very pale brown (10YR 7/3) extremely gravelly loamy coarse sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; 45 percent gravel and 20 percent cobbles; 10 percent pararock fragments; neutral (pH 6.6); clear smooth boundary.

C2—43 to 60 inches; very pale brown (10YR 7/4) extremely gravelly sand, yellowish brown (10YR 5/4) moist; single grain; loose, nonsticky and nonplastic; few very fine, fine, and medium roots; 65 percent gravel; slightly acid (pH 6.4).

### **Range in Characteristics**

#### *Profile:*

Thickness of mollic epipedon—10 to 14 inches

Depth to bedrock—60 inches or more

Reaction—slightly acid or neutral

*Particle-size control section:*

Content of clay—5 to 12 percent

Content of rock fragments—35 to 65 percent

*A horizon:*

Value—4 or 5 dry and 2 or 3 moist

Chroma—2 or 3 dry or moist

Content of rock fragments—15 to 35 percent total, with 15 to 35 percent gravel and 0 to 5 percent cobbles

*Bw horizon:*

Value—5 or 6 dry and 3 or 4 moist

Texture—sandy loam or coarse sandy loam

Content of clay—7 to 14 percent

Content of rock fragments—25 to 65 percent total, with 10 to 60 percent gravel and 5 to 30 percent cobbles

*C horizon:*

Value—6 or 7 dry and 4 or 5 moist

Chroma—3 to 6 dry or moist

Texture—sandy loam, loamy sand, loamy coarse sand, or sand

Content of clay—0 to 12 percent

Content of rock fragments—35 to 65 percent total, with 35 to 65 percent gravel and 0 to 30 percent cobbles

Content of pararock fragments—0 to 30 percent

**Zimmer Series***Depth class:* Shallow*Drainage class:* Somewhat excessively drained*Permeability class:* Moderately rapid*Landform:* Canyon walls and mountain slopes*Parent material:* Colluvium derived from granodiorite*Slope range:* 8 to 90 percent*Elevation:* 2,750 to 7,090 feet*Mean annual precipitation:* 22 to 36 inches*Mean annual air temperature:* 39 to 45 degrees F*Frost-free period:* 45 to 90 days*Taxonomic class:* Loamy, mixed, superactive, frigid Lithic Ultic Haploxerolls**Typical Pedon Location**Boise County, Idaho; about 4 miles northwest of Banks; sec. 11, T. 9 N., R. 2 E.;  
Dry Buck Valley Quadrangle; lat. 44°07'29" N., long. 116°10'40" W.; NAD 83**Typical Pedon**

A—0 to 7 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine, fine, and medium irregular pores; 10 percent fine gravel; moderately acid (pH 6.0); clear smooth boundary.

Bw—7 to 14 inches; brown (10YR 5/3) fine gravelly coarse sandy loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very

fine, fine, and medium irregular pores; 15 percent fine gravel; moderately acid (pH 6.0); abrupt wavy boundary.  
R—14 inches; unweathered granodiorite.

### ***Range in Characteristics***

#### *Profile:*

Thickness of mollic epipedon—7 to 10 inches  
Depth to bedrock (lithic contact)—10 to 20 inches  
Base saturation—50 to 75 percent  
Reaction—moderately acid or slightly acid

#### *Particle-size control section:*

Content of clay—5 to 12 percent  
Content of rock fragments—10 to 35 percent

#### *A horizon:*

Value—3 to 5 dry and 2 or 3 moist  
Chroma—1 to 3 dry or moist  
Content of rock fragments—5 to 35 percent total, with 5 to 30 percent fine gravel and 0 to 5 percent cobbles

#### *Bw horizon:*

Value—4 to 6 dry and 3 to 5 moist  
Chroma—2 to 4 dry or moist  
Texture—sandy loam or coarse sandy loam  
Content of clay—5 to 12 percent  
Content of rock fragments—15 to 35 percent total, with 15 to 35 percent fine gravel and 0 to 5 percent cobbles

# Formation of the Soils

---

Soil is a variable and dynamic mixture of rocks and minerals, organic matter, water, and air commonly characterized by distinct layers, or horizons. These natural bodies that mantle the surface of the earth are a fundamental part of terrestrial ecosystems. Even though generally perceived to be one of the more stable components of our environment, soils are complex systems that have many reactions to any single change.

Soil forms as a result of climate, living organisms, parent material, and relief interacting over time. Soils differ according to the influence of these five soil-forming factors. Although one factor can dominate and influence the properties of a soil more than the other four, a unique combination of all the soil-forming factors determines each particular soil profile.

In this section, each of the five soil-forming factors are discussed separately. They are discussed relative to their effects on the soils in the survey area and illustrated with examples of soils in the area.

## Time

In general, a soil acquires its properties over thousands to hundreds of thousands of years. Although the change commonly is imperceptible, it is continuous from the time a new surface has been exposed by erosion or created by deposition. The relative age of soils is expressed in features or diagnostic characteristics that develop and change at varying rates. The accumulation of organic matter in a mollic epipedon approaches dynamic equilibrium at a relatively rapid rate (less than 10,000 years), but an argillic horizon develops at a much slower rate (more than 10,000 years) (Wilding and others, 1983).

Typically, mature soils are on the oldest of the most stable landforms. Strongly developed soils exhibit pronounced zones of eluviation with strongly expressed structure (argillic horizon). Soils such as those of the McDesh series (Argixerolls) and Doubledia series (Haploxererts) are on fan remnants and structural benches of late Miocene, Pliocene, and Pleistocene. These landforms are throughout the survey area below an elevation of about 5,200 feet.

Most of the soils in the survey area have a less developed profile. In the mountains and canyons, the steeper slopes are less stable. Soils that formed in volcanic material, such as those of the Hess series (Argixerolls), have a weakly developed argillic horizon, but soils that formed in much older granitic material of the Eocene, such as those of the Charters series (Haploxerolls), Packerjohn series (Dystroxerepts), and Quartzburg series (Xerorthents), are still immature. At the higher elevations, particularly on north-facing slopes, cold temperatures tend to slow the chemical and biological processes in soils such as those of the Awley series (Haplocryolls) and Zan series (Dystrocryepts).

The pedogenic processes also are slower in areas that have a drier climate, generally at the lower elevations in the southern part of the area. Even in these areas, however, the soils on stable landforms, such as those of the Gacey series (Durixerolls), are old enough to have formed an argillic horizon. The Siphonlake

series (Haploxerolls) and Solarview series (Torripsamments) are examples of droughty, upland soils with minimal horizon definition or none at all.

The youngest soils in the survey area are on fan remnants and flood-plain steps that have received recent (Holocene) deposits of alluvium. Soils of the Boise series (Haploxerolls), Pay series (Psammaquents), and Ralsen series (Endoaquolls) are examples.

## Climate

The most active of the soil-forming factors is climate. The two most frequently considered climatic attributes are precipitation and temperature, but other attributes such as wind and relative humidity interrelate to affect many soil features. During geologic time, there have been significant changes in the climate of the area. Older soils in the area probably were influenced by prehistoric climatic conditions but the impact on the soils is speculative. Certainly, significant pluvial periods existed during the Tertiary, but since then the climate has become generally warmer and drier, allowing sediment to accumulate in the valleys. Glaciers of the more recent ice ages had limited impact on the area, but the effects of periglacial conditions, including solifluction, freeze-thaw cycles, and great floods, were probably significant. The area presently has a continental climate characterized by hot, dry summers; cold, moist winters; light winds; and low relative humidity. Typically, the soils dry out in summer and freeze in winter.

Water is the major agent for weathering of rock and transformation of minerals in soils. It also distributes and removes soil material, such as carbonates, basic cations, and clay, in the soil profile. The availability and flux of water in the soil profile characterizes the soil moisture regime. The balance of water in the soil has a profound effect on living organisms. Generally, a higher amount of precipitation results in a higher content of biomass.

The upland soils in this survey area have either a xeric soil moisture regime or an aridic soil moisture regime bordering on xeric (similar to Mediterranean areas). The soil moisture regime is determined not only by the annual precipitation, but also by the rate of runoff, solar exposure (slope and aspect), pattern of drifting snow, and available water capacity of the soil. Consequently, the soil moisture regime designation cannot be precisely correlated to the average annual precipitation. For example, soils such as those of the McDesh series (Argixerolls), which receive 14 inches of precipitation annually and have a high available water capacity, relatively limited runoff, and moderate solar exposure, are in the xeric soil moisture regime. Associated soils such as those of the Duco series (Argixerolls), which also receive 14 inches of precipitation annually but have low available water capacity, high runoff, and full solar exposure, are in the drier soil moisture regime. Wind, solar radiation (temperature), and relative humidity have a less evident influence on the water balance in the soil profile through evapotranspiration.

Three of the driest soils in the area are those of the sandy textured, excessively drained Arrowrock, Painter, and Solarview series (Torripsamments). These soils are on steep, south- and west-facing slopes at low elevations. They support sparse, drought-tolerant vegetation and exhibit no diagnostic horizons or properties. The annual precipitation is directly related to the orographic influences throughout the area. Generally, precipitation increases as the elevation and latitude increase. Snow drifting can result in uneven coverage, resulting in areas that record an average annual precipitation of 40 inches or more. Soils on steep, north- and east-facing mountain slopes, such as those of the Tripod series (Dystroxerepts) and Shilling series (Haploxerolls), typically receive the most effective precipitation and therefore support dense conifer forests.

Soil temperature regimes are based on the average soil temperature at a depth of

20 inches (50 centimeters) or at bedrock in areas where it is at a depth of less than 20 inches. The main impact of soil temperature is its effect on living organisms, influencing the type and amount of organic matter in the soil. The accumulation of organic matter is aided by cool temperatures, which slow microbial breakdown. The soils that have a thick, dark-colored surface layer, such as those of the Pumpkin series (Argixerolls) and Northfork series (Haploxerolls) formed under these conditions. Depending on aspect, soils below an elevation of about 5,000 feet have a mesic soil temperature regime and those at higher elevations have a frigid or cryic soil temperature regime. Soils that have a cryic soil temperature regime stay cool in summer. Examples are soils of the Josie series (Dystrocryepts) and Bo series (Haplocryolls), which are at an elevation of more than about 6,000 feet and on steep, north-facing mountain slopes.

Wind directly affects soil formation through the transport and distribution of suspended material. This material commonly is silt-sized loess, of which the most noticeable deposits are on upper leeward slopes. Significant accumulations of eolian volcanic ash were deposited over the entire survey area in the past, but the time and source of these accumulations are uncertain.

## Living Organisms

Besides climate, the other active soil-forming factor is the soil biota, which consists of lower plants (fungi, bacteria, algae, lichens, and mosses), higher plants, and animals. The content and distribution of organic matter, pH, structure, and bulk density are the soil properties that are most noticeably influenced by living organisms.

Many biochemical processes that involve cycling of different elements are closely related to soil formation. The dynamics of nitrogen and carbons in the biosphere begin with the interaction of organisms and soil. The nitrogen cycle is interrelated with the carbon cycle, and the rate of nitrogen cycling is closely related to the productivity of the ecosystem. Productivity is directly related to the accumulation and decomposition of organic matter, which have a significant influence on soil formation (Wilding and others, 1983). Bacteria and fungi release bound nutrients and help to decompose rocks and minerals. Algae influence the solubility of minerals in water, and lichens and moss contribute to the weathering of rock through both physical and chemical processes.

High annual production or poor conditions for microbial activity favor the accumulation of organic matter. In this survey area, the greatest accumulations are in areas of soils that are deficient in oxygen because of a high water table, such as those of the Ralsen series (Endoaquolls), or in areas of soils that stay cool, such as those of the Awley series (Haplocryolls).

Higher plants make up the major portion of the total biomass. The kind and amount of the primary producers in the survey area are largely dependent on the climatic conditions. The average annual production of the plant communities on the more droughty soils, such as those of the Arrowrock series (Torripsamments), Borid series (Haploxerolls), Crawley series (Argixerolls), and Flybow series (Xerorthents), is only about 500 to 600 pounds per acre. Churning clay soils, such as those of the Breadloaf series (Haploxererts), have similar limited productivity. Forested soils, such as those of the Northfork series (Haploxerolls), can produce more than 200 cubic feet of wood fiber and about 1,000 pounds per acre of understory vegetation annually. Soils in riparian areas, such as those of the Crossbow series (Haploxerolls) and Pay series (Psammaquents), can produce 4,000 pounds or more of natural vegetation per acre in a favorable year.

Each plant community and individual plant has a unique effect on soil properties. For example, a single pine tree rooting on a shallow soil, such as that of the Kisky series (Haploxerolls), will eventually open cracks beneath the soil. The soil depth is

then modified, and a moderately deep soil, such as that of the Garval series (Haploxerolls), can form. Over time, plant succession has a profound effect on soil development. If the vegetation is altered, horizons can become degraded or can develop in a relatively short period. For example, an O horizon (duff layer), which insulates and protects the soil surface, can be totally destroyed during a forest fire.

Cicadas, ants, earthworms, and rodents and other mammals mix, loosen, and compact soils. Beavers dam streams, which affects the water table. Krotovinas, which are tunnels, passageways, and nests backfilled with soil material, are common throughout the survey area. Man's contribution to the reworking of the soils can be observed in areas of plowed fields, logging roads and landings, mining sites, and home landscaping.

## Parent Material

The properties of soils are largely dependent upon the kind of parent material from which they formed. In this survey area, the soils are derived from either residual or transported material. Even in areas where rock deposits are weathered in place (residuum), other material moved by water (alluvium), wind (eolian ash and loess), or gravity (colluvium) generally have been incorporated into the soils.

The mineral components of a soil are either directly inherited (primary) from the parent material or formed during the natural processes of soil development (secondary). Quartz, a resistant primary mineral, is a component of soils derived from granitic rock. These soils tend to be sandy and develop relatively slowly. Smectite, inherited from volcanic ash, occurs as clay-sized particles and is translocated in the profile from the surface layer to the subsoil during soil development. Layers of significant clay accumulation, or argillic horizons, are common throughout the survey area.

Silica-cemented horizons, called duripans, are rare in this area. The duripan in the soils of the Gacey series (Durixerolls) formed at the typical depth of wetting, where soluble silica was deposited. Silica, which is the cementing agent that forms a duripan, is readily released from weathering volcanic ash and pyroclastic rock.

Soils that have an accumulation of calcium carbonates are also rare in this area. Soils of the Meclo series (Argixerolls) have a slightly effervescent horizon directly over silty and loamy lacustrine deposits.

Minerals are more highly weathered in the mountainous areas. The minerals released through weathering are susceptible to leaching, whereby the basic cations are readily removed. The resultant low base saturation reflects the loss of calcium, magnesium, sodium, and potassium. Soils such as the Zan series (Dystrocryepts), Boise series (Haploxerolls), Middlefork series (Argixerolls), Quartzburg series (Xerorthents), and Tripod series (Dystroxerepts) have low base saturation.

Nearly all of the soils in the survey area contain at least a few rock fragments. Typically, shallow soils, such as those of the Hoff series (Argixerolls) and Kisky series (Haploxerolls), contain large amounts of unattached, angular fragments of parent rock. Alluvial soils, such as those of the Pioneervil series (Haploxerolls) and Ralsen series (Endoaquolls), are very deep and contain rounded rock fragments that vary in size and amount from horizon to horizon.

Igneous rock, including basalt, welded tuff, rhyolite, and granitic rock such as granodiorite, is the primary source of parent material in the survey area (Kiilsgaard and others, 1997; Mitchell and Bennett, 1979a and 1979b). Depositions of volcanic ash are a secondary source of parent material for many soils in the survey area.

Most of the survey area is underlain by granitic rock of the Cretaceous Atlanta (Idaho) Batholith and a dioritic younger (Eocene) intrusive rock. These are the oldest and most extensive exposed rocks in the area. The most extensive soils in the area formed in colluvium derived from granitic rock, including those of the Shirts, Charters,

and Kosh series (Haploxerolls) that total more than 100,000 acres. These soils are characterized by a preponderance of coarse and very coarse sand-sized particles and fine gravel. Soils that are in proximity of porphyritic Eocene dikes and stocks, such as those of the Eagleson series (Haploxerolls), differ significantly because of the increased size and amount of rock fragments in the profile. Along the Boise Ridge and North Fork Range, volcanic ash persists in some relatively cool, moist soils, such as those of the Packerjohn series (Dystroxerepts) and Josie series (Dystrocryepts).

The next oldest and second most common parent rock in the area is the Miocene Columbia River flood basalt. Since this survey area is at the eastern edge of the Columbia Plateau, the basalt flow is disjointed and is patchy east of Boise Ridge. Apparently the basalt spread over low-lying areas and subsequently was displaced by fault movement to areas at an elevation of 2,700 to 7,000 feet. This basalt has weathered readily into fine grained, reddish brown soils that are easily distinguished from the sandy, grayish soils that formed in granitic rock. Soils such as those of the Shilling series (Haploxerolls) and Hess series (Argixerolls) exhibit moderate to strong development of the soil profile. Typically, volcanic ash is an identified component of these soils. Soils at the higher elevations, such as those of the Awley series (Haplocryolls), still have a significant amount of allophone and unweathered volcanic glass. The Timberbutte series (Vitrixerands), which is on a volcanic cone in the northwest corner of the area, has 30 to 50 percent volcanic ash in the upper part. These soils have the highest content of volcanic ash of any soils in the survey area.

The basalt flows near Jerusalem Valley and Horseshoe Bend are beneath and intercalated in the Tertiary Payette Formation. One or more large lakes impounded behind lava flows during the mid- to late-Miocene inundated the western Snake River Plain and the lower elevations of the survey area. More than 500 feet of sediment accumulated in Boise Basin and Garden Valley. Most of the material consists of fine, well-stratified lakebeds with some fluvial deposits and thin beds of volcanic ash, sandstone, and bituminous coal (Kiilsgaard and others, 1997). Soils such as those of the Middlefork series (Argixerolls), Doubledia series (Haploxererts) and Siphonlake series (Haploxerolls) formed in this sediment.

Pleistocene gravel terraces are on the lacustrine beds of the Payette Formation. These periglacial stream deposits consist of poorly sorted sand- to boulder-sized rock fragments. The uplifted valley floors and stream terraces contain gold that is placer mined in many areas around the Boise Basin (Kiilsgaard and others, 1997). Soils such as those of the Brassey series (Argixerolls) and Huston series (Haploxerolls) formed in these deposits.

A much younger (late Pleistocene) olivine-rich basalt is in Mores Creek Canyon. Since these nearly level flows are completely covered by subsequent alluvium, soils have formed only in the rubbly talus material below the vertical canyon walls. Because of the high variability and limited extent of these soils, they were identified as Pachic Argixerolls and Typic Haploxerolls. Soil series were not recognized for these soils.

The youngest (Holocene) parent material is loess, volcanic ash, landslide deposits, and recent alluvium. The landslide deposits and recent alluvium are intrinsically localized and reflect older, adjacent parent material. Periodically, alluvial material is reworked or newly deposited on bottomland and fans. Landslides typically occur in very steep canyons or in areas of stratified lacustrine deposits near Horseshoe Bend.

## Relief

Relief is the contour of the surface landscape determined by changes in elevation as a result of erosion, deposition, or tectonic activity. Aspect, shape, and steepness of slope directly affect runoff, soil moisture, erosion, and deposition. Relief influences soil formation primarily as a result of its affect on temperature and water.

The soils on mountains most dramatically exhibit the influences of relief; however,

micro-topographic relief, such as the regular pattern of concave fluves and convex interfluves on nearly level relict terraces, also has a significant influence on soil development. The Hellake series (Argixerolls) and Staircase series (Haploxerolls) are examples of soils in these fluve-interfluve areas. Local differences in soil moisture are obvious in areas where snow continuously melts on the south-facing slopes and builds up on the north-facing slopes. Similarly, aspect affects soil temperature. North-facing slopes, particularly those that are steep, receive less direct solar radiation and are therefore cooler. Examples are soils of the mesic Huston series and frigid Zeb series (Haploxerolls).

Throughout the survey area, the distribution and movement of water over and through the soil are largely determined by relief and are the main reasons for differences in soils on the landscape (Wilding and others, 1983). For all soils, the hazard of erosion and rate of runoff increase as the slope gradient increases. The most stable broad planar landforms are characterized by a slow rate of runoff and a high water retention capacity. Runoff tends to converge in concave areas, such as footslopes, and diverge in convex positions, such as shoulder slopes. Mass movement and surface wash transport material downslope. Rock outcrop, or exposed bedrock, commonly is on the very steep canyon walls throughout the area.

In gently rolling areas, even a slight change in the shape of the slope may have a dramatic effect on soil properties. For example, soils of the Breadloaf series (Haploxererts) are in slightly convex (erosional) areas of interfluves that have low relief. These moderately deep soils are characterized by a very thin, high-chroma surface layer over a clayey subsoil and by strongly expressed cracks as much as 6 inches wide. Intermingled with the Breadloaf soils are soils of the Doubledia series (Haploxererts) in smooth or slightly concave areas. These soils are deep. They have a very thin surface layer over a similar clayey subsoil. Because of the extra moisture received from runoff, plant production on these soils is higher. The vegetation protects the soils from erosion, produces a thick dark-colored upper layer in the soils, and helps to minimize cracking.

Basins and fluvial bottoms are unstable because they are dominantly constructional in nature. The soils on these landforms are highly variable, reflecting periodic flooding and multiple sources of material (Wilding and others, 1983). A high water table commonly is an important factor of soil formation in these areas. If all or part of the soil profile is saturated, many physical and chemical reactions are altered. Anaerobic activity is dominant because there is insufficient oxygen for bacteria to grow. These soils tend to be cooler than soils that developed under aerobic conditions. Soils of the Ralsen series (Endoaquolls) and Pay series (Psammaquents) are most affected by the presence of a water table. Other soils such as those of the Crossbow series (Haploxerolls) and Foxlane series (Haploxerolls) are less affected because only the lower horizons are periodically saturated.

## References

---

- Alexander, R.R. 1966. Site indexes for lodgepole pine. U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station Research Paper RM-24.
- Alexander, R.R. 1967. Site indexes for Engelmann spruce. U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station Research Paper RM-32.
- American Association of State Highway and Transportation Officials (AASHTO). 2000. Standard specifications for transportation materials and methods of sampling and testing. 20th edition, 2 volumes.
- American Society for Testing and Materials (ASTM). 2001. Standard classification of soils for engineering purposes. ASTM Standard D 2487-00.
- Carpenter, L.B. 1990. Idaho wildlife viewing guide. Falcon Press.
- Cochran, P.H. 1979. Site index and height growth curves for managed, even-aged stands of Douglas-fir east of the Cascades in Oregon and Washington. U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station Research Paper PNW-251.
- Cochran, P.H. 1979. Site index and height growth curves for managed, even-aged stands of white or grand fir east of the Cascades in Oregon and Washington. U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station Research Paper PNW-252.
- Cochran, P.H. 1979. Gross yields for even-aged stands of Douglas-fir and white or grand fir east of the Cascades in Oregon and Washington. U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station Research Paper PNW-263.
- Daubenmire, R. 1952. Forest vegetation of northern Idaho and adjacent Washington, and its bearing on concepts of vegetation classification. *Ecological Monograph* 22(4): 301-330.
- Edminster, C.B. 1980. Engelmann spruce and subalpine fir yield tables for managed stands. U.S. Department of Agriculture, Soil Conservation Service, West Technical Service Center Bulletin W38-00-17.
- Graham, R., A. Harvey, M. Jurgensen, T. Jain, J. Tonn, and D. Page-Dumroese. 1994. Managing coarse woody debris in forests of the Rocky Mountains. U.S. Department of Agriculture, Forest Service, Intermountain Research Station Research Paper INT-RP-477.

- Groves, C.R., B. Butterfield., A. Lippincott, B. Csuti, and J.M. Scott. 1997. Atlas of Idaho's wildlife. Idaho Department of Fish and Game.
- Hall, F. 1998. Pacific Northwest ecoclass codes for seral and potential natural plant communities. U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station General Technical Report PNW-GTR-418.
- Idaho State Historical Society. n.d. Reference series no. 22. Available online at [http://www.idahohistory.net/reference\\_series.html](http://www.idahohistory.net/reference_series.html) (accessed December 2004).
- Kiilsgaard, T.H., T.M. Scanlan, and D.E. Stewart. 1997. Geology of the Boise Basin vicinity, Boise, Ada, and Elmore Counties, Idaho (map). Idaho Geological Survey.
- McGrath, C.L., A.J. Woods, J.M. Omernik, S.A. Bryce, M. Edmondson, J.A. Nesser, J. Shelden, R.C. Crawford, J.A. Comstock, and M.D. Plocher. 2002. Ecoregions of Idaho. Color poster with map, descriptive text, summary tables, and photographs. U.S. Geological Survey.
- Meyer, W.H. 1961. Yield of even-aged stands of ponderosa pine. U.S. Department of Agriculture Technical Bulletin 630.
- Mitchell, V.E., and E.H. Bennett, compilers. 1979. Geologic map of the Baker quadrangle, Idaho. Idaho Bureau of Mines and Geology.
- Mitchell, V.E., and E.H. Bennett, compilers. 1979. Geologic map of the Boise quadrangle, Idaho. Idaho Bureau of Mines and Geology.
- Portland Cement Association. 1973. PCA soil primer.
- Smith, E.M. 1983. History of the Boise National Forest. 1905-1976. Idaho State Historical Society.
- Steele, R., R.D. Pfister, R.A. Ryker, and J.A. Kittams. 1981. Forest habitat types of central Idaho. U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station General Technical Report INT-114.
- United States Department of Agriculture, Natural Resources Conservation Service. 1998. National forestry manual, title 190-V. Available online at <http://soils.usda.gov/technical/nfmanual/>
- United States Department of Agriculture, Natural Resources Conservation Service. 1999. Soil Taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Soil Survey Staff. U.S. Department of Agriculture Handbook 436.
- United States Department of Agriculture, Natural Resources Conservation Service. 2003. Keys to soil taxonomy. 9th edition. Soil Survey Staff.
- United States Department of Agriculture, Natural Resources Conservation Service. 2003. National range and pasture handbook, title 190-VI. Available online at <http://www.glti.nrcs.usda.gov/technical/publications/nrph.html>

- United States Department of Agriculture, Natural Resources Conservation Service. 2003. National soil survey handbook, title 430-VI. Available online at <http://soils.usda.gov/technical/handbook/>
- United States Department of Agriculture, Natural Resources Conservation Service. 2004. The PLANTS database, version 3.5. Available online at <http://plants.usda.gov/>
- United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.
- United States Department of Agriculture, Soil Conservation Service. 1981. Land resource regions and major land resource areas of the United States. U.S. Department of Agriculture Handbook 296.
- United States Department of Agriculture, Soil Conservation Service. 1993. Soil survey manual. Soil Survey Staff. U.S. Department of Agriculture Handbook 18.
- United States Department of Agriculture, Soil Conservation Service. 1997. Soil survey of Boise Front Project, Idaho.
- Wells, M.W. 2002. Gold camps & silver cities. University of Idaho Press.
- Wilding, L.P., N.E. Smeck, and G.F. Hall, editors. 1983. Pedogenesis and soil taxonomy I. Concepts and interactions II. The soil orders. Elsevier Science Publishers, New York.



# Glossary

---

- Abrupt textural change.** A soil horizon boundary or thin transition zone that is characterized by a considerable increase in clay and occurs at the contact between a surface or subsurface layer and the argillic horizon.
- Aeration, soil.** The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.
- Aggregate, soil.** Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.
- Alkali (sodic) soil.** A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.
- Alluvial fan (landform).** A low, outspread mass of loose material and/or rock, commonly gently sloping, that is shaped like an open fan or a segment of a cone and is deposited by a stream at the place where it issues from a narrow mountain valley or other upland valley or where a tributary stream is near or at its junction with the main stream. It is steepest near its apex, which points upstream, and extends outward (downstream) with a gradual decrease in gradient.
- Alluvium.** Material, such as sand, silt, or clay, deposited on land by streams.
- Alpha,alpha-dipyridyl.** A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.
- Animal unit month (AUM).** The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.
- Aquic conditions.** Current soil wetness characterized by saturation, reduction, and redoximorphic features.
- Argillic horizon.** A subsoil characterized by an accumulation of illuvial clay.
- Ashy (textural modifier).** Term used to describe material in which the fine-earth fraction has 30 percent or more particles that are 0.02 to 2.0 millimeters in diameter. Of this, 5 percent or more is volcanic glass and the ammonium oxalate extractable aluminum plus  $\frac{1}{2}$  the ammonium oxalate extractable iron times 60 added to the percentage of volcanic glass are equal to or more than 30.
- Ashy (family classification).** Term used in Soil Taxonomy to describe a particle-size class.
- Aspect.** The direction in which a slope faces.
- Association, soil.** A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.
- Available water capacity (available moisture capacity).** The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, is calculated for the profile to a depth of 60 inches or to a limiting layer.

- Backslope.** The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.
- Basalt.** A fine-grained, dark-colored extrusive igneous rock composed primarily of calcic plagioclase and pyroxene, with or without olivine.
- Base saturation.** The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.
- Batholith.** A large, generally discordant body of plutonic rock exposed at the land surface that is more than 40 square miles (100 square kilometers) in size and has no known bottom.
- Canyonland (general landscape).** A deeply and extensively dissected landscape composed dominantly of relatively narrow, steep-walled valleys with small flood plains or valley floors. Commonly has considerable outcroppings of hard bedrock on steep slopes, ledges, and cliffs and has broader summits or interfluves than does badland. Side slopes exhibit extensive erosion, active backwearing, and relatively sparse vegetation.
- Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
- Bisequum.** Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.
- Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.
- Butte.** An isolated small mountain or hill with steep or precipitous sides and a top variously flat, rounded, or pointed that may be a residual mass isolated by erosion or an exposed volcanic neck.
- Canopy.** The leafy crown of trees or shrubs. (See Crown.)
- Canyon.** A long, deep, narrow, very steep sided valley with high, precipitous walls in an area of high local relief.
- Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.
- Catena.** A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.
- Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.
- Cation-exchange capacity (CEC).** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.
- Cemented pan (in tables).** A duripan, or a horizon cemented with silica to the degree that fragments do not slake during prolonged soaking in water or hydrochloric acid.
- Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
- Clay depletions.** Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.
- Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
- Claypan.** A slowly permeable soil horizon that contains much more clay than the

horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

**Climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same. Major natural disturbances, such as fire, are excluded from the environmental factors.

**Coarse textured soil.** Sand or loamy sand.

**Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

**Cobbly soil material.** Material that has 15 to 35 percent, by volume, rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

**COLE (coefficient of linear extensibility).** See Linear extensibility.

**Colluvium.** Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

**Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

**Concretions.** Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

**Conservation tillage.** A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

**Consistence, soil.** Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

**Control section.** The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

**Corrosion.** Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

**Crop residue management.** Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

**Crown.** The upper part of a tree or shrub, including the living branches and their foliage.

**Culmination of the mean annual increment (CMAI).** The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

**Cutbanks cave** (in tables). The walls of excavations tend to cave in or slough.

**Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately

deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

**Dissected fan remnant (landform).** An alluvial fan that is more extensively dissected than a fan remnant. Consists primarily of highly dissected side slopes and a less extensive, intact, relatively planar, relict summit area, or tread.

**Drainage class (natural).** Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained*, *somewhat excessively drained*, *well drained*, *moderately well drained*, *somewhat poorly drained*, *poorly drained*, and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

**Drainage, surface.** Runoff, or surface flow of water, from an area.

**Drainageway (landform).** A general term for a course or channel along which water moves, draining an area. Also used to describe a relatively small, roughly linear or arcuate depression that moves concentrated water at times and either does not have a defined channel or has a small defined channel.

**Droughty (in tables).** Soil is dry most of the time, and vegetation is difficult to establish.

**Dump.** An area of smooth or uneven accumulations or piles of waste rock, earthy material, or general refuse that is incapable of supporting plants without major reclamation.

**Duripan.** A layer, or horizon, that is genetically cemented with silica which restricts roots and water movement. (See Cemented pan.)

**Ecological site.** An area where climate, soil, and relief are sufficiently uniform to produce a distinct historic climax plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

**Effervescence.** The gaseous response, exhibited as bubbles, of a soil to applied drops of dilute (1:10) hydrochloric acid (HCl). General indication of the presence of calcium carbonate (CaCO<sub>3</sub>).

**Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

**Endosaturation.** A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

**Eolian soil material.** Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

**Episaturation.** A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

**Erodibility.** The susceptibility of a soil to erosion.

**Erosion (geologic).** The wearing away of the land surface caused by geologic processes acting over long geologic periods. Results in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

**Erosion (accelerated).** The wearing away of the land surface that is much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

**Escarpment.** A relatively continuous and steep slope or cliff breaking the general

continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

**Extrusive rock.** Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

**Fan remnant (landform).** A general term for a landform that consists of the remaining parts of older fan landforms, such as alluvial fans, fan aprons, inset fans, and fan skirts, that has been dissected (erosional fan remnant) or partially buried (nonburied fan remnant). An erosional fan remnant has a relatively flat summit that is a relict fan surface. A nonburied fan remnant is a relict surface in its entirety.

**Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

**Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.

**Fill slope.** A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

**Filtering capacity (in tables).** Leaching and seepage potential of a soil. If the hydraulic conductivity is high, transmission of fluids into and through the soil is unimpeded; therefore, leaching and seepage may become an environmental or health concern.

**Fine textured soil.** Sandy clay, silty clay, or clay.

**Flood plain.** A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially. It generally is a constructional landform that consists of sediment deposited during overflow and lateral migration of a stream.

**Fluvial.** Of or pertaining to rivers; produced by river action, as a fluvial plain.

**Foothill.** A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

**Footslope.** The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

**Forb.** Any herbaceous plant not a grass or a sedge.

**Forestland.** Land on which the historic vegetation was dominantly a 25-percent overstory canopy of trees. A tree is a woody-stemmed plant that can grow to a height of 4 meters (about 13 feet) at maturity.

**Forest habitat type.** A distinct climax plant community produced in an area where climate, soil, and relief are sufficiently uniform. A habitat type is the product of the environmental factors responsible for its development, excluding major natural disturbances such as fire.

**Frost action (in tables).** Freezing and thawing of soil moisture. Frost action can damage roads, buildings, and other structures and plant roots.

**Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

**Glacial outwash.** Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

**Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

**Granitic rock.** Light-colored, coarse-grained igneous rock consisting essentially of alkali feldspar and quartz. Locally, Eocene or Cretaceous plutonic rock, including

biotite granite, biotite granodiorite, diorite, gabbro, hornblende-biotite granodiorite, muscovite-biotite granite, quartz monzonite, and quartz monzodiorite.

**Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

**Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

**Green manure crop** (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

**Grus.** The fragmental product of *in situ* granular disintegration of granite and granitic rock, dominantly intercrystal disintegration.

**Gully.** A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

**Gypsum.** A mineral consisting of hydrous calcium sulfate.

**Hard bedrock.** Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

**Hard to reclaim** (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

**Head slope.** A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

**Hill.** A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

**Historic climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same. Major natural disturbances, such as fire, are included with the environmental factors.

**Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

*O horizon.*—An organic layer of fresh and decaying plant residue.

*A horizon.*—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

*E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

*B horizon.*—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

*C horizon.*—The mineral horizon or layer, excluding indurated bedrock, that is

little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

*Cr horizon.*—Moderately cemented bedrock (paralithic) beneath the soil.

*R layer.*—Indurated bedrock (lithic) beneath the soil.

**Humus.** The well decomposed, more or less stable part of the organic matter in mineral soils.

**Hydrologic soil groups.** Refers to soils grouped according to their runoff potential.

The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

**Igneous rock.** Rock formed by solidification from a molten or partially molten state.

Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

**Illuviation.** The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

**Infiltration.** The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

**Intake rate.** The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application.

**Intermontane basin (general landscape).** A generic term for a wide structural depression between mountain ranges that is partly filled with alluvium. Called “mountain valleys” in local vernacular. Intermontane basins are drained either internally (bolsons) or externally (semibolsons).

**Iron depletions.** Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

**Irrigation.** Application of water to soils to assist in production of crops. Methods of irrigation are:

*Basin.*—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

*Border.*—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

*Controlled flooding.*—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

*Corrugation.*—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

*Drip (or trickle).*—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

*Furrow.*—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

*Sprinkler.*—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

*Subirrigation.*—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

*Wild flooding.*—Water, released at high points, is allowed to flow onto an area without controlled distribution.

**Irrigation water management.** The quantity of water used is determined by the available water capacity of the soil and the needs of the crop grown, and water is applied at a rate and in such a manner that it can be used efficiently by the crop and minimal erosion occurs.

**K<sub>sat</sub>.** Saturated hydraulic conductivity. (See Permeability.)

**Lacustrine deposit.** Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

**Lakebed (landform).** The level to gently undulating ground underlain or composed of fine-grained sediment deposited in a former lake.

**Lamella.** A thin, discontinuous or continuous, generally horizontal layer of fine textured material (especially clay and iron oxides) that has been pedogenically concentrated (illuviated) within a coarser textured eluviated layer.

**Landform.** Any recognizable physical form or feature on the earth's surface that has a characteristic shape and range in composition and was produced by natural causes. Landforms range widely in size. They provide an empirical description of similar portions of the earth's surface.

**Landscape (soils).** A broad or unique area of land that consists of an assemblage or group of landforms that define a general geomorphic form or setting, such as a mountain range, lake plain, lava plateau, or loess hill. Landforms within a landscape are spatially associated, but they may vary in age and the process of formation.

**Landslide.** A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock material caused by gravitational forces and which may or may not involve saturated material.

**Large stones** (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

**Leaching.** The removal of soluble material from soil or other material by percolating water.

**Linear extensibility.** Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at  $1/3$ - or  $1/10$ -bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

**Liquid limit.** The moisture content at which the soil passes from a plastic to a liquid state.

**Loam.** Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

**Loess.** Fine grained material, dominantly of silt-sized particles, deposited by wind.

**Low adsorption** (in tables). Relatively limited capacity of the soil to take up and retain atoms, molecules, or ions from the soil solution or atmosphere.

**Low strength.** The soil is not strong enough to support loads.

**Major land resource area (MLRA).** A broad geographic land area characterized by a particular pattern of soils, geology, climate, water resources, and land use. An MLRA can be one continuous area or several separate areas that are in proximity.

**Masses.** Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate,

gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

**Medium textured soil.** Very fine sandy loam, loam, silt loam, or silt.

**Mineral soil.** Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

**Minimum tillage.** Only the tillage essential to crop production and prevention of soil damage.

**Miscellaneous area.** An area that has little or no natural soil and supports little or no vegetation.

**Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.

**Moderately fine textured soil.** Clay loam, sandy clay loam, or silty clay loam.

**Mollic epipedon.** A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation (more than 50 percent) and pedogenic soil structure. It may include the upper part of the subsoil.

**Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

**Mountain.** A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

**Mountain valleys (landform).** Any small externally drained V-shaped depression that has been cut or deepened by a stream and has a floor of alluvium or U-shaped depression that has been modified by an alpine glacier and has a floor of till or alluvium and is on or within mountains. (See Intermontane basins.)

**Munsell notation.** A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

**Nodules.** Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

**Nose slope.** A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

**Nutrient, plant.** Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

**Organic matter.** Plant and animal residue in the soil in various stages of decomposition.

**Outwash terrace (landform).** A flat-topped bank of outwash that has an abrupt outer face (scarp or riser) extending along a valley downstream from an outwash plain or terminal moraine; a valley train deposit.

**Pararock fragments.** Fragments of rock 2 millimeters or more in diameter that are weakly cemented or moderately cemented.

**Parent material.** The unconsolidated organic and mineral material in which soil forms.

**Ped.** An individual natural soil aggregate, such as a granule, a prism, or a block.

**Pedon.** The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to

100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

**Permeability.** The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Impermeable .....	less than 0.0015 inch
Very slow .....	0.0015 to 0.06 inch
Slow .....	0.06 to 0.2 inch
Moderately slow .....	0.2 to 0.6 inch
Moderate .....	0.6 inch to 2.0 inches
Moderately rapid .....	2.0 to 6.0 inches
Rapid .....	6.0 to 20 inches
Very rapid .....	more than 20 inches

**Phase, soil.** A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

**pH value.** A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

**Piping** (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

**Plasticity index.** The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

**Plastic limit.** The moisture content at which a soil changes from semisolid to plastic.

**Plowpan.** A compacted layer formed in the soil directly below the plowed layer.

**Ponding.** Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

**Poorly graded.** Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

**Potential rooting depth (effective rooting depth).** Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

**Productivity, soil.** The capability of a soil for producing a specified plant or sequence of plants under specific management.

**Profile, soil.** A vertical section of the soil extending through all its horizons and into the parent material.

**Proper grazing use.** Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

**Rangeland.** Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

**Reaction, soil.** A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is

neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid .....	less than 3.5
Extremely acid .....	3.5 to 4.4
Very strongly acid .....	4.5 to 5.0
Strongly acid .....	5.1 to 5.5
Moderately acid .....	5.6 to 6.0
Slightly acid .....	6.1 to 6.5
Neutral .....	6.6 to 7.3
Slightly alkaline .....	7.4 to 7.8
Moderately alkaline .....	7.9 to 8.4
Strongly alkaline .....	8.5 to 9.0
Very strongly alkaline .....	9.1 and higher

**Redoximorphic concentrations.** Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide.

An indication of chemical reduction and oxidation resulting from saturation.

**Redoximorphic depletions.** Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

**Redoximorphic features.** Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

**Reduced matrix.** A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

**Regolith.** The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

**Relief.** The elevations or inequalities of a land surface, considered collectively.

**Residuum (residual soil material).** Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

**Restrictive layer.** Physical feature that significantly limits penetration by plant roots; for example, strongly contrasting textural stratification, bedrock, or duripan.

**Rhyolite.** An extrusive volcanic rock; the aphanitic equivalent of granitic rock that locally exhibits fluidal banding.

**Ridge (landform).** A long, narrow, generally sharp-crested elevation of the land surface that has steep sides and forms an upland between valleys. Term is used in areas of both hill and mountain relief.

**Riser.** A geomorphic component of terraces, flood-plain steps, and other stepped landforms that consists of the vertical or steep side slope, typically of minimal aerial extent. Generally referred to as a terrace escarpment.

**Riverwash.** Unstable areas of sandy, silty, clayey, or gravelly sediment. These areas are flooded, washed, and reworked by rivers so frequently that they support little or no vegetation.

**Rock fragments.** Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

**Rock outcrop.** Exposures of bare bedrock excluding recent lava flows and rock-lined pits.

**Root zone.** The part of the soil that can be penetrated by plant roots.

**Rubble land.** Areas that have more than 75 percent of the surface covered with

cobbles, stones, and/or boulders. Voids contain no soil material and virtually no vegetation other than lichens. Areas of Rubble land commonly are below rims of lava flows or on exposed mountain slopes.

**Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

**Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

**Saturation.** Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

**Sedimentary rock.** Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

**Seepage** (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

**Sequum.** A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

**Series, soil.** A group of soils that have profiles that are almost alike. All the soils of a given series have horizons that are similar in composition, thickness, and arrangement.

**Shoulder.** The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

**Shrink-swell.** The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

**Side slope.** A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

**Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

**Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

**Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

**Slickensides.** Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

**Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

**Sodic (alkali) soil.** A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

**Sodium adsorption ratio (SAR).** A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

**Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

**Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

**Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand .....	2.0 to 1.0
Coarse sand .....	1.0 to 0.5
Medium sand .....	0.5 to 0.25
Fine sand .....	0.25 to 0.10
Very fine sand .....	0.10 to 0.05
Silt .....	0.05 to 0.002
Clay .....	less than 0.002

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

**Species.** A single, distinct kind of plant or animal that has certain distinguishing characteristics.

**Spur.** A subordinate ridge that projects sharply from the crest or side of a hill, mountain, or prominent range of hills or mountains.

**Stickiness** (in tables). The capacity of a wet soil to adhere to other objects.

**Stoniness (or boulderiness).** The relative proportion of larger rock fragments on the surface. Used as a phase designation for soils that have a sufficient amount of stones or boulders to limit use and management. These phases should not be confused with the rock fragment textural modifiers. The four classes recognized in this survey are as follows:

*Stony (bouldery)*—The content of stones or boulders at or near the surface is enough to be a continuing nuisance during operations that mix the surface layer, but they do not make most such operations impractical. Conventional wheeled vehicles can move over the area with reasonable ease. Rocks may damage the equipment that mixes the soil and the vehicles. Large rock fragments cover about 0.01 to 0.1 percent of the surface.

*Very stony (very bouldery)*—The content of stones or boulders at or near the surface is enough that operations that mix the surface layer either require heavy equipment or use of implements that can operate between the larger ones. Tillage with conventionally powered farm equipment is impractical. Wheeled tractors and other vehicles with high clearance can operate on carefully chosen routes over and around stones and boulders. Large rock fragments cover about 0.1 to 3.0 percent of the surface.

*Extremely stony (extremely bouldery)*—The content of stones or boulders at or near the surface is enough that wheeled powered equipment, except some special types, can operate only along selected routes. Tracked vehicles can be used in most places, although some routes have to be cleared. Large rock fragments cover about 3 to 15 percent of the surface.

*Rubby*—The content of stones or boulders at or near the surface is enough that tracked vehicles cannot be used in most places. Large rock fragments cover about 15 to 50 percent of the surface.

**Stony soil material.** Material that is 15 to 35 percent, by volume, rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter. Very stony soil material has 35 to 60 percent of these rock fragments, and extremely stony soil material has more than 60 percent.

**Stream terrace (landform).** A flat-topped platform or a series of these platforms in a stream valley that flanks the stream channel and is parallel to it. It originally formed during a period when the stream was at a different level and represents the remnants of an abandoned flood plain, streambed, or valley floor that was produced during a former period of fluvial erosion or deposition.

**Structural bench (landform).** A platform-like, nearly level to gently sloping, inclined erosional surface that formed on resistant strata in areas where valleys were cut from alternating strong and weak layers that are essentially horizontal. Structural benches are bedrock controlled.

**Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

**Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

**Subaqueous.** Conditions, processes, features, or deposits that exist or operate in or under water.

**Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth.

**Substratum.** The part of the soil below the solum.

**Subsurface layer.** Technically, the E horizon. Generally refers to a leached horizon that is lighter in color and lower in content of organic matter than the overlying surface layer.

**Summit.** The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

**Surface layer.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

**Tailings.** Areas of rock fragments and soil material deposited in uneven piles during placer mining activities.

**Talus.** Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

**Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand*, *loamy sand*, *sandy loam*, *loam*, *silt loam*, *silt*, *sandy clay loam*, *clay loam*, *silty clay loam*, *sandy clay*, *silty clay*, and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

**Thin layer** (in tables). Otherwise suitable soil material that is too thin for the specified use.

**Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

**Toeslope.** The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

- Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.
- Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.
- Tread.** A geomorphic component of terraces, flood-plain steps, and other stepped landforms consisting of the level to gently sloping, uppermost, laterally extensive slope.
- Understory.** Plants in a forest plant community that grow to a height of as much as 4.5 feet.
- Umbric epipedon.** A thick, dark, humus-rich surface horizon (or horizons) that has low base saturation (less than 50 percent) and pedogenic soil structure. It may include the upper part of the subsoil.
- Upland.** Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.
- Valley (general landscape).** An elongated, relatively large, externally drained depression of the earth's surface that is primarily the result of stream erosion or glacial activity.
- Variagation.** Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.
- Volcanic.** The structures, rocks, and landforms produced by deep-seated (igneous) processes by which magma and associated gases rise through the crust and are extruded onto the earth's surface and into the atmosphere.
- Volcanic ash.** Unconsolidated, pyroclastic material less than 2 millimeters in all dimensions.
- Volcanic cone (landform).** A conical hill of lava and/or pyroclastic material that is built up around a volcanic vent.
- Water bars.** Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.
- Weathering.** All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.
- Well graded.** Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.
- Welded tuff.** A glass-rich rock that has been indurated by the welding together of the glass shards by the heat retained by particles, the weight of the overlying material, and hot gases.
- Wilting point (or permanent wilting point).** The moisture content of soil, on an oven-dry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.
- Windthrow.** The uprooting and tipping over of trees by the wind.



# Tables

---

Table 1.--Temperature and Precipitation

(Recorded in the period 1971-2000 at Garden Valley Ranger Station, Idaho 3448)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of growing degree days*	Average	2 years in 10 will have--		Average number of days with 0.10 inch or more	Average snowfall
				Maximum temperature higher than--	Minimum temperature lower than--			Less than--	More than--		
<sup>o</sup> F	<sup>o</sup> F	<sup>o</sup> F	<sup>o</sup> F	<sup>o</sup> F	Units	In	In	In		In	
January-----	34.9	17.5	26.2	49	-13	0	3.96	2.05	5.96	8	17.1
February-----	42.1	21.3	31.7	57	-6	4	2.85	1.43	4.13	7	9.3
March-----	51.7	26.1	38.9	70	7	53	2.44	1.09	3.73	6	2.5
April-----	61.7	31.2	46.4	83	18	203	1.74	0.72	2.59	5	0.1
May-----	71.5	37.7	54.6	92	23	447	1.74	0.64	2.79	4	0.0
June-----	80.2	43.3	61.8	98	29	644	1.45	0.63	2.17	3	0.0
July-----	89.5	47.0	68.2	103	34	867	0.65	0.13	1.11	1	0.0
August-----	89.5	45.2	67.4	102	32	848	0.46	0.05	0.77	1	0.0
September---	78.9	37.7	58.3	97	22	547	1.22	0.15	2.05	3	0.0
October-----	65.9	30.2	48.0	87	15	257	1.41	0.45	2.32	3	0.2
November----	44.6	25.1	34.8	66	1	24	3.33	1.60	4.93	8	6.1
December----	34.3	18.1	26.2	50	-10	1	4.06	1.73	6.14	9	18.0
Yearly:											
Average---	62.1	31.7	46.9	---	---	---	---	---	---	---	---
Extreme---	108	-23.0	---	104	-17	---	---	---	---	---	---
Total-----	---	---	---	---	---	3,895	25.31	16.00	30.09	58	53.3

See footnote at end of table.

Table 1.--Temperature and Precipitation--Continued  
 (Recorded in the period 1971-2000 at Idaho City, Idaho 4442)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of growing degree days*	Average	2 years in 10 will have--		Average number of days with 0.10 inch or more	Average snowfall
				Maximum temperature higher than--	Minimum temperature lower than--			Less than--	More than--		
<sup>o</sup> F	<sup>o</sup> F	<sup>o</sup> F	<sup>o</sup> F	<sup>o</sup> F	Units	In	In	In		In	
January-----	35.5	13.6	24.5	50	-16	0	3.44	1.69	5.25	7	21.3
February----	41.5	16.2	28.8	58	-12	2	2.77	1.49	3.90	7	12.7
March-----	48.6	22.6	35.6	67	2	25	2.43	1.25	3.60	7	4.7
April-----	58.0	28.0	43.0	81	15	134	1.87	0.95	2.78	5	0.9
May-----	67.4	34.9	51.1	88	21	350	1.88	0.77	2.93	5	0.1
June-----	76.7	40.6	58.6	96	27	557	1.33	0.45	2.17	3	0.0
July-----	86.2	45.1	65.7	100	31	794	0.67	0.11	1.16	1	0.0
August-----	86.3	44.1	65.2	100	31	777	0.52	0.06	0.85	1	0.0
September---	75.8	36.0	55.9	95	21	477	1.17	0.11	2.07	2	0.0
October-----	63.2	28.2	45.7	85	12	208	1.45	0.45	2.39	3	0.9
November----	44.2	22.1	33.2	67	-3	23	3.08	1.38	4.75	8	9.4
December----	35.1	13.9	24.5	50	-15	0	3.51	1.18	5.72	8	21.3
Yearly:											
Average---	59.9	28.8	44.3	---	---	---	---	---	---	---	---
Extreme---	104	-32.0	---	101	-21	---	---	---	---	---	---
Total-----	---	---	---	---	---	3,347	24.12	19.07	28.65	57	71.4

\*A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Garden Valley Ranger Station (3448) and Idaho City (4442), Idaho)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
<b>GARDEN VALLEY RANGER STATION</b>			
Last freezing temperature in spring:			
1 year in 10 later than-----	May 14	June 10	July 1
2 years in 10 later than-----	May 7	June 2	June 23
5 years in 10 later than-----	April 22	May 16	June 7
First freezing temperature in fall:			
1 year in 10 earlier than---	September 13	September 7	August 19
2 years in 10 earlier than---	September 20	September 11	August 26
5 years in 10 earlier than---	October 3	September 20	September 6
<b>IDAHO CITY</b>			
Last freezing temperature in spring:			
1 year in 10 later than-----	May 21	June 20	July 10
2 years in 10 later than-----	May 15	June 12	July 4
5 years in 10 later than-----	May 4	May 28	June 24
First freezing temperature in fall:			
1 year in 10 earlier than---	September 16	September 2	August 16
2 years in 10 earlier than---	September 21	September 7	August 22
5 years in 10 earlier than---	October 1	September 16	September 2

Table 3.--Growing Season

(Recorded in the period 1971-2000 at Garden Valley Ranger Station (3448) and Idaho City (4442), Idaho)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F <i>Days</i>	Higher than 28 °F <i>Days</i>	Higher than 32 °F <i>Days</i>
GARDEN VALLEY RANGER STATION			
9 years in 10	130	95	65
8 years in 10	142	106	74
5 years in 10	163	126	93
2 years in 10	185	147	111
1 year in 10	196	157	121
IDAHO CITY			
9 years in 10	130	82	46
8 years in 10	136	91	54
5 years in 10	149	110	69
2 years in 10	161	128	85
1 year in 10	168	138	93

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Ada County	Boise County	Total	
				Area	Extent
		<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Pct</i>
220	Oxyaquic Xerofluvents-Cumulic Haploxerolls complex, nearly level-----	---	355	355	*
221	Bissell loam, 2 to 4 percent slopes-----	---	145	145	*
222	Bissell loam, 4 to 8 percent slopes-----	---	420	420	*
223	Staircase sandy loam, 1 to 4 percent slopes--	---	354	354	*
224	Porter sandy loam, 1 to 4 percent slopes-----	---	323	323	*
225	Boise coarse sandy loam, 3 to 8 percent slopes-----	---	602	602	0.1
226	Flofeather-Shawmount complex, 1 to 3 percent slopes-----	---	434	434	*
227	Piercepark loam, 2 to 4 percent slopes-----	---	295	295	*
228	Piercepark loam, 4 to 8 percent slopes-----	---	260	260	*
229	Piercepark coarse sandy loam, 8 to 25 percent slopes-----	---	803	803	0.2
230	Hann-Doubledia complex, 2 to 15 percent slopes-----	---	806	806	0.2
232	Jasseek loam, 1 to 3 percent slopes-----	---	168	168	*
233	Jasseek loam, 3 to 8 percent slopes-----	---	69	69	*
238	Adaboi silt loam, 1 to 4 percent slopes-----	---	32	32	*
240	Collister-Flofeather complex, 1 to 3 percent slopes-----	---	115	115	*
300	Shawmount gravelly loam, 8 to 35 percent slopes-----	---	570	570	0.1
301	Breadloaf-Doubledia complex, 4 to 15 percent slopes-----	---	167	167	*
302	Breadloaf-Doubledia-Hann complex, 15 to 50 percent slopes-----	---	2,683	2,683	0.6
303	Doubledia-Hann-Breadloaf complex, 15 to 50 percent slopes-----	---	1,765	1,765	0.4
304	Breadloaf-Doubledia-Hullsgulch complex, 2 to 35 percent slopes-----	---	358	358	*
305	Siphonlake-Solarview complex, 35 to 65 percent slopes-----	---	767	767	0.2
306	Van Dusen-Siphonlake complex, 35 to 65 percent slopes-----	---	318	318	*
307	Adaboi-Meclo complex, 4 to 15 percent slopes	---	123	123	*
308	Breadloaf-Crawley-Doubledia complex, 25 to 65 percent slopes-----	---	727	727	0.2
309	Hullsgulch-Solarview complex, 35 to 65 percent slopes-----	---	469	469	0.1
311	Meclo-Crawley-Adaboi complex, 15 to 50 percent slopes-----	---	364	364	*
328	Gacey stony loam, 3 to 8 percent slopes-----	---	290	290	*
329	Ayette-Duco complex, 25 to 65 percent slopes	---	775	775	0.2
330	Breadloaf-Ayette-Immig complex, 4 to 35 percent slopes-----	---	362	362	*
331	Ayette-Yad complex, 8 to 25 percent slopes---	---	882	882	0.2
332	Hann-Ayette-Picketpin complex, 25 to 65 percent slopes-----	---	663	663	0.1
333	Ayette-Crawley-Hullsgulch complex, 25 to 65 percent slopes-----	---	1,527	1,527	0.3
335	Gimmi-Ayette-Doubledia complex, 4 to 35 percent slopes-----	---	544	544	0.1
400	Ralsen-Foxlane-Pay complex, 0 to 2 percent slopes-----	---	854	854	0.2
401	Staircase sandy loam, 0 to 2 percent slopes--	---	456	456	*
402	Crossbow-Foxlane complex, 1 to 4 percent slopes-----	---	529	529	0.1
403	Ralsen-Pay-Crossbow complex, 0 to 2 percent slopes-----	---	682	682	0.1

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Ada County	Boise County	Total	
				Area	Extent
		<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Pct</i>
404	Riverpoint-Hellake complex, 2 to 25 percent slopes-----	---	568	568	0.1
405	Hellake-Staircase complex, 0 to 2 percent slopes-----	---	871	871	0.2
406	Hellake loam, 2 to 8 percent slopes-----	---	505	505	0.1
407	Hellake loam, 8 to 25 percent slopes-----	---	652	652	0.1
408	Stardust fine gravelly loam, 1 to 3 percent slopes-----	---	568	568	0.1
409	Stardust fine gravelly loam, 3 to 8 percent slopes-----	---	1,048	1,048	0.2
410	Stardust-Riverpoint complex, 8 to 25 percent slopes-----	---	1,377	1,377	0.3
411	Huston-Zeb association, 25 to 65 percent slopes-----	---	1,133	1,133	0.2
412	Huston-Stardust association, 8 to 65 percent slopes-----	---	3,720	3,720	0.8
413	Cloudyway fine gravelly sandy loam, 4 to 15 percent slopes-----	---	598	598	0.1
414	Hellake-Middlefork complex, 8 to 50 percent slopes-----	---	657	657	0.1
415	Middlefork-Pinney complex, 8 to 50 percent slopes-----	---	1,572	1,572	0.3
416	Pinney-Middlefork-Zeb complex, 15 to 50 percent slopes-----	---	2,053	2,053	0.4
417	Middlefork-Zeb complex, 8 to 25 percent slopes-----	---	1,441	1,441	0.3
418	Middlefork-Zeb complex, 25 to 65 percent slopes-----	---	591	591	0.1
419	Charters-Zeb complex, 15 to 50 percent slopes-----	---	614	614	0.1
420	Pioneervil-Grimescreek complex, 0 to 3 percent slopes-----	---	1,305	1,305	0.3
421	Dumps-Oxyaquic Xerorthents complex, undulating-----	---	3,648	3,648	0.8
422	Lithic Xerorthents-Dumps-Dystric Xeropsamments complex, gently rolling-----	---	2,450	2,450	0.5
423	Dystric Xeropsamments-Ultic Haploxeralfs-Lithic Xerorthents complex, hilly-----	---	6,012	6,012	1.3
424	Middlefork-Charters complex, 8 to 25 percent slopes-----	---	5,535	5,535	1.2
425	Middlefork-Brassey complex, 3 to 15 percent slopes-----	---	1,020	1,020	0.2
426	Middlefork loam, 8 to 25 percent slopes-----	---	717	717	0.2
427	Middlefork loam, 25 to 50 percent slopes-----	---	248	248	*
428	Zeb-Republic complex, 25 to 65 percent slopes-----	---	373	373	*
429	Huston gravelly coarse sandy loam, 8 to 25 percent slopes-----	---	193	193	*
503	Cartwright loam, 3 to 8 percent slopes-----	---	197	197	*
504	Cartwright loam, 8 to 25 percent slopes-----	---	640	640	0.1
505	Brownlee loam, 4 to 15 percent slopes-----	---	310	310	*
506	Brownlee-Robbscreek-Whisk complex, 8 to 35 percent slopes-----	187	10,518	10,705	2.3
507	Shoebend-Dobson-Jerusalem complex, 25 to 65 percent slopes-----	---	1,395	1,395	0.3
509	Arrowrock-Borid-Rock outcrop complex, 35 to 90 percent slopes-----	---	2,023	2,023	0.4
511	Olaton-Roney complex, moist, 35 to 90 percent slopes-----	141	2,847	2,988	0.6
513	Shimo-Cartwright-Robbscreek complex, 35 to 90 percent slopes-----	---	2,208	2,208	0.5
516	Shimo-Olaton-Schiller complex, 35 to 90 percent slopes-----	---	1,824	1,824	0.4

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Ada County	Boise County	Total	
				Area	Extent
		<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Pct</i>
525	Robbscreek-Dobson-Brownlee complex, 25 to 65 percent slopes-----	213	16,891	17,104	3.7
526	Cartwright-Brownlee-Robbscreek complex, 25 to 65 percent slopes-----	90	7,390	7,480	1.6
527	Dobson-Roney complex, 35 to 90 percent slopes	442	9,854	10,296	2.2
528	Roney-Dobson-Olaton complex, 25 to 65 percent slopes-----	360	4,543	4,903	1.1
529	Roney-Kisky-Olaton complex, 25 to 65 percent slopes-----	541	10,872	11,413	2.5
532	Schiller-Shimo complex, 25 to 65 percent slopes-----	142	---	142	*
533	Olaton-Roney complex, 35 to 90 percent slopes	246	5,053	5,299	1.1
534	Shimo-Kisky-Schiller complex, 35 to 90 percent slopes-----	1,368	10,035	11,403	2.5
538	Borid-Shimo complex, 35 to 90 percent slopes	35	475	510	0.1
541	Roney-Kisky complex, 8 to 35 percent slopes--	---	248	248	*
544	Arrowrock-Borid-Painter complex, 35 to 90 percent slopes-----	32	2,739	2,771	0.6
551	Shimo-Kisky complex, 35 to 90 percent slopes	54	2,677	2,731	0.6
555	Brownlee-Schiller complex, 8 to 65 percent slopes-----	---	268	268	*
556	Kisky-Shimo-Brownlee complex, 35 to 90 percent slopes-----	195	1,528	1,723	0.4
558	Kisky-Whisk-Roney complex, 35 to 90 percent slopes-----	402	2,145	2,547	0.6
560	Robbscreek-Hellake-Shimo complex, 25 to 65 percent slopes-----	---	420	420	*
561	Shimo-Kisky-Olaton complex, 35 to 90 percent slopes-----	104	1,708	1,812	0.4
562	Kisky-Shimo-Roney complex, 35 to 90 percent slopes-----	---	3,240	3,240	0.7
600	McDesh-Immig-Gwin complex, 4 to 25 percent slopes-----	---	4,200	4,200	0.9
601	Hann-Gwin-Shafer complex, 2 to 25 percent slopes-----	---	1,142	1,142	0.2
602	Hillcreek-Hovelton-Hann complex, 25 to 65 percent slopes-----	---	3,015	3,015	0.7
604	Shafer-Hann complex, 2 to 35 percent slopes--	113	1,106	1,219	0.3
605	Gwin-Flybow complex, 4 to 25 percent slopes--	---	1,122	1,122	0.2
606	Hillcreek-Hovelton complex, 35 to 65 percent slopes-----	---	1,291	1,291	0.3
607	Duco-Immig-Rubble land complex, 25 to 65 percent slopes-----	---	517	517	0.1
608	Duco-Hovelton-McDesh complex, 25 to 65 percent slopes-----	---	3,207	3,207	0.7
610	Hovelton-Duco-McDesh complex, 25 to 65 percent slopes-----	---	3,715	3,715	0.8
612	Hann-Hillcreek complex, 4 to 15 percent slopes-----	---	885	885	0.2
613	Duco-Searles-McDesh complex, 25 to 65 percent slopes-----	---	827	827	0.2
618	McDesh-Duco-Shafer complex, 8 to 35 percent slopes-----	---	293	293	*
619	McDesh-Gwin-Shafer complex, 8 to 35 percent slopes-----	---	747	747	0.2
620	Immig-McDesh-Duco complex, 25 to 65 percent slopes-----	---	754	754	0.2
621	McDaniel-Hovelton association, 35 to 65 percent slopes-----	---	1,147	1,147	0.2
622	Hovelton-Gwin complex, 15 to 65 percent slopes-----	---	284	284	*

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Ada County	Boise County	Total	
				Area	Extent
		<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Pct</i>
630	Gwin-Flybow-Rock outcrop complex, 35 to 65 percent slopes-----	---	561	561	0.1
631	Flybow-Rock outcrop-Rubble land complex, 35 to 90 percent slopes-----	---	587	587	0.1
634	Gwin-McDesh-Rock outcrop complex, 4 to 25 percent slopes-----	15	---	15	*
635	Shafer-Karney-Yad complex, 8 to 35 percent slopes-----	12	---	12	*
636	Hann-McDesh-Robbascreek complex, 15 to 50 percent slopes-----	15	---	15	*
638	Yad-Cranegulch-Duco complex, 4 to 15 percent slopes-----	10	---	10	*
640	Timberbutte very gravelly ashy silt loam, 35 to 65 percent slopes-----	---	362	362	*
641	Aradaran-Yad complex, 4 to 15 percent slopes	23	19	42	*
650	Longs-Highvalley-Hoff complex, 15 to 35 percent slopes-----	---	1,028	1,028	0.2
651	Hess-Lidos-Cleymor complex, 4 to 35 percent slopes-----	---	217	217	*
652	Hess-Lidos-Klicker complex, 15 to 35 percent slopes-----	---	2,302	2,302	0.5
653	Lidos-Klicker-Hess complex, 35 to 65 percent slopes-----	---	967	967	0.2
654	Shilling-Highvalley-Hoff complex, 35 to 65 percent slopes-----	---	3,755	3,755	0.8
655	Shilling-Highvalley complex, 15 to 35 percent slopes-----	---	1,186	1,186	0.3
656	Shilling-Highvalley complex, 35 to 65 percent slopes-----	---	532	532	0.1
657	Pumpkin stony loam, 8 to 25 percent slopes---	---	262	262	*
658	Cleymor-Pumpkin complex, 4 to 35 percent slopes-----	---	859	859	0.2
659	Hoff gravelly ashy loam, 8 to 50 percent slopes-----	---	623	623	0.1
660	Longs-Highvalley complex, 35 to 65 percent slopes-----	---	781	781	0.2
661	Awley-Bo complex, 15 to 35 percent slopes----	---	964	964	0.2
662	Awley-Bo complex, 35 to 65 percent slopes----	---	636	636	0.1
663	Cleymor-Hoff complex, 15 to 50 percent slopes	---	138	138	*
666	Pachic Argixerolls-Rubble land-Typic Haploxerolls complex, very steep-----	---	925	925	0.2
700	Drybuck-Whisk complex, 8 to 25 percent slopes	---	3,630	3,630	0.8
701	Drybuck-Whisk complex, 25 to 65 percent slopes-----	---	2,260	2,260	0.5
702	Deerrun-Kisky-Drybuck complex, 35 to 90 percent slopes-----	25	15,584	15,609	3.4
704	Drybuck-Northfork-Whisk association, 25 to 65 percent slopes-----	---	328	328	*
705	Northfork-Shirts complex, 15 to 35 percent slopes-----	---	632	632	0.1
706	Northfork-Shirts-Zimmer complex, 35 to 90 percent slopes-----	65	7,850	7,915	1.7
707	Packerjohn-Shirts-Zimmer complex, 35 to 65 percent slopes-----	---	755	755	0.2
708	Zimmer-Northfork-Rock outcrop complex, 35 to 90 percent slopes-----	---	1,249	1,249	0.3
709	Shirts-Charters complex, 15 to 35 percent slopes-----	---	2,844	2,844	0.6
710	Charters-Northfork-Shirts complex, 35 to 90 percent slopes-----	59	5,882	5,941	1.3

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Ada County	Boise County	Total	
				Area	Extent
		<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Pct</i>
711	Charters-Shirts-Zimmer complex, 15 to 35 percent slopes-----	---	1,482	1,482	0.3
712	Charters-Shirts-Zimmer complex, 35 to 90 percent slopes-----	16	10,942	10,958	2.4
714	Shirts-Eagleson-Charters complex, 35 to 65 percent slopes-----	---	1,653	1,653	0.4
715	Eagleson-Kosh complex, 25 to 90 percent slopes-----	93	11,463	11,556	2.5
716	Zan-Belsh-Montchief complex, 35 to 90 percent slopes-----	---	3,625	3,625	0.8
718	Charters-Crumley-Eagleson complex, 35 to 90 percent slopes-----	723	14,670	15,393	3.3
720	Drybuck-Deerrun-Kisky complex, 25 to 65 percent slopes-----	---	3,156	3,156	0.7
721	Shirts-Kosh-Charters complex, 25 to 65 percent slopes-----	---	12,847	12,847	2.8
726	Garval-Kisky complex, 35 to 90 percent slopes	69	9,686	9,755	2.1
730	Hellake-Stardust complex, 8 to 25 percent slopes-----	---	275	275	*
731	Shirts-Charters-Zimmer complex, 35 to 90 percent slopes-----	64	6,514	6,578	1.4
733	Shirts-Kosh complex, 8 to 25 percent slopes--	---	614	614	0.1
734	Shirts-Kosh complex, 35 to 90 percent slopes	---	9,325	9,325	2.0
735	Shirts-Zimmer-Charters complex, 35 to 90 percent slopes-----	34	11,119	11,153	2.4
738	Tripod-Packerjohn-Pajo complex, 35 to 90 percent slopes-----	---	6,581	6,581	1.4
739	Shirts-Zimmer-Packerjohn complex, 35 to 90 percent slopes-----	---	1,996	1,996	0.4
740	Charters-Eagleson complex, 35 to 90 percent slopes-----	---	805	805	0.2
741	Zan fine gravelly ashy coarse sandy loam, 4 to 35 percent slopes-----	---	472	472	0.1
742	Crumley-Eagleson complex, 35 to 90 percent slopes-----	369	2,367	2,736	0.6
743	Packerjohn-Shirts complex, 8 to 35 percent slopes-----	---	1,850	1,850	0.4
744	Packerjohn-Shirts-Tripod complex, 4 to 35 percent slopes-----	---	3,507	3,507	0.8
745	Tripod-Packerjohn complex, 35 to 90 percent slopes-----	---	469	469	0.1
746	Packerjohn ashy sandy loam, 15 to 35 percent slopes-----	---	495	495	0.1
747	Pinney-Charters-Shirts complex, 25 to 65 percent slopes-----	---	1,474	1,474	0.3
748	Belsh-Zan complex, 8 to 35 percent slopes----	---	351	351	*
749	Quartzburg-Charters complex, 35 to 90 percent slopes-----	---	4,624	4,624	1.0
750	Garval-Kisky-Rock outcrop complex, 35 to 90 percent slopes-----	---	4,625	4,625	1.0
751	Belsh-Zan complex, 35 to 65 percent slopes----	---	268	268	*
752	Josie-Zimmer complex, 8 to 50 percent slopes	---	1,354	1,354	0.3
753	Tripod-Packerjohn-Shirts complex, 15 to 50 percent slopes-----	---	1,361	1,361	0.3
754	Packerjohn-Shirts complex, moist, 8 to 35 percent slopes-----	---	50	50	*
755	Zimmer-Quartzburg-Rock outcrop complex, 50 to 90 percent slopes-----	---	135	135	*
756	Pajo-Tripod-Kosh complex, 50 to 90 percent slopes-----	---	529	529	0.1

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Ada County	Boise County	Total	
				Area	Extent
		<i>Acres</i>	<i>Acres</i>	<i>Acres</i>	<i>Pct</i>
758	Eagleson-Kosh-Charters complex, 35 to 90 percent slopes-----	657	9,616	10,273	2.2
759	Charters-Shirts-Kosh complex, 25 to 65 percent slopes-----	---	14,813	14,813	3.2
761	Charters-Middlefork complex, 8 to 50 percent slopes-----	---	1,859	1,859	0.4
762	Drybuck-Hellake-Deerrun complex, 8 to 50 percent slopes-----	---	1,730	1,730	0.4
763	Eagleson-Kosh-Rock outcrop complex, 35 to 90 percent slopes-----	---	5,588	5,588	1.2
765	Backswitch-Zimmer-Rock outcrop complex, 8 to 35 percent slopes-----	---	877	877	0.2
766	Backswitch-Charters-Zimmer complex, 8 to 50 percent slopes-----	---	13,584	13,584	2.9
767	Shirts-Kosh-Charters complex, 15 to 50 percent slopes-----	---	12,047	12,047	2.6
768	Shirts-Kosh-Eagleson complex, 35 to 90 percent slopes-----	---	5,861	5,861	1.3
770	Shirts-Charters-Kosh complex, 15 to 65 percent slopes-----	---	2,724	2,724	0.6
771	Backswitch-Shirts complex, 25 to 65 percent slopes-----	---	1,064	1,064	0.2
772	Pajo-Packerjohn-Kosh complex, 35 to 90 percent slopes-----	---	9,252	9,252	2.0
900	Pits and Dumps, gravel-----	---	75	75	*
901	Dumps, landfill-----	---	31	31	*
999	Water-----	---	1,500	1,500	0.3
	Total-----	6,914	455,848	462,762	100.0

\* Less than 0.1 percent.

Table 5.--Yields per Acre of Crops and Pasture

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are for those that can be expected under a high level of management. Absence of an entry indicates that data were not estimated. Only the soils suited to crops and pasture are listed.)

Map symbol and soil name	Alfalfa hay		Barley		Grass hay		Pasture	
	N	I	N	I	N	I	N	I
	Tons	Tons	Bu	Bu	Tons	Tons	AUM	AUM
220: Oxyaquic Xerofluvents---	---	5.0	---	70.0	---	---	---	13.0
Cumulic Haploxerolls---	---	7.0	---	115.0	---	---	---	18.0
221: Bissell-----	---	8.5	---	125.0	---	---	---	21.0
222: Bissell-----	---	8.0	---	125.0	---	---	---	21.0
223: Staircase, dry--	---	7.0	---	115.0	---	---	---	18.0
224: Porter-----	---	7.0	---	115.0	---	---	---	18.0
225: Boise-----	---	7.0	---	115.0	---	---	---	18.0
226: Flofeather, very rarely flooded	---	7.0	---	115.0	---	---	---	17.0
Shawmount, stony surface-----	---	6.5	---	115.0	---	---	---	18.0
227: Piercepark, loam	---	8.5	---	125.0	---	---	---	21.0
228: Piercepark, loam	---	8.0	---	120.0	---	---	---	20.0
229: Piercepark, coarse sandy loam-----	---	7.0	---	110.0	---	---	---	18.0
230: Hann-----	---	7.0	---	125.0	---	---	---	19.0
Doubledia, silty clay loam-----	---	6.0	---	100.0	---	---	---	15.0
232: Jasseek-----	---	8.0	---	135.0	---	---	---	22.0
233: Jasseek-----	---	7.5	---	130.0	---	---	---	20.0

Table 5.--Yields per Acre of Crops and Pasture and Pasture--Continued

Map symbol and soil name	Alfalfa hay		Barley		Grass hay		Pasture	
	N Tons	I Tons	N Bu	I Bu	N Tons	I Tons	N AUM	I AUM
238: Adaboi-----	---	7.5	---	135.0	---	---	---	20.0
240: Collister-----	---	8.0	---	125.0	---	---	---	21.0
Flofeather-----	---	7.0	---	115.0	---	---	---	17.0
401: Staircase-----	---	---	---	---	---	3.5	---	9.0
402: Crossbow-----	---	---	---	---	---	3.0	---	8.0
Foxlane-----	---	---	---	---	---	3.0	---	8.0
403: Ralsen-----	---	---	---	---	1.5	3.0	4.0	7.0
Pay-----	---	---	---	---	1.5	3.0	4.0	7.0
Crossbow-----	---	---	---	---	1.0	3.0	3.0	8.0
404: Riverpoint-----	---	---	---	---	---	2.5	---	7.0
Hellake-----	---	---	---	---	---	4.0	---	11.0
405: Hellake-----	---	---	---	---	---	4.5	---	12.0
Staircase-----	---	---	---	---	---	3.5	---	9.0
406: Hellake-----	---	---	---	---	---	4.0	---	11.0
407: Hellake-----	---	---	---	---	---	3.5	---	9.0
408: Stardust-----	---	---	---	---	---	4.0	---	9.0
409: Stardust-----	---	---	---	---	---	3.5	---	8.0
410: Stardust-----	---	---	---	---	---	3.0	---	7.0
Riverpoint, very stony surface--	---	---	---	---	---	2.5	---	7.0
412: Stardust-----	---	---	---	---	---	3.0	---	7.0
413: Cloudyway-----	---	---	---	---	---	3.0	---	8.0
417: Middlefork-----	---	---	---	---	---	3.5	---	9.0

Table 5.--Yields per Acre of Crops and Pasture and Pasture--Continued

Map symbol and soil name	Alfalfa hay		Barley		Grass hay		Pasture	
	N <i>Tons</i>	I <i>Tons</i>	N <i>Bu</i>	I <i>Bu</i>	N <i>Tons</i>	I <i>Tons</i>	N <i>AUM</i>	I <i>AUM</i>
417: Zeb, fine gravelly sandy loam-----	---	---	---	---	---	2.5	---	7.0
420: Pioneervil-----	---	---	---	---	---	3.0	---	8.0
Grimescreek-----	---	---	---	---	---	3.0	---	8.0
424: Middlefork-----	---	---	---	---	---	3.5	---	9.0
Charters, coarse sandy loam-----	---	---	---	---	---	3.0	---	7.0
425: Middlefork-----	---	---	---	---	---	4.0	---	11.0
Brassey-----	---	---	---	---	---	3.5	---	9.0

Table 6.--Land Capability Classification

(Land capability is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time.)

Map symbol and soil name	Land capability	
	N	I
220:		
Oxyaquic Xerofluvents-----	7s	7s
Cumulic Haploxerolls-----	6c	4s
221:		
Bissell-----	6c	2e
222:		
Bissell-----	6e	3e
223:		
Staircase, dry-----	3c	2e
224:		
Porter-----	4c	2e
225:		
Boise-----	6e	3e
226:		
Flofeather, very rarely flooded-----	6c	2s
Shawmount, stony surface-----	6c	3s
227:		
Piercepark, loam-----	6c	2e
228:		
Piercepark, loam-----	6e	3e
229:		
Piercepark, coarse sandy loam-----	6e	4e
230:		
Hann-----	6e	4e
Doubledia, silty clay loam-----	6e	4e
232:		
Jasseek-----	6s	3s
233:		
Jasseek-----	6e	3e
238:		
Adaboi-----	6c	3s
240:		
Collister-----	6c	2e
Flofeather-----	6c	2s
300:		
Shawmount, stony surface-----	6e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
301:		
Breadloaf-----	6e	---
Doubledia, silty clay loam-----	6e	---
302:		
Breadloaf-----	7e	---
Doubledia, silty clay loam-----	7e	---
Hann-----	6e	---
303:		
Doubledia, silty clay loam-----	7e	---
Hann-----	6e	---
Breadloaf-----	7e	---
304:		
Breadloaf-----	6e	---
Doubledia, silty clay loam-----	6e	---
Hullsgulch, loam-----	6e	---
305:		
Siphonlake, south slope-----	7e	---
Solarview-----	7e	---
306:		
Van Dusen-----	7e	---
Siphonlake-----	7e	---
307:		
Adaboi-----	6e	---
Meclo-----	6e	---
308:		
Breadloaf-----	7e	---
Crawley, silt loam-----	7e	---
Doubledia, clay loam-----	7e	---
309:		
Hullsgulch, sandy loam-----	7e	---
Solarview-----	7e	---
311:		
Meclo-----	7e	---
Crawley, silt loam-----	7e	---
Adaboi-----	6e	---
328:		
Gacey, extremely stony surface-----	7s	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
329:		
Ayette-----	7e	---
Duco, stony loam, very stony surface-----	7e	---
330:		
Breadloaf-----	6e	---
Ayette, moist-----	6e	---
Immig, rubbly surface-----	6s	---
331:		
Ayette, moist-----	6e	---
Yad-----	6s	---
332:		
Hann-----	7e	---
Ayette, moist-----	7e	---
Picketpin-----	7e	---
333:		
Ayette-----	7e	---
Crawley, loam-----	7e	---
Hullsgulch, loam-----	7e	---
335:		
Gimmi, very stony surface-----	4s	---
Ayette, moist-----	4e	---
Doubledia, silty clay loam-----	4e	---
400:		
Ralsen-----	4w	---
Foxlane-----	4s	---
Pay-----	4w	---
401:		
Staircase-----	3c	3c
402:		
Crossbow-----	3w	3w
Foxlane-----	4s	4s
403:		
Ralsen-----	4w	4w
Pay-----	4w	4w
Crossbow-----	3w	3w
404:		
Riverpoint-----	4e	6e

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
404: Hellake-----	3e	3e
405: Hellake-----	3c	3c
Staircase-----	3c	3c
406: Hellake-----	3e	3e
407: Hellake-----	4e	6e
408: Stardust-----	3c	3c
409: Stardust-----	3e	3e
410: Stardust-----	4e	6e
Riverpoint, very stony surface-----	6s	6s
411: Huston, very stony surface-----	7s	---
Zeb, gravelly sandy loam-----	7e	---
412: Huston, very stony surface-----	7s	---
Stardust-----	4e	6e
413: Cloudyway-----	3e	4e
414: Hellake-----	6e	---
Middlefork-----	7e	---
415: Middlefork-----	4e	---
Pinney-----	7e	---
416: Pinney, moist-----	7e	---
Middlefork, moist-----	6e	---
Zeb, gravelly sandy loam-----	6e	---
417: Middlefork-----	4e	6e
Zeb, fine gravelly sandy loam-----	4e	6e
418: Middlefork-----	6e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
418: Zeb, fine gravelly sandy loam-----	7e	---
419: Charters, fine gravelly sandy loam, dry-----	6e	---
Zeb, fine gravelly sandy loam-----	6e	---
420: Pioneervil-----	4c	4c
Grimescreek-----	4c	4c
421: Dumps, dredge tailings-----	8	---
Oxyaquic Xerorthents, very stony surface-----	7s	---
422: Lithic Xerorthents, very stony surface-----	7s	---
Dumps, placer tailings-----	8	---
Dystric Xeropsamments, very stony surface-----	7s	---
423: Dystric Xeropsamments, very stony surface-----	7s	---
Ultic Haploxeralfs-----	6e	---
Lithic Xerorthents-----	7s	---
424: Middlefork-----	4e	6e
Charters, coarse sandy loam-----	4e	6e
425: Middlefork-----	3e	3e
Brassey-----	3e	3e
426: Middlefork, moist-----	4e	---
427: Middlefork, moist-----	7e	---
428: Zeb, gravelly sandy loam-----	6e	---
Republic-----	7e	---
429: Huston, very stony surface-----	6s	---
503: Cartwright, dry-----	3e	---
504: Cartwright, dry-----	4e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
505: Brownlee-----	3e	---
506: Brownlee-----	4e	---
Robbscreek-----	4e	---
Whisk-----	6e	---
507: Shoebend-----	7e	---
Dobson-----	7e	---
Jerusalem-----	7e	---
509: Arrowrock-----	7e	---
Borid-----	7e	---
Rock outcrop-----	8	---
511: Olaton, north slope, moist-----	7e	---
Roney, moist-----	7e	---
513: Shimo, fine gravelly loamy sand, north slope-----	7e	---
Cartwright-----	7e	---
Robbscreek, moist-----	7e	---
516: Shimo, extremely stony surface-----	7s	---
Olaton, south slope-----	7e	---
Schiller, south slope-----	7e	---
525: Robbscreek-----	7e	---
Dobson-----	7e	---
Brownlee-----	7e	---
526: Cartwright-----	7e	---
Brownlee, moist-----	7e	---
Robbscreek, moist-----	7e	---
527: Dobson-----	7e	---
Roney, dry-----	7e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
528:		
Roney, dry-----	7e	---
Dobson-----	7e	---
Olaton, south slope-----	7e	---
529:		
Roney-----	7e	---
Kisky, fine gravelly sandy loam-----	7e	---
Olaton, south slope-----	7e	---
532:		
Schiller, north slope-----	7e	---
Shimo, fine gravelly loamy sand, north slope-----	7e	---
533:		
Olaton, north slope, dry-----	7e	---
Roney, moist-----	7e	---
534:		
Shimo, fine gravelly loamy sand-----	7e	---
Kisky, fine gravelly sandy loam-----	7e	---
Schiller-----	7e	---
538:		
Borid-----	7e	---
Shimo, fine gravelly loamy sand-----	7e	---
541:		
Roney-----	6e	---
Kisky, fine gravelly sandy loam-----	6e	---
544:		
Arrowrock-----	7e	---
Borid-----	7e	---
Painter-----	7e	---
551:		
Shimo, fine gravelly loamy sand, north slope-----	7e	---
Kisky, fine gravelly loamy sand-----	7e	---
555:		
Brownlee-----	6e	---
Schiller-----	7e	---
556:		
Kisky, fine gravelly sandy loam-----	7e	---
Shimo, fine gravelly loamy sand-----	7e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
556: Brownlee-----	7e	---
558: Kisky, fine gravelly sandy loam-----	7e	---
Whisk-----	7e	---
Roney, dry-----	7e	---
560: Robbscreek, moist-----	7e	---
Hellake-----	6e	---
Shimo, fine gravelly loamy sand, north slope----	7e	---
561: Shimo, fine gravelly sandy loam, north slope----	7e	---
Kisky, fine gravelly loamy sand-----	7e	---
Olaton, north slope, moist-----	7e	---
562: Kisky, fine gravelly sandy loam-----	7e	---
Shimo, fine gravelly sandy loam-----	7e	---
Roney-----	7e	---
600: McDesh-----	6e	---
Immig, rubbly surface-----	6s	---
Gwin, very stony loam, extremely stony surface---	6s	---
601: Hann-----	3e	---
Gwin, very stony loam, extremely stony surface---	6e	---
Shafer-----	6e	---
602: Hillcreek-----	7e	---
Hovelton, cobbly ashy loam, moist, very stony surface-----	7s	---
Hann-----	7e	---
604: Shafer-----	6e	---
Hann-----	3e	---
605: Gwin, very stony loam, extremely stony surface---	6e	---
Flybow-----	6e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
606:		
Hillcreek-----	7e	---
Hovelton, cobbly ashy loam, moist, very stony surface-----	7e	---
607:		
Duco, stony loam, very stony surface-----	7e	---
Immig, very stony surface-----	7s	---
Rubble land-----	8	---
608:		
Duco, very gravelly loam, stony surface-----	7e	---
Hovelton, gravelly ashy loam-----	7e	---
McDesh, south slope-----	7e	---
610:		
Hovelton, cobbly ashy loam, very stony surface---	7e	---
Duco, stony loam, very stony surface-----	7s	---
McDesh, south slope-----	7e	---
612:		
Hann-----	4e	---
Hillcreek, dry-----	4e	---
613:		
Duco, stony loam, very stony surface-----	7e	---
Searles, very stony surface-----	7s	---
McDesh, south slope-----	7e	---
618:		
McDesh, south slope-----	6e	---
Duco, very gravelly loam, stony surface-----	6e	---
Shafer-----	6e	---
619:		
McDesh-----	6e	---
Gwin, gravelly loam, stony surface-----	6e	---
Shafer-----	6e	---
620:		
Immig, very stony surface-----	7s	---
McDesh, south slope-----	7e	---
Duco, stony loam, very stony surface-----	7e	---
621:		
McDaniel-----	7e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
621: Hovelton, gravelly ashy loam-----	7e	---
622: Hovelton, gravelly ashy loam-----	7e	---
Gwin, very stony loam, extremely stony surface---	6e	---
630: Gwin, very gravelly loam-----	7e	---
Flybow-----	7e	---
Rock outcrop-----	8	---
631: Flybow-----	7e	---
Rock outcrop-----	8	---
Rubble land-----	8	---
634: Gwin, very stony loam, extremely stony surface---	6e	---
McDesh, very stony loam, very stony surface-----	7s	---
Rock outcrop-----	8	---
635: Shafer, very stony surface-----	7e	---
Karney-----	6e	---
Yad-----	6e	---
636: Hann, stony surface-----	6e	---
McDesh, very stony loam, extremely bouldery surface-----	7s	---
Robbscreek, moist-----	6e	---
638: Yad-----	6s	---
Cranegulch-----	3e	---
Duco, stony loam, very stony surface-----	6s	---
640: Timberbutte-----	7e	---
641: Aradaran-----	4e	---
Yad-----	6s	---
650: Longs-----	6e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
650:		
Highvalley-----	6e	---
Hoff-----	6e	---
651:		
Hess-----	4e	---
Lidos-----	4e	---
Cleymor-----	4e	---
652:		
Hess-----	6e	---
Lidos-----	6e	---
Klicker-----	6e	---
653:		
Lidos-----	7e	---
Klicker-----	7e	---
Hess-----	7e	---
654:		
Shilling-----	7e	---
Highvalley-----	7e	---
Hoff-----	7e	---
655:		
Shilling, moist-----	6e	---
Highvalley, moist-----	4e	---
656:		
Shilling, moist-----	7e	---
Highvalley, moist-----	7e	---
657:		
Pumpkin, stony surface-----	3e	---
658:		
Cleymor-----	4e	---
Pumpkin, stony surface-----	3e	---
659:		
Hoff, south slope-----	6e	---
660:		
Longs-----	7e	---
Highvalley-----	7e	---
661:		
Awley-----	6e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
661: Bo-----	6e	---
662: Awley-----	7e	---
Bo-----	7e	---
663: Cleymor-----	4e	---
Hoff-----	6e	---
666: Pachic Argixerolls, very stony surface-----	7e	---
Rubble land-----	8	---
Typic Haploxerolls, extremely stony surface-----	7e	---
700: Drybuck-----	4e	---
Whisk, moist-----	7s	---
701: Drybuck-----	7e	---
Whisk, moist-----	7e	---
702: Deerrun-----	7e	---
Kisky, fine gravelly sandy loam, moist-----	7e	---
Drybuck, dry-----	7e	---
704: Drybuck-----	7e	---
Northfork, fine gravelly sandy loam-----	7e	---
Whisk, moist-----	7e	---
705: Northfork, sandy loam-----	4e	---
Shirts, sandy loam, dry-----	4e	---
706: Northfork, fine gravelly sandy loam-----	7e	---
Shirts, coarse sandy loam-----	7e	---
Zimmer-----	7e	---
707: Packerjohn, ashy coarse sandy loam-----	7e	---
Shirts, coarse sandy loam-----	7e	---
Zimmer-----	7e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
708:		
Zimmer-----	7e	---
Northfork, fine gravelly sandy loam-----	7e	---
Rock outcrop-----	8	---
709:		
Shirts, sandy loam, south slope-----	4e	---
Charters, sandy loam-----	4e	---
710:		
Charters, fine gravelly sandy loam-----	7e	---
Northfork, fine gravelly sandy loam-----	7e	---
Shirts, coarse sandy loam-----	7e	---
711:		
Charters, fine gravelly sandy loam, dry-----	4e	---
Shirts, sandy loam, dry-----	4e	---
Zimmer-----	7s	---
712:		
Charters, fine gravelly sandy loam-----	7e	---
Shirts, coarse sandy loam-----	7e	---
Zimmer-----	7e	---
714:		
Shirts, sandy loam, south slope-----	7e	---
Eagleson, fine gravelly sandy loam-----	7e	---
Charters, sandy loam-----	7e	---
715:		
Eagleson, fine gravelly sandy loam, dry-----	7e	---
Kosh-----	7e	---
716:		
Zan-----	7e	---
Belsh-----	7e	---
Montchief-----	7e	---
718:		
Charters, fine gravelly sandy loam-----	7e	---
Crumley-----	7e	---
Eagleson, sandy loam-----	7e	---
720:		
Drybuck, dry-----	7e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
720:		
Deerrun-----	7e	---
Kisky, fine gravelly sandy loam, moist-----	7e	---
721:		
Shirts, fine gravelly sandy loam-----	7e	---
Kosh-----	7e	---
Charters, fine gravelly sandy loam, dry-----	7e	---
726:		
Garval-----	7e	---
Kisky, fine gravelly loamy coarse sand-----	7e	---
730:		
Hellake-----	4e	---
Stardust-----	4e	---
731:		
Shirts, sandy loam, dry-----	7e	---
Charters, fine gravelly sandy loam, dry-----	7e	---
Zimmer-----	7e	---
733:		
Shirts, fine gravelly sandy loam-----	4s	---
Kosh-----	7s	---
734:		
Shirts, sandy loam, dry-----	7e	---
Kosh-----	7e	---
735:		
Shirts, coarse sandy loam-----	7e	---
Zimmer-----	7e	---
Charters, fine gravelly sandy loam-----	7e	---
738:		
Tripod-----	7e	---
Packerjohn, ashy coarse sandy loam-----	7e	---
Pajo, fine gravelly ashy coarse sandy loam-----	7e	---
739:		
Shirts, sandy loam, moist-----	7e	---
Zimmer-----	7e	---
Packerjohn, ashy coarse sandy loam-----	7e	---
740:		
Charters, sandy loam-----	7e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
740: Eagleson, fine gravelly sandy loam-----	7e	---
741: Zan-----	4e	---
742: Crumley-----	7e	---
Eagleson, sandy loam-----	7e	---
743: Packerjohn, ashy coarse sandy loam-----	4e	---
Shirts, sandy loam, moist-----	4e	---
744: Packerjohn, ashy sandy loam, cool-----	4e	---
Shirts, sandy loam, moist-----	4e	---
Tripod, cool-----	4e	---
745: Tripod, moist-----	7e	---
Packerjohn, ashy sandy loam-----	7e	---
746: Packerjohn, ashy sandy loam-----	4e	---
747: Pinney, moist-----	7e	---
Charters, fine gravelly sandy loam-----	7e	---
Shirts, sandy loam, dry-----	7e	---
748: Belsh, moist-----	4e	---
Zan, moist-----	4e	---
749: Quartzburg-----	7e	---
Charters, sandy loam-----	7e	---
750: Garval-----	7e	---
Kisky, fine gravelly loamy coarse sand-----	7e	---
Rock outcrop-----	8	---
751: Belsh, moist-----	7e	---
Zan, moist-----	7e	---
752: Josie-----	6e	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
752: Zimmer, fine gravelly sandy loam-----	7s	---
753: Tripod, cool-----	6e	---
Packerjohn, ashy sandy loam, cool-----	6e	---
Shirts, sandy loam, moist-----	6e	---
754: Packerjohn, ashy sandy loam-----	4e	---
Shirts, sandy loam, moist-----	4e	---
755: Zimmer-----	7e	---
Quartzburg-----	7e	---
Rock outcrop-----	8	---
756: Pajo, fine gravelly ashy coarse sandy loam-----	7e	---
Tripod-----	7e	---
Kosh, moist-----	7e	---
758: Eagleson, sandy loam-----	7e	---
Kosh, moist-----	7e	---
Charters, fine gravelly sandy loam-----	7e	---
759: Charters, sandy loam-----	7e	---
Shirts, sandy loam, south slope-----	7e	---
Kosh, moist-----	7e	---
761: Charters, fine gravelly sandy loam-----	6e	---
Middlefork, moist-----	4e	---
762: Drybuck, dry-----	6e	---
Hellake-----	4e	---
Deerrun-----	6e	---
763: Eagleson, fine gravelly sandy loam-----	7e	---
Kosh-----	7e	---
Rock outcrop-----	8	---

Table 6.--Land Capability Classification--Continued

Map symbol and soil name	Land capability	
	N	I
765:		
Backswitch, coarse sandy loam-----	7e	---
Zimmer, warm-----	7s	---
Rock outcrop-----	8	---
766:		
Backswitch, coarse sandy loam-----	7e	---
Charters, coarse sandy loam-----	4e	---
Zimmer, dry-----	7s	---
767:		
Shirts, sandy loam, dry-----	6e	---
Kosh-----	7s	---
Charters, fine gravelly sandy loam, dry-----	6e	---
768:		
Shirts, sandy loam, south slope-----	7e	---
Kosh, moist-----	7e	---
Eagleson, fine gravelly sandy loam-----	7e	---
770:		
Shirts, sandy loam, dry-----	6e	---
Charters, fine gravelly sandy loam, dry-----	6e	---
Kosh, moist-----	7s	---
771:		
Backswitch, sandy loam-----	7e	---
Shirts, sandy loam, dry-----	7e	---
772:		
Pajo, fine gravelly ashy sandy loam-----	7e	---
Packerjohn, ashy sandy loam, dry-----	7e	---
Kosh, moist-----	7e	---
900:		
Pits, gravel-----	8	---
Dumps, gravel-----	8	---
901:		
Dumps, landfill-----	8	---
999:		
Water-----	8	---

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Very limited		Very limited	
		Droughty	1.00	Flooding	1.00
		Filtering capacity	0.99	Droughty	1.00
		Depth to saturated zone	0.99	Filtering capacity	0.99
		Flooding	0.60	Depth to saturated zone	0.99
		Too acid	0.01	Too acid	0.03
Cumulic Haploxerolls	40	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
				Flooding	0.40
221: Bissell-----	85	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Slow water movement	0.76	Slow water movement	0.62
222: Bissell-----	85	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Slow water movement	0.76	Slow water movement	0.62
223: Staircase, dry-----	85	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Droughty	0.08	Flooding	0.40
				Droughty	0.08
224: Porter-----	85	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
				Flooding	0.40
225: Boise-----	85	Very limited		Very limited	
		Dense layer	1.00	Filtering capacity	0.99
		Filtering capacity	0.99	Droughty	0.25
		Droughty	0.25	Too acid	0.01
		Too acid	0.01		

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
226: Flofeather, very rarely flooded-----	55	Very limited Filtering capacity Droughty	0.99 0.11	Very limited Filtering capacity Flooding Droughty	0.99 0.20 0.11
Shawmount, stony surface-----	30	Very limited Filtering capacity Droughty Too acid	0.99 0.70 0.02	Very limited Filtering capacity Droughty Flooding Too acid	0.99 0.70 0.20 0.07
227: Piercepark, loam----	85	Not limited		Not limited	
228: Piercepark, loam----	85	Not limited		Not limited	
229: Piercepark, coarse sandy loam-----	85	Very limited Slope	1.00	Very limited Slope	1.00
230: Hann-----	60	Very limited Slow water movement Runoff Slope	1.00 0.40 0.01	Very limited Slow water movement Slope	1.00 0.01
Doubledia, silty clay loam-----	15	Very limited Slow water movement Runoff Slope	1.00 0.40 0.01	Very limited Slow water movement Low adsorption Slope	1.00 1.00 0.01
232: Jasseek-----	85	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
233: Jasseek-----	85	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
238: Adaboi-----	85	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
240: Collister-----	65	Not limited		Somewhat limited Flooding	0.40
Flofeather-----	25	Not limited		Somewhat limited Flooding	0.40
300: Shawmount, stony surface-----	75	Very limited Slope Filtering capacity Droughty Too acid	1.00 0.99 0.70 0.02	Very limited Slope Filtering capacity Droughty Too acid	1.00 0.99 0.70 0.07
301: Breadloaf-----	55	Very limited Slow water movement Depth to bedrock Droughty Runoff Slope	1.00 0.95 0.88 0.40 0.16	Very limited Slow water movement Low adsorption Depth to bedrock Droughty Slope	1.00 1.00 0.95 0.88 0.16
Doubledia, silty clay loam-----	25	Very limited Slow water movement Runoff	1.00 0.40	Very limited Slow water movement Low adsorption	1.00 1.00
302: Breadloaf-----	40	Very limited Slope Slow water movement Depth to bedrock Droughty Runoff	1.00 1.00 0.95 0.88 0.40	Very limited Slow water movement Low adsorption Slope Depth to bedrock Droughty	1.00 1.00 1.00 0.95 0.88
Doubledia, silty clay loam-----	35	Very limited Slope Slow water movement Runoff	1.00 1.00 0.40	Very limited Slow water movement Low adsorption Slope	1.00 1.00 1.00 1.00
Hann-----	20	Very limited Slope Slow water movement Runoff	1.00 1.00 0.40	Very limited Slope Slow water movement	1.00 1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
303: Doubledia, silty clay loam-----	40	Very limited		Very limited	
		Slope	1.00	Slow water movement	1.00
		Slow water movement	1.00	Low adsorption	1.00
Hann-----	25	Runoff	0.40	Slope	1.00
		Very limited		Very limited	
		Slope	1.00	Slope	1.00
Breadloaf-----	20	Slow water movement	1.00	Slow water movement	1.00
		Depth to bedrock	0.95	Low adsorption	1.00
		Droughty	0.88	Slope	1.00
304: Breadloaf-----	30	Runoff	0.40	Depth to bedrock	0.95
		Very limited		Droughty	0.88
		Slow water movement	1.00	Slope	0.63
Doubledia, silty clay loam-----	30	Depth to bedrock	0.95	Runoff	0.40
		Droughty	0.88	Very limited	
		Slope	0.63	Slow water movement	1.00
Hullsgulch, loam----	30	Runoff	0.40	Low adsorption	1.00
		Very limited		Slope	1.00
		Slope	1.00	Very limited	
305: Siphonlake, south slope-----	60	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
Solarview-----	25	Filtering capacity	0.99	Filtering capacity	0.99
		Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Filtering capacity	1.00	Filtering capacity	1.00
Solarview-----	25	Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
		Very limited		Depth to bedrock	1.00
		Slope	1.00	Very limited	

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
306: Van Dusen-----	45	Very limited Slope Too acid	1.00 0.01	Very limited Slope Too acid	1.00 0.01
Siphonlake-----	35	Very limited Slope Filtering capacity Droughty	1.00 0.99 0.01	Very limited Low adsorption Slope Filtering capacity Droughty	1.00 1.00 0.99 0.01
307: Adaboi-----	65	Very limited Slow water movement Slope	1.00 0.16	Very limited Slow water movement Slope	1.00 0.16
Meclo-----	20	Very limited Slow water movement Runoff Depth to bedrock Slope Droughty	1.00 0.40 0.35 0.16 0.03	Very limited Low adsorption Slow water movement Depth to bedrock Slope Too acid	1.00 1.00 0.35 0.16 0.07
308: Breadloaf-----	40	Very limited Slope Slow water movement Depth to bedrock Droughty Runoff	1.00 1.00 0.95 0.88 0.40	Very limited Slow water movement Low adsorption Slope Depth to bedrock Droughty	1.00 1.00 1.00 0.95 0.88
Crawley, silt loam--	30	Very limited Slope Droughty Depth to bedrock Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
Doubledia, clay loam	20	Very limited Slope Slow water movement Runoff	1.00 1.00 0.40	Very limited Slow water movement Low adsorption Slope	1.00 1.00 1.00
309: Hullsgulch, sandy loam-----	65	Very limited Slope	1.00	Very limited Slope	1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
309: Solarview-----	25	Very limited Slope Filtering capacity Droughty Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Droughty Filtering capacity Low adsorption Slope Depth to bedrock	1.00 1.00 1.00 1.00 1.00
311: Meclo-----	35	Very limited Slope Slow water movement Runoff Depth to bedrock Droughty	1.00 1.00 0.40 0.35 0.03	Very limited Low adsorption Slope Slow water movement Depth to bedrock Too acid	1.00 1.00 1.00 0.35 0.07
Crawley, silt loam--	30	Very limited Slope Droughty Depth to bedrock Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
Adaboi-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Slow water movement Slope	1.00 1.00
328: Gacey, extremely stony surface-----	75	Very limited Slow water movement Depth to cemented pan Droughty Large stones content Large stones on the surface	1.00 1.00 1.00 1.00 0.99	Very limited Droughty Depth to cemented pan Low adsorption Slow water movement Large stones on the surface	1.00 1.00 1.00 1.00 0.99
329: Ayette-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Low adsorption Slope Slow water movement	1.00 1.00 1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
329: Duco, stony loam, very stony surface	25	Very limited Slope Droughty Depth to bedrock Slow water movement Large stones on the surface	1.00 1.00 1.00 0.76 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
330: Breadloaf-----	35	Very limited Slow water movement Slope Depth to bedrock Droughty Runoff	1.00 0.96 0.95 0.88 0.40	Very limited Slow water movement Low adsorption Slope Depth to bedrock Droughty	1.00 1.00 0.96 0.95 0.88
Ayette, moist-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Low adsorption Slow water movement Slope	1.00 1.00 1.00
Immig, rubbly surface-----	20	Very limited Slow water movement Large stones on the surface Droughty Large stones content Slope	1.00 1.00 1.00 1.00 1.00	Very limited Droughty Low adsorption Large stones on the surface Slow water movement Slope	1.00 1.00 1.00 1.00 1.00
331: Ayette, moist-----	50	Very limited Slow water movement Slope	1.00 1.00	Very limited Low adsorption Slow water movement Slope	1.00 1.00 1.00
Yad-----	30	Very limited Slow water movement Slope Runoff	1.00 1.00 0.40	Very limited Slow water movement Slope	1.00 1.00
332: Hann-----	35	Very limited Slope Slow water movement Runoff	1.00 1.00 0.40	Very limited Slope Slow water movement	1.00 1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
332: Ayette, moist-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Low adsorption Slope Slow water movement	1.00 1.00 1.00
Picketpin-----	20	Very limited Slope	1.00	Very limited Slope	1.00
333: Ayette-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Low adsorption Slope Slow water movement	1.00 1.00 1.00
Crawley, loam-----	15	Very limited Slope Droughty Depth to bedrock Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
Hullsgulch, loam----	15	Very limited Slope	1.00	Very limited Slope	1.00
335: Gimmi, very stony surface-----	30	Very limited Slow water movement Slope Droughty Large stones content Large stones on the surface	1.00 1.00 0.96 0.76 0.50	Very limited Low adsorption Slow water movement Slope Droughty Large stones on the surface	1.00 1.00 1.00 0.96 0.50
Ayette, moist-----	25	Very limited Slow water movement Slope	1.00 1.00	Very limited Low adsorption Slow water movement Slope	1.00 1.00 1.00
Doubledia, silty clay loam-----	25	Very limited Slow water movement Slope Runoff	1.00 1.00 0.40	Very limited Slow water movement Low adsorption Slope	1.00 1.00 1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
400: Ralsen-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Flooding	0.60	Flooding	1.00
		Runoff	0.40		
Foxlane-----	30	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Strongly contrasting textural stratification	1.00	Strongly contrasting textural stratification	1.00
		Droughty	0.99	Too acid	0.99
		Too acid	0.50	Droughty	0.99
				Flooding	0.40
Pay-----	20	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Droughty	0.91	Flooding	1.00
		Flooding	0.60	Droughty	0.91
		Runoff	0.40	Too acid	0.07
401: Staircase-----	85	Very limited Filtering capacity	0.99	Very limited Filtering capacity	0.99
		Too acid	0.05	Flooding	0.40
				Too acid	0.21
402: Crossbow-----	60	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Depth to saturated zone	0.98	Flooding	1.00
		Flooding	0.60	Depth to saturated zone	0.98
		Too acid	0.03	Too acid	0.14
Foxlane-----	20	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Strongly contrasting textural stratification	1.00	Strongly contrasting textural stratification	1.00
		Droughty	0.99	Too acid	0.99
		Too acid	0.50	Droughty	0.99
				Flooding	0.40

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
403: Ralsen-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Flooding	0.60	Flooding	1.00
		Runoff	0.40		
Pay-----	25	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Droughty	0.91	Flooding	1.00
		Flooding	0.60	Droughty	0.91
		Runoff	0.40	Too acid	0.07
Crossbow-----	20	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Depth to saturated zone	0.98	Flooding	1.00
		Flooding	0.60	Depth to saturated zone	0.98
		Too acid	0.03	Too acid	0.14
404: Riverpoint-----	55	Very limited Strongly contrasting textural stratification	1.00	Very limited Strongly contrasting textural stratification	1.00
		Slope	1.00	Slope	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Slow water movement	0.76	Slow water movement	0.62
		Droughty	0.48	Droughty	0.48
Hellake-----	25	Somewhat limited Slow water movement	0.76	Somewhat limited Slow water movement	0.62
		Too acid	0.01	Too acid	0.03
405: Hellake-----	65	Somewhat limited Slow water movement	0.76	Somewhat limited Slow water movement	0.62
		Too acid	0.01	Too acid	0.03
Staircase-----	15	Very limited Filtering capacity	0.99	Very limited Filtering capacity	0.99
		Too acid	0.05	Flooding	0.40
				Too acid	0.21

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
406: Hellake-----	75	Somewhat limited Slow water movement Too acid	0.76 0.01	Somewhat limited Slow water movement Too acid	0.62 0.03
407: Hellake-----	75	Very limited Slope Slow water movement Too acid	1.00 0.76 0.01	Very limited Slope Slow water movement Too acid	1.00 0.62 0.03
408: Stardust-----	75	Very limited Filtering capacity Too acid	0.99 0.50	Very limited Filtering capacity Too acid	0.99 0.99
409: Stardust-----	75	Very limited Filtering capacity Too acid	0.99 0.50	Very limited Filtering capacity Too acid	0.99 0.99
410: Stardust-----	65	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Riverpoint, very stony surface-----	20	Very limited Slope Filtering capacity Large stones content Slow water movement Large stones on the surface	1.00 0.99 0.76 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement Large stones on the surface	1.00 0.99 0.99 0.62 0.50
411: Huston, very stony surface-----	45	Very limited Slope Filtering capacity Droughty Too acid Large stones content	1.00 0.99 0.71 0.50 0.47	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.71

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
411: Zeb, gravelly sandy loam-----	35	Very limited Slope Filtering capacity Droughty Too acid	1.00 1.00 0.99 0.50	Very limited Filtering capacity Slope Too acid Droughty	1.00 1.00 0.99 0.99
412: Huston, very stony surface-----	50	Very limited Slope Filtering capacity Droughty Too acid Large stones content	1.00 0.99 0.71 0.50 0.47	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.71
Stardust-----	30	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
413: Cloudyway-----	75	Very limited Filtering capacity Too acid Slope Droughty	0.99 0.50 0.16 0.12	Very limited Filtering capacity Too acid Slope Droughty	0.99 0.99 0.16 0.12
414: Hellake-----	40	Very limited Slope Slow water movement Too acid	1.00 0.76 0.01	Very limited Slope Slow water movement Too acid	1.00 0.62 0.03
Middlefork-----	40	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
415: Middlefork-----	55	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
415: Pinney-----	20	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
416: Pinney, moist-----	35	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
Middlefork, moist---	30	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
Zeb, gravelly sandy loam-----	20	Very limited Slope Filtering capacity Droughty Too acid	1.00 1.00 0.99 0.50	Very limited Filtering capacity Slope Too acid Droughty	1.00 1.00 0.99 0.99
417: Middlefork-----	60	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
Zeb, fine gravelly sandy loam-----	20	Very limited Filtering capacity Slope Droughty Too acid	1.00 1.00 0.79 0.50	Very limited Filtering capacity Slope Too acid Droughty	1.00 1.00 0.99 0.79
418: Middlefork-----	55	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
418: Zeb, fine gravelly sandy loam-----	25	Very limited Slope Filtering capacity Droughty Too acid	1.00 1.00 0.79 0.50	Very limited Filtering capacity Slope Too acid Droughty	1.00 1.00 0.99 0.79
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
Zeb, fine gravelly sandy loam-----	35	Very limited Slope Filtering capacity Droughty Too acid	1.00 1.00 0.79 0.50	Very limited Filtering capacity Slope Too acid Droughty	1.00 1.00 0.99 0.79
420: Pioneervil-----	40	Very limited Filtering capacity Too acid	0.99 0.50	Very limited Filtering capacity Too acid Flooding	0.99 0.99 0.40
Grimescreek-----	35	Somewhat limited Depth to saturated zone Flooding	0.98 0.60	Very limited Flooding Depth to saturated zone	1.00 0.98
421: Dumps, dredge tailings-----	50	Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Very limited Filtering capacity Droughty Large stones content Too acid Depth to saturated zone	1.00 1.00 0.76 0.50 0.18	Very limited Droughty Filtering capacity Low adsorption Too acid Flooding	1.00 1.00 1.00 0.99 0.40

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
422: Lithic Xerorthents, very stony surface	30	Very limited Droughty Depth to bedrock Filtering capacity Too acid Large stones content	1.00 1.00 0.99 0.50 0.47	Very limited Droughty Low adsorption Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Dumps, placer tailings-----	25	Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Very limited Droughty Filtering capacity Depth to bedrock Too acid Large stones content	1.00 0.99 0.90 0.50 0.04	Very limited Droughty Low adsorption Filtering capacity Too acid Depth to bedrock	1.00 1.00 0.99 0.99 0.90
423: Dystric Xeropsamments, very stony surface-----	35	Very limited Droughty Slope Filtering capacity Depth to bedrock Too acid	1.00 1.00 0.99 0.90 0.50	Very limited Droughty Low adsorption Slope Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Ultic Haploxeralfs--	35	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
Lithic Xerorthents--	15	Very limited Droughty Depth to bedrock Filtering capacity Too acid Slope	1.00 1.00 0.99 0.50 0.16	Very limited Droughty Low adsorption Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
424: Middlefork-----	50	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
Charters, coarse sandy loam-----	35	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
425: Middlefork-----	55	Very limited Filtering capacity Slow water movement Too acid	0.99 0.76 0.50	Very limited Filtering capacity Too acid Slow water movement	0.99 0.99 0.62
Brassey-----	25	Very limited Filtering capacity Too acid Droughty Slope	0.99 0.50 0.38 0.01	Very limited Filtering capacity Too acid Droughty Slope	0.99 0.99 0.38 0.01
426: Middlefork, moist---	85	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
427: Middlefork, moist---	85	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
428: Zeb, gravelly sandy loam-----	45	Very limited Slope Filtering capacity Droughty Too acid	1.00 1.00 0.99 0.50	Very limited Filtering capacity Slope Too acid Droughty	1.00 1.00 0.99 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
428: Republic-----	35	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
429: Huston, very stony surface-----	85	Very limited Slope Filtering capacity Droughty Too acid Large stones content	1.00 0.99 0.71 0.50 0.47	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.71
503: Cartwright, dry-----	85	Somewhat limited Too acid	0.01	Somewhat limited Too acid	0.01
504: Cartwright, dry-----	85	Very limited Slope Too acid	1.00 0.01	Very limited Slope Too acid	1.00 0.01
505: Brownlee-----	85	Somewhat limited Slow water movement Too acid Droughty Slope	0.76 0.03 0.01 0.01	Very limited Low adsorption Slow water movement Too acid Droughty Slope	1.00 0.62 0.14 0.01 0.01
506: Brownlee-----	45	Very limited Slope Slow water movement Too acid Droughty	1.00 0.76 0.03 0.01	Very limited Low adsorption Slope Slow water movement Too acid Droughty	1.00 1.00 0.62 0.14 0.01
Robbscreek-----	20	Very limited Slope Droughty Depth to bedrock Too acid	1.00 0.97 0.46 0.02	Very limited Low adsorption Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.97 0.46 0.07
Whisk-----	15	Very limited Droughty Depth to bedrock Slope Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Depth to bedrock Slope Too acid	1.00 1.00 1.00 1.00 0.21

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
507: Shoebend-----	35	Very limited Slope Slow water movement Depth to bedrock Droughty	1.00 0.76 0.65 0.61	Very limited Low adsorption Slope Depth to bedrock Slow water movement Droughty	1.00 1.00 0.65 0.62 0.61
Dobson-----	30	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.03	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.14
Jerusalem-----	20	Very limited Slope Slow water movement	1.00 0.76	Very limited Slope Slow water movement	1.00 0.62
509: Arrowrock-----	35	Very limited Slope Depth to bedrock Droughty Filtering capacity	1.00 1.00 1.00 0.99	Very limited Droughty Depth to bedrock Low adsorption Slope Filtering capacity	1.00 1.00 1.00 1.00 0.99
Borid-----	25	Very limited Slope Droughty Depth to bedrock Runoff	1.00 1.00 1.00 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock	1.00 1.00 1.00 1.00
Rock outcrop-----	25	Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Very limited Slope Too acid	1.00 0.05	Very limited Slope Too acid	1.00 0.21
Roney, moist-----	25	Very limited Slope Droughty Too acid Depth to bedrock	1.00 0.92 0.18 0.01	Very limited Low adsorption Slope Droughty Too acid Depth to bedrock	1.00 1.00 0.92 0.67 0.01

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.46	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.46
Cartwright-----	25	Very limited Slope Too acid	1.00 0.01	Very limited Slope Too acid	1.00 0.01
Robbscreek, moist---	25	Very limited Slope Droughty Depth to bedrock Too acid	1.00 0.93 0.46 0.11	Very limited Low adsorption Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.93 0.46 0.42
516: Shimo, extremely stony surface-----	35	Very limited Slope Large stones on the surface Droughty Large stones content Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Droughty Low adsorption Large stones on the surface Slope Filtering capacity	1.00 1.00 1.00 0.99
Olaton, south slope	30	Very limited Slope Droughty Too acid	1.00 0.29 0.05	Very limited Slope Droughty Too acid	1.00 0.29 0.21
Schiller, south slope-----	25	Very limited Slope Droughty	1.00 0.61	Very limited Slope Droughty	1.00 0.61
525: Robbscreek-----	35	Very limited Slope Droughty Depth to bedrock Too acid	1.00 0.97 0.46 0.02	Very limited Low adsorption Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.97 0.46 0.07
Dobson-----	30	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.03	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.14

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
525: Brownlee-----	20	Very limited Slope Slow water movement Too acid Droughty	1.00 0.76 0.03 0.01	Very limited Low adsorption Slope Slow water movement Too acid Droughty	1.00 1.00 0.62 0.14 0.01
526: Cartwright-----	35	Very limited Slope Too acid	1.00 0.01	Very limited Slope Too acid	1.00 0.01
Brownlee, moist----	30	Very limited Slope Slow water movement Too acid Droughty	1.00 0.76 0.02 0.01	Very limited Low adsorption Slope Slow water movement Too acid Droughty	1.00 1.00 0.62 0.07 0.01
Robbscreek, moist---	20	Very limited Slope Droughty Depth to bedrock Too acid	1.00 0.93 0.46 0.11	Very limited Low adsorption Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.93 0.46 0.42
527: Dobson-----	50	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.03	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.14
Roney, dry-----	35	Very limited Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.46 0.18	Very limited Low adsorption Slope Droughty Too acid Depth to bedrock	1.00 1.00 1.00 0.67 0.46
528: Roney, dry-----	40	Very limited Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.46 0.18	Very limited Low adsorption Slope Droughty Too acid Depth to bedrock	1.00 1.00 1.00 0.67 0.46
Dobson-----	30	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.03	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.14

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
528: Olaton, south slope	15	Very limited Slope Droughty Too acid	1.00 0.29 0.05	Very limited Slope Droughty Too acid	1.00 0.29 0.21
529: Roney-----	40	Very limited Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.46 0.18	Very limited Low adsorption Slope Droughty Too acid Depth to bedrock	1.00 1.00 1.00 0.67 0.46
Kisky, fine gravelly sandy loam-----	35	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Olaton, south slope	15	Very limited Slope Droughty Too acid	1.00 0.29 0.05	Very limited Slope Droughty Too acid	1.00 0.29 0.21
532: Schiller, north slope-----	55	Very limited Slope Droughty	1.00 0.58	Very limited Slope Droughty	1.00 0.58
Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.46	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.46
533: Olaton, north slope, dry-----	60	Very limited Slope Droughty Too acid	1.00 0.17 0.05	Very limited Slope Too acid Droughty	1.00 0.21 0.17
Roney, moist-----	20	Very limited Slope Droughty Too acid Depth to bedrock	1.00 0.93 0.18 0.01	Very limited Low adsorption Slope Droughty Too acid Depth to bedrock	1.00 1.00 0.93 0.67 0.01

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
534: Shimo, fine gravelly loamy sand-----	50	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.84	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.84
Kisky, fine gravelly sandy loam-----	25	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Schiller-----	15	Very limited Slope Droughty	1.00 1.00	Very limited Slope Droughty	1.00 1.00
538: Borid-----	65	Very limited Slope Droughty Depth to bedrock Runoff	1.00 1.00 1.00 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock	1.00 1.00 1.00 1.00
Shimo, fine gravelly loamy sand-----	20	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.84	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.84
541: Roney-----	55	Very limited Droughty Slope Depth to bedrock Too acid	1.00 1.00 0.46 0.18	Very limited Low adsorption Droughty Slope Too acid Depth to bedrock	1.00 1.00 1.00 0.67 0.46
Kisky, fine gravelly sandy loam-----	35	Very limited Droughty Depth to bedrock Slope Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Depth to bedrock Slope Filtering capacity	1.00 1.00 1.00 1.00 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
544: Arrowrock-----	40	Very limited Slope Depth to bedrock Droughty Filtering capacity	1.00 1.00 1.00 0.99	Very limited Droughty Depth to bedrock Low adsorption Slope Filtering capacity	1.00 1.00 1.00 1.00 0.99
Borid-----	30	Very limited Slope Droughty Depth to bedrock Runoff	1.00 1.00 1.00 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock	1.00 1.00 1.00 1.00
Painter-----	20	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.90	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.90
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.46	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.46
Kisky, fine gravelly loamy sand-----	30	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
555: Brownlee-----	50	Very limited Slope Slow water movement Too acid Droughty	1.00 0.76 0.03 0.01	Very limited Low adsorption Slope Slow water movement Too acid Droughty	1.00 1.00 0.62 0.14 0.01
Schiller-----	40	Very limited Slope Droughty	1.00 1.00	Very limited Slope Droughty	1.00 1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
556: Kisky, fine gravelly sandy loam-----	40	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Shimo, fine gravelly loamy sand-----	30	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.84	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.84
Brownlee-----	20	Very limited Slope Slow water movement Too acid Droughty	1.00 0.76 0.03 0.01	Very limited Low adsorption Slope Slow water movement Too acid Droughty	1.00 1.00 0.62 0.14 0.01
558: Kisky, fine gravelly sandy loam-----	35	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Whisk-----	30	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
Roney, dry-----	25	Very limited Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.46 0.18	Very limited Low adsorption Slope Droughty Too acid Depth to bedrock	1.00 1.00 1.00 0.67 0.46
560: Robbscreek, moist---	30	Very limited Slope Droughty Depth to bedrock Too acid	1.00 0.93 0.46 0.11	Very limited Low adsorption Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.93 0.46 0.42

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
560: Hellake-----	25	Very limited Slope Slow water movement Too acid	1.00 0.76 0.01	Very limited Slope Slow water movement Too acid	1.00 0.62 0.03
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.46	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.46
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.29	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.29
Kisky, fine gravelly loamy sand-----	30	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Olaton, north slope, moist-----	25	Very limited Slope Too acid	1.00 0.05	Very limited Slope Too acid	1.00 0.21
562: Kisky, fine gravelly sandy loam-----	30	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
562: Shimo, fine gravelly sandy loam-----	30	Very limited Slope Droughty Filtering capacity Depth to bedrock	1.00 1.00 0.99 0.29	Very limited Droughty Low adsorption Slope Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.29
Roney-----	25	Very limited Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.46 0.18	Very limited Low adsorption Slope Droughty Too acid Depth to bedrock	1.00 1.00 1.00 0.67 0.46
600: McDesh-----	50	Very limited Slow water movement Slope Depth to bedrock Droughty	1.00 1.00 0.90 0.72	Very limited Low adsorption Slow water movement Slope Depth to bedrock Droughty	1.00 1.00 1.00 0.90 0.72
Immig, rubbly surface-----	25	Very limited Slow water movement Large stones on the surface Droughty Large stones content Slope	1.00 1.00 1.00 1.00 1.00 1.00	Very limited Droughty Low adsorption Large stones on the surface Slow water movement Slope	1.00 1.00 1.00 1.00 1.00
Gwin, very stony loam, extremely stony surface-----	15	Very limited Droughty Large stones content Large stones on the surface Depth to bedrock Slope	1.00 1.00 1.00 1.00 1.00 1.00	Very limited Droughty Low adsorption Large stones on the surface Depth to bedrock Slope	1.00 1.00 1.00 1.00 1.00
601: Hann-----	45	Very limited Slow water movement Slope Runoff	1.00 1.00 0.40	Very limited Slow water movement Slope	1.00 1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
601: Gwin, very stony loam, extremely stony surface-----	25	Very limited Droughty Large stones Large stones on the surface Depth to bedrock Slope	1.00 1.00 1.00 1.00 1.00	Very limited Droughty Low adsorption Large stones on the surface Depth to bedrock Slope	1.00 1.00 1.00 1.00 1.00
Shafer-----	20	Very limited Slow water movement Slope Depth to bedrock Droughty Runoff	1.00 1.00 0.97 0.82 0.40	Very limited Slow water movement Low adsorption Slope Depth to bedrock Droughty	1.00 1.00 1.00 0.97 0.82
602: Hillcreek-----	35	Very limited Slope Slow water movement	1.00 0.76	Very limited Slope Slow water movement	1.00 0.62
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited Slope Droughty Depth to bedrock Slow water movement Large stones on the surface	1.00 1.00 0.97 0.76 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 0.97 0.62
Hann-----	20	Very limited Slope Slow water movement Runoff	1.00 1.00 0.40	Very limited Slope Slow water movement	1.00 1.00
604: Shafer-----	55	Very limited Slow water movement Slope Depth to bedrock Droughty Runoff	1.00 1.00 0.97 0.82 0.40	Very limited Slow water movement Low adsorption Slope Depth to bedrock Droughty	1.00 1.00 1.00 0.97 0.82
Hann-----	25	Very limited Slow water movement Slope Runoff	1.00 1.00 0.40	Very limited Slow water movement Slope	1.00 1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited Droughty Large stones Large stones on the surface Depth to bedrock Slope	1.00 1.00 1.00 1.00 1.00	Very limited Droughty Low adsorption Large stones on the surface Depth to bedrock Slope	1.00 1.00 1.00 1.00 1.00
Flybow-----	20	Very limited Depth to bedrock Droughty Slope Runoff Too acid	1.00 1.00 1.00 0.40 0.01	Very limited Droughty Depth to bedrock Low adsorption Slope Too acid	1.00 1.00 1.00 1.00 0.03
606: Hillcreek-----	50	Very limited Slope Slow water movement	1.00 0.76	Very limited Slope Slow water movement	1.00 0.62
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited Slope Droughty Depth to bedrock Slow water movement Large stones on the surface	1.00 1.00 0.97 0.76 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 0.97 0.62
607: Duco, stony loam, very stony surface	35	Very limited Slope Droughty Depth to bedrock Slow water movement Large stones on the surface	1.00 1.00 1.00 0.76 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
Immig, very stony surface-----	35	Very limited Slope Slow water movement Droughty Cobble content Depth to bedrock	1.00 1.00 1.00 1.00 0.84	Very limited Droughty Low adsorption Slope Slow water movement Cobble content	1.00 1.00 1.00 1.00 1.00
Rubble land-----	15	Not rated		Not rated	

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
608: Duco, very gravelly loam, stony surface	40	Very limited Slope Droughty Depth to bedrock Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
Hovelton, gravelly ashy loam-----	25	Very limited Slope Droughty Slow water movement Depth to bedrock	1.00 0.99 0.76 0.01	Very limited Low adsorption Slope Droughty Slow water movement Depth to bedrock	1.00 1.00 0.99 0.62 0.01
McDesh, south slope	20	Very limited Slope Slow water movement Depth to bedrock Droughty	1.00 1.00 0.03 0.02	Very limited Low adsorption Slope Slow water movement Depth to bedrock Droughty	1.00 1.00 1.00 0.03 0.02
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited Slope Droughty Depth to bedrock Slow water movement Large stones on the surface	1.00 1.00 0.90 0.76 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 0.90 0.62
Duco, stony loam, very stony surface	20	Very limited Slope Droughty Depth to bedrock Slow water movement Large stones on the surface	1.00 1.00 1.00 0.76 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
McDesh, south slope	20	Very limited Slope Slow water movement Depth to bedrock Droughty	1.00 1.00 0.03 0.02	Very limited Low adsorption Slope Slow water movement Depth to bedrock Droughty	1.00 1.00 1.00 0.03 0.02

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
612: Hann-----	60	Very limited Slow water movement Runoff Slope	1.00  0.40 0.01	Very limited Slow water movement Slope	1.00  0.01
Hillcreek, dry-----	25	Somewhat limited Slow water movement	0.76	Somewhat limited Slow water movement	0.62
613: Duco, stony loam, very stony surface	40	Very limited Slope Droughty Depth to bedrock Slow water movement Large stones on the surface	1.00 1.00 1.00 0.76 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
Searles, very stony surface-----	25	Very limited Slope Droughty Depth to bedrock Slow water movement Cobble content	1.00 1.00 0.84 0.76 0.50	Very limited Low adsorption Slope Droughty Depth to bedrock Slow water movement	1.00 1.00 1.00 0.84 0.62
McDesh, south slope	20	Very limited Slope Slow water movement Depth to bedrock Droughty	1.00 1.00 0.03 0.02	Very limited Low adsorption Slope Slow water movement Depth to bedrock Droughty	1.00 1.00 1.00 0.03 0.02
618: McDesh, south slope	35	Very limited Slow water movement Slope Depth to bedrock Droughty	1.00 1.00 0.03 0.02	Very limited Low adsorption Slow water movement Slope Depth to bedrock Droughty	1.00 1.00 1.00 0.03 0.02
Duco, very gravelly loam, stony surface	25	Very limited Droughty Depth to bedrock Slope Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Depth to bedrock Slope Slow water movement	1.00 1.00 1.00 1.00 0.62

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
618: Shafer-----	20	Very limited Slow water movement Slope Depth to bedrock Droughty Runoff	1.00  1.00 0.97 0.82 0.40	Very limited Slow water movement Low adsorption Slope Depth to bedrock Droughty	1.00  1.00 1.00 0.97 0.82
619: McDesh-----	35	Very limited Slow water movement Slope Depth to bedrock Droughty	1.00  1.00 0.90 0.72	Very limited Low adsorption Slow water movement Slope Depth to bedrock Droughty	1.00 1.00  1.00 0.90 0.72
Gwin, gravelly loam, stony surface-----	25	Very limited Droughty Depth to bedrock Slope Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Depth to bedrock Slope Slow water movement	1.00 1.00 1.00 1.00 0.62
Shafer-----	20	Very limited Slow water movement Slope Depth to bedrock Droughty Runoff	1.00  1.00 0.97 0.82 0.40	Very limited Slow water movement Low adsorption Slope Depth to bedrock Droughty	1.00  1.00 1.00 0.97 0.82
620: Immig, very stony surface-----	35	Very limited Slope Slow water movement Droughty Cobble content Depth to bedrock	1.00 1.00 1.00 1.00 0.84	Very limited Droughty Low adsorption Slope Slow water movement Cobble content	1.00 1.00 1.00 1.00 1.00
McDesh, south slope	30	Very limited Slope Slow water movement Depth to bedrock Droughty	1.00 1.00 0.03 0.02	Very limited Low adsorption Slope Slow water movement Depth to bedrock Droughty	1.00 1.00 1.00 0.03 0.02

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.76	Depth to bedrock	1.00
		Large stones on the surface	0.50	Slow water movement	0.62
621: McDaniel-----	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.76	Slow water movement	0.62
		Droughty	0.05	Droughty	0.05
Hovelton, gravelly ashy loam-----	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.99	Slope	1.00
		Slow water movement	0.76	Droughty	0.99
		Depth to bedrock	0.01	Slow water movement	0.62
				Depth to bedrock	0.01
622: Hovelton, gravelly ashy loam-----	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.99	Slope	1.00
		Slow water movement	0.76	Droughty	0.99
		Depth to bedrock	0.01	Slow water movement	0.62
				Depth to bedrock	0.01
Gwin, very stony loam, extremely stony surface-----	30	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
		Large stones on the surface	1.00	Large stones on the surface	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
630: Gwin, very gravelly loam-----	45	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.76	Depth to bedrock	1.00
		Runoff	0.40	Slow water movement	0.62

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
630: Flybow-----	25	Very limited Slope Depth to bedrock Droughty Runoff Too acid	1.00 1.00 1.00 0.40 0.01	Very limited Droughty Depth to bedrock Low adsorption Slope Too acid	1.00 1.00 1.00 1.00 0.03
Rock outcrop-----	20	Not rated		Not rated	
631: Flybow-----	40	Very limited Slope Depth to bedrock Droughty Runoff Too acid	1.00 1.00 1.00 0.40 0.01	Very limited Droughty Depth to bedrock Low adsorption Slope Too acid	1.00 1.00 1.00 1.00 0.03
Rock outcrop-----	30	Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated	
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited Droughty Large stones content Large stones on the surface Depth to bedrock Slope	1.00 1.00 1.00 1.00 1.00	Very limited Droughty Low adsorption Large stones on the surface Depth to bedrock Slope	1.00 1.00 1.00 1.00 1.00
McDesh, very stony loam, very stony surface-----	25	Very limited Slow water movement Large stones on the surface Slope Droughty Depth to bedrock	1.00 1.00 1.00 1.00 0.99 0.90	Very limited Low adsorption Slow water movement Large stones on the surface Slope Droughty	1.00 1.00 1.00 1.00 0.99
Rock outcrop-----	25	Not rated		Not rated	
635: Shafer, very stony surface-----	40	Very limited Slow water movement Large stones on the surface Slope Cobble content Droughty	1.00 1.00 1.00 1.00 0.99	Very limited Slow water movement Low adsorption Large stones on the surface Slope Cobble content	1.00 1.00 1.00 1.00 1.00

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
635: Karney-----	25	Very limited Slow water movement Slope Droughty Runoff Depth to bedrock	1.00 1.00 0.65 0.40 0.35	Very limited Low adsorption Slow water movement Slope Droughty Depth to bedrock	1.00 1.00 1.00 0.65 0.35
Yad-----	20	Very limited Slow water movement Slope Runoff	1.00 1.00 0.40	Very limited Slow water movement Slope	1.00 1.00
636: Hann, stony surface	30	Very limited Slope Slow water movement Runoff Cobble content	1.00 1.00 0.40 0.12	Very limited Slope Slow water movement Cobble content	1.00 1.00 0.12
McDesh, very stony loam, extremely bouldery surface---	30	Very limited Slope Slow water movement Large stones content Large stones on the surface Droughty	1.00 1.00 1.00 1.00 0.01	Very limited Low adsorption Slope Slow water movement Large stones on the surface Droughty	1.00 1.00 1.00 1.00 0.01
Robbscreek, moist---	25	Very limited Slope Droughty Depth to bedrock Too acid	1.00 0.93 0.46 0.11	Very limited Low adsorption Slope Droughty Depth to bedrock Too acid	1.00 1.00 0.93 0.46 0.42
638: Yad-----	35	Very limited Slow water movement Runoff Slope	1.00 0.40 0.01	Very limited Slow water movement Slope	1.00 0.01
Cranegulch-----	25	Very limited Slow water movement Slope	1.00 0.16	Very limited Slow water movement Slope	1.00 0.16

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
638: Duco, stony loam, very stony surface	25	Very limited Droughty Depth to bedrock Slow water movement Large stones on the surface Large stones content	1.00 1.00 0.76 0.50 0.47	Very limited Droughty Low adsorption Depth to bedrock Slow water movement Large stones on the surface	1.00 1.00 1.00 0.62 0.50
640: Timberbutte-----	85	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
641: Aradaran-----	45	Very limited Slow water movement Slope Too acid	1.00 0.16 0.02	Very limited Slow water movement Slope Too acid	1.00 0.16 0.07
Yad-----	40	Very limited Slow water movement Runoff Slope	1.00 0.40 0.16	Very limited Slow water movement Slope	1.00 0.16
650: Longs-----	40	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Low adsorption Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Highvalley-----	30	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Hoff-----	20	Very limited Slope Droughty Depth to bedrock Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
651: Hess-----	35	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62
Lidos-----	30	Very limited Slow water movement Slope Filtering capacity Too acid	1.00 1.00 0.99 0.50	Very limited Slow water movement Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Cleymor-----	25	Very limited Slow water movement Slope Filtering capacity Too acid Runoff	1.00 1.00 0.99 0.50 0.40	Very limited Slow water movement Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
652: Hess-----	40	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62
Lidos-----	30	Very limited Slope Slow water movement Filtering capacity Too acid	1.00 1.00 0.99 0.50	Very limited Slope Slow water movement Filtering capacity Too acid	1.00 1.00 0.99 0.99
Klicker-----	20	Very limited Slope Filtering capacity Droughty Depth to bedrock Slow water movement	1.00 0.99 0.87 0.80 0.76	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.87

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
653: Lidos-----	45	Very limited Slope Slow water movement Filtering capacity Too acid	1.00 1.00 0.99 0.50	Very limited Slope Slow water movement Filtering capacity Too acid	1.00 1.00 0.99 0.99
Klicker-----	30	Very limited Slope Filtering capacity Droughty Depth to bedrock Slow water movement	1.00 0.99 0.87 0.80 0.76	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.87
Hess-----	20	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62
654: Shilling-----	40	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.01	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.01
Highvalley-----	30	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Hoff-----	20	Very limited Slope Droughty Depth to bedrock Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
655: Shilling, moist-----	40	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
655: Highvalley, moist---	35	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
656: Shilling, moist-----	50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Highvalley, moist---	40	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
657: Pumpkin, stony surface-----	95	Very limited Slope Filtering capacity Slow water movement Large stones on the surface Too acid	1.00 0.99 0.76 0.50 0.50	Very limited Slope Filtering capacity Too acid Slow water movement Large stones on the surface	1.00 0.99 0.99 0.62 0.50
658: Cleymor-----	50	Very limited Slow water movement Slope Filtering capacity Too acid Runoff	1.00 1.00 0.99 0.50 0.40	Very limited Slow water movement Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Pumpkin, stony surface-----	30	Very limited Slope Filtering capacity Slow water movement Large stones on the surface Too acid	1.00 0.99 0.76 0.50 0.50	Very limited Slope Filtering capacity Too acid Slow water movement Large stones on the surface	1.00 0.99 0.99 0.62 0.50

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
659: Hoff, south slope---	85	Very limited Droughty Depth to bedrock Slope Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Depth to bedrock Slope Slow water movement	1.00 1.00 1.00 1.00 0.62
660: Longs-----	60	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Low adsorption Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Highvalley-----	30	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
661: Awley-----	50	Very limited Slope Low adsorption Filtering capacity Too acid	1.00 1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Bo-----	35	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
662: Awley-----	65	Very limited Slope Low adsorption Filtering capacity Too acid	1.00 1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Bo-----	20	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
663: Cleymor-----	65	Very limited Slope Slow water movement Filtering capacity Too acid Runoff	1.00 1.00 0.99 0.50 0.40	Very limited Slow water movement Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Hoff-----	20	Very limited Slope Droughty Depth to bedrock Slow water movement Runoff	1.00 1.00 1.00 0.76 0.40	Very limited Droughty Low adsorption Slope Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62
666: Pachic Argixerolls, very stony surface	40	Very limited Slope Filtering capacity Slow water movement Too acid Large stones content	1.00 0.99 0.76 0.50 0.47	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
Rubble land-----	30	Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Very limited Slope Large stones content Filtering capacity Droughty Large stones on the surface	1.00 1.00 0.99 0.89 0.50	Very limited Slope Filtering capacity Droughty Large stones on the surface	1.00 0.99 0.89 0.50
700: Drybuck-----	50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Low adsorption Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Whisk, moist-----	30	Very limited Droughty Depth to bedrock Slope Runoff Too acid	1.00 1.00 1.00 0.40 0.18	Very limited Droughty Low adsorption Depth to bedrock Slope Too acid	1.00 1.00 1.00 1.00 0.67

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
701: Drybuck-----	55	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Low adsorption Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Whisk, moist-----	25	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.18	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.67
702: Deerrun-----	40	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 0.99 0.78 0.50 0.20	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.78
Kisky, fine gravelly sandy loam, moist--	40	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Drybuck, dry-----	15	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Low adsorption Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
704: Drybuck-----	35	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Low adsorption Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Northfork, fine gravelly sandy loam	30	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.07	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.99 0.07

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
704: Whisk, moist-----	20	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.18	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.67
705: Northfork, sandy loam-----	60	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.06	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.06
Shirts, sandy loam, dry-----	20	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.36 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36
706: Northfork, fine gravelly sandy loam	40	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.07	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.07
Shirts, coarse sandy loam-----	25	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 0.99 0.98 0.54 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.99 0.98
Zimmer-----	20	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
707: Packerjohn, ashy coarse sandy loam--	40	Very limited Slope Filtering capacity Too acid Leaching	1.00 0.99 0.50 0.45	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
707: Shirts, coarse sandy loam-----	30	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 0.99 0.98 0.54 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.98
Zimmer-----	15	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
708: Zimmer-----	35	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
Northfork, fine gravelly sandy loam	25	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.07	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.07
Rock outcrop-----	25	Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 0.99 0.85 0.50 0.10	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.85
Charters, sandy loam	30	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.01	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.01

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
710: Charters, fine gravelly sandy loam	35	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
Northfork, fine gravelly sandy loam	35	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.07	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.07
Shirts, coarse sandy loam-----	15	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 0.99 0.98 0.54 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.98
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
Shirts, sandy loam, dry-----	30	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.36 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36
Zimmer-----	30	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
712: Charters, fine gravelly sandy loam	40	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
Shirts, coarse sandy loam-----	35	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 0.99 0.98 0.54 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.98
Zimmer-----	15	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
714: Shirts, sandy loam, south slope-----	40	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 0.99 0.85 0.50 0.10	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.85
Eagleson, fine gravelly sandy loam	35	Very limited Slope Droughty Filtering capacity Depth to bedrock Too acid	1.00 1.00 0.99 0.84 0.50	Very limited Droughty Low adsorption Slope Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Charters, sandy loam	15	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.01	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.01

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited Slope Droughty Filtering capacity Depth to bedrock Too acid	1.00 1.00 0.99 0.71 0.50	Very limited Low adsorption Slope Droughty Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Kosh-----	35	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
716: Zan-----	45	Very limited Slope Filtering capacity Droughty Too acid Leaching	1.00 1.00 0.76 0.50 0.45	Very limited Filtering capacity Slope Too acid Droughty	1.00 1.00 0.99 0.76
Belsh-----	25	Very limited Slope Filtering capacity Strongly contrasting textural stratification Droughty Too acid	1.00 1.00 1.00 0.89 0.78	Very limited Filtering capacity Slope Strongly contrasting textural stratification Too acid Droughty	1.00 1.00 1.00 1.00 0.89
Montchief-----	25	Very limited Slope Droughty Filtering capacity Too acid Depth to bedrock	1.00 1.00 0.99 0.50 0.20	Very limited Low adsorption Slope Droughty Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
718: Charters, fine gravelly sandy loam	35	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
718: Crumley-----	30	Very limited Slope Strongly contrasting textural stratification Droughty Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.50	Very limited Slope Strongly contrasting textural stratification Droughty Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Eagleson, sandy loam	20	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 0.99 0.97 0.50 0.03	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.99
720: Drybuck, dry-----	40	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Low adsorption Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Deerrun-----	30	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 0.99 0.78 0.50 0.20	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.78
Kisky, fine gravelly sandy loam, moist--	20	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.50	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
721: Shirts, fine gravelly sandy loam	40	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 0.99 0.91 0.54 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.91

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
721: Kosh-----	30	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Charters, fine gravelly sandy loam, dry-----	15	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
726: Garval-----	50	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 1.00 1.00 0.54 0.50	Very limited Droughty Filtering capacity Low adsorption Slope Too acid	1.00 1.00 1.00 1.00 0.99
Kisky, fine gravelly loamy coarse sand--	25	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
730: Hellake-----	40	Very limited Slope Slow water movement Too acid	1.00 0.76 0.01	Very limited Slope Slow water movement Too acid	1.00 0.62 0.03
Stardust-----	40	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
731: Shirts, sandy loam, dry-----	40	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.36 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
731: Charters, fine gravelly sandy loam, dry-----	25	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
Zimmer-----	25	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
733: Shirts, fine gravelly sandy loam	50	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 0.99 0.91 0.54 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.91
Kosh-----	30	Very limited Droughty Depth to bedrock Slope Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Depth to bedrock Slope Filtering capacity	1.00 1.00 1.00 1.00 0.99
734: Shirts, sandy loam, dry-----	45	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.36 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36
Kosh-----	35	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
735: Shirts, coarse sandy loam-----	50	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 0.99 0.98 0.54 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.99 0.98
Zimmer-----	25	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
Charters, fine gravelly sandy loam	15	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
738: Tripod-----	35	Very limited Slope Filtering capacity Strongly contrasting textural stratification Droughty Too acid	1.00 1.00 1.00 0.99 0.50	Very limited Filtering capacity Slope Strongly contrasting textural stratification Too acid Droughty	1.00 1.00 1.00 0.99 0.99
Packerjohn, ashy coarse sandy loam--	30	Very limited Slope Filtering capacity Too acid Leaching	1.00 0.99 0.50 0.45	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 1.00 1.00 0.71 0.50	Very limited Droughty Filtering capacity Low adsorption Slope Too acid	1.00 1.00 1.00 1.00 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
739: Shirts, sandy loam, moist-----	40	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.23 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.23
Zimmer-----	25	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
Packerjohn, ashy coarse sandy loam--	20	Very limited Slope Filtering capacity Too acid Leaching	1.00 0.99 0.50 0.45	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
740: Charters, sandy loam	40	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.01	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.01
Eagleson, fine gravelly sandy loam	35	Very limited Slope Droughty Filtering capacity Depth to bedrock Too acid	1.00 1.00 0.99 0.84 0.50	Very limited Droughty Low adsorption Slope Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
741: Zan-----	85	Very limited Filtering capacity Slope Droughty Too acid Leaching	1.00 1.00 0.76 0.50 0.45	Very limited Filtering capacity Slope Too acid Droughty	1.00 1.00 0.99 0.76

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
742: Crumley-----	65	Very limited Slope Strongly contrasting textural stratification Droughty Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.50	Very limited Slope Strongly contrasting textural stratification Droughty Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Eagleson, sandy loam	20	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 0.99 0.97 0.50 0.03	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.99
743: Packerjohn, ashy coarse sandy loam--	50	Very limited Slope Filtering capacity Too acid Leaching	1.00 0.99 0.50 0.45	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Shirts, sandy loam, moist-----	35	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.23 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.23
744: Packerjohn, ashy sandy loam, cool---	60	Very limited Slope Dense layer Filtering capacity Too acid Leaching	1.00 1.00 0.99 0.50 0.45	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.35
Shirts, sandy loam, moist-----	20	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.23 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.23

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
744: Tripod, cool-----	15	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slope	1.00	Slope	1.00
		Strongly contrasting textural stratification	0.99	Too acid	0.99
		Droughty	0.62	Strongly contrasting textural stratification	0.99
		Too acid	0.50	Droughty	0.62
745: Tripod, moist-----	50	Very limited		Very limited	
		Slope	1.00	Filtering	1.00
		Filtering capacity	1.00	capacity	1.00
		Strongly contrasting textural stratification	1.00	Low adsorption	1.00
		Droughty	0.99	Slope	1.00
		Too acid	0.50	Strongly contrasting textural stratification	1.00
				Too acid	0.99
Packerjohn, ashy sandy loam-----	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Leaching	0.45		
746: Packerjohn, ashy sandy loam-----	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Leaching	0.45		
747: Pinney, moist-----	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Slow water movement	0.76	Too acid	0.99
		Too acid	0.50	Slow water movement	0.62
Charters, fine gravelly sandy loam	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Droughty	0.04	Droughty	0.04

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
747: Shirts, sandy loam, dry-----	15	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.36 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36
748: Belsh, moist-----	45	Very limited Slope Filtering capacity Strongly contrasting textural stratification Droughty Too acid	1.00 0.99 0.99 0.63 0.50	Very limited Slope Filtering capacity Too acid Strongly contrasting textural stratification Droughty	1.00 0.99 0.99 0.99 0.63
Zan, moist-----	40	Very limited Slope Filtering capacity Too acid Leaching Droughty	1.00 0.99 0.50 0.45 0.30	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.30
749: Quartzburg-----	50	Very limited Slope Droughty Filtering capacity Too acid Depth to bedrock	1.00 1.00 0.99 0.50 0.03	Very limited Droughty Low adsorption Slope Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Charters, sandy loam	25	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.01	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.01
750: Garval-----	50	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 1.00 1.00 0.54 0.50	Very limited Droughty Filtering capacity Low adsorption Slope Too acid	1.00 1.00 1.00 1.00 0.99

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
750: Kisky, fine gravelly loamy coarse sand--	20	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.01	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Rock outcrop-----	20	Not rated		Not rated	
751: Belsh, moist-----	50	Very limited Slope Filtering capacity Strongly contrasting textural stratification Droughty Too acid	1.00 0.99 0.99 0.63 0.50	Very limited Slope Filtering capacity Too acid Strongly contrasting textural stratification Droughty	1.00 0.99 0.99 0.99 0.63
Zan, moist-----	40	Very limited Slope Filtering capacity Too acid Leaching Droughty	1.00 0.99 0.50 0.45 0.30	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.30
752: Josie-----	70	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.08	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.31
Zimmer, fine gravelly sandy loam	20	Very limited Droughty Depth to bedrock Slope Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Depth to bedrock Slope Too acid	1.00 1.00 1.00 1.00 0.21
753: Tripod, cool-----	45	Very limited Slope Filtering capacity Strongly contrasting textural stratification Droughty Too acid	1.00 1.00 0.99 0.62 0.50	Very limited Filtering capacity Slope Too acid Strongly contrasting textural stratification Droughty	1.00 1.00 0.99 0.99 0.62

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
753: Packerjohn, ashy sandy loam, cool---	25	Very limited Slope Filtering capacity Too acid Leaching Droughty	1.00 0.99 0.50 0.45 0.35	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.35
Shirts, sandy loam, moist-----	20	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.23 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.23
754: Packerjohn, ashy sandy loam-----	55	Very limited Slope Filtering capacity Too acid Leaching	1.00 0.99 0.50 0.45	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Shirts, sandy loam, moist-----	20	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.23 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.23
755: Zimmer-----	40	Very limited Slope Droughty Depth to bedrock Runoff Too acid	1.00 1.00 1.00 0.40 0.05	Very limited Droughty Low adsorption Slope Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21
Quartzburg-----	35	Very limited Slope Droughty Filtering capacity Too acid Depth to bedrock	1.00 1.00 0.99 0.50 0.03	Very limited Droughty Low adsorption Slope Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Rock outcrop-----	20	Not rated		Not rated	

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Slope Filtering capacity Droughty Depth to bedrock Too acid	1.00 1.00 1.00 0.71 0.50	Very limited Droughty Filtering capacity Low adsorption Slope Too acid	1.00 1.00 1.00 1.00 0.99
Tripod-----	25	Very limited Slope Filtering capacity Strongly contrasting textural stratification Droughty Too acid	1.00 1.00 1.00 0.99 0.50	Very limited Filtering capacity Slope Strongly contrasting textural stratification Too acid Droughty	1.00 1.00 1.00 0.99 0.99
Kosh, moist-----	20	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
758: Eagleson, sandy loam	40	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 0.99 0.97 0.50 0.03	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.97
Kosh, moist-----	30	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Charters, fine gravelly sandy loam	20	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
759: Charters, sandy loam	30	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.01	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.01
Shirts, sandy loam, south slope-----	30	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 0.99 0.85 0.50 0.10	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.85
Kosh, moist-----	20	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
761: Charters, fine gravelly sandy loam	45	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
Middlefork, moist---	40	Very limited Slope Filtering capacity Slow water movement Too acid	1.00 0.99 0.76 0.50	Very limited Slope Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.62
762: Drybuck, dry-----	40	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.50	Very limited Low adsorption Slope Filtering capacity Too acid	1.00 1.00 0.99 0.99
Hellake-----	30	Very limited Slope Slow water movement Too acid	1.00 0.76 0.01	Very limited Slope Slow water movement Too acid	1.00 0.62 0.03

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
762: Deerrun-----	20	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
		Droughty	0.78	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Depth to bedrock	0.20	Droughty	0.78
763: Eagleson, fine gravelly sandy loam	40	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
		Depth to bedrock	0.84	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
Kosh-----	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.11	Filtering capacity	0.99
Rock outcrop-----	15	Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
		Droughty	0.65	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Depth to bedrock	0.10	Droughty	0.65
Zimmer, warm-----	20	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Depth to bedrock	1.00	Low adsorption	1.00
		Slope	1.00	Depth to bedrock	1.00
		Runoff	0.40	Slope	1.00
		Too acid	0.05	Too acid	0.21
Rock outcrop-----	15	Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
		Droughty	0.65	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Depth to bedrock	0.10	Droughty	0.65

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
766: Charters, coarse sandy loam-----	15	Very limited Slope	1.00	Very limited Slope	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
Zimmer, dry-----	15	Very limited Droughty	1.00	Very limited Droughty	1.00
		Depth to bedrock	1.00	Low adsorption	1.00
		Slope	1.00	Depth to bedrock	1.00
		Runoff	0.40	Slope	1.00
		Too acid	0.05	Too acid	0.21
767: Shirts, sandy loam, dry-----	45	Very limited Slope	1.00	Very limited Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
		Too acid	0.50	Filtering capacity	0.99
		Droughty	0.36	Too acid	0.99
		Depth to bedrock	0.01	Droughty	0.36
Kosh-----	25	Very limited Slope	1.00	Very limited Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.11	Filtering capacity	0.99
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope	1.00	Very limited Slope	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Droughty	0.04	Droughty	0.04
768: Shirts, sandy loam, south slope-----	35	Very limited Slope	1.00	Very limited Low adsorption	1.00
		Filtering capacity	0.99	Slope	1.00
		Droughty	0.85	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Depth to bedrock	0.10	Droughty	0.85

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
768: Kosh, moist-----	25	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Eagleson, fine gravelly sandy loam	15	Very limited Slope Droughty Filtering capacity Depth to bedrock Too acid	1.00 1.00 0.99 0.84 0.50	Very limited Droughty Low adsorption Slope Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
770: Shirts, sandy loam, dry-----	50	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.36 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.99 0.36
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.50 0.04	Very limited Slope Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.04
Kosh, moist-----	20	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
771: Backswitch, sandy loam-----	55	Very limited Slope Filtering capacity Droughty Too acid	1.00 0.99 0.77 0.50	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.99 0.77

Table 7.--Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
771: Shirts, sandy loam, dry-----	25	Very limited Slope Filtering capacity Too acid Droughty Depth to bedrock	1.00 0.99 0.50 0.36 0.01	Very limited Low adsorption Slope Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Slope Filtering capacity Droughty Too acid Depth to bedrock	1.00 1.00 1.00 0.50 0.01	Very limited Filtering capacity Low adsorption Slope Droughty Too acid	1.00 1.00 1.00 1.00 0.99
Packerjohn, ashy sandy loam, dry----	25	Very limited Slope Filtering capacity Too acid Leaching	1.00 0.99 0.50 0.45	Very limited Slope Filtering capacity Too acid	1.00 0.99 0.99
Kosh, moist-----	20	Very limited Slope Droughty Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.11	Very limited Droughty Low adsorption Slope Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
900: Pits, gravel-----	75	Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated	
999: Water-----	100	Not rated		Not rated	

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Very limited Droughty Filtering capacity Depth to saturated zone Flooding Too acid	1.00 0.99 0.99 0.60 0.03	Very limited Flooding Seepage Depth to saturated zone Too acid	1.00 1.00 0.99 0.03
Cumulic Haploxerolls	40	Very limited Filtering capacity	0.99	Very limited Seepage Flooding	1.00 0.40
221: Bissell-----	85	Very limited Filtering capacity Slow water movement	0.99 0.62	Very limited Seepage	1.00
222: Bissell-----	85	Very limited Filtering capacity Too steep for surface application Slow water movement	0.99 0.68 0.62	Very limited Seepage	1.00
223: Staircase, dry-----	85	Very limited Filtering capacity Droughty	0.99 0.08	Very limited Seepage Flooding	1.00 0.40
224: Porter-----	85	Very limited Filtering capacity	0.99	Very limited Seepage Flooding	1.00 0.40
225: Boise-----	85	Very limited Filtering capacity Too steep for surface application Droughty Too acid	0.99 0.32 0.25 0.01	Very limited Seepage Too acid	1.00 0.01

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
226: Flofeather, very rarely flooded-----	55	Very limited Filtering capacity Droughty	0.99 0.11	Very limited Seepage Flooding	1.00 0.20
Shawmount, stony surface-----	30	Very limited Filtering capacity Droughty Too acid	0.99 0.70 0.07	Very limited Seepage Stone content Flooding Too acid Cobble content	1.00 0.41 0.20 0.07 0.01
227: Piercepark, loam----	85	Not limited		Very limited Seepage	1.00
228: Piercepark, loam----	85	Somewhat limited Too steep for surface application	0.68	Very limited Seepage	1.00
229: Piercepark, coarse sandy loam-----	85	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
230: Hann-----	60	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.10	Somewhat limited Seepage Too steep for surface application	0.37 0.22
Doubledia, silty clay loam-----	15	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.10	Somewhat limited Depth to bedrock Too steep for surface application	0.99 0.22

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
232: Jasseek-----	85	Very limited Slow water movement	1.00	Very limited Seepage	1.00
233: Jasseek-----	85	Very limited Slow water movement Too steep for surface application	1.00 0.32	Very limited Seepage	1.00
238: Adaboi-----	85	Very limited Slow water movement	1.00	Somewhat limited Seepage	0.37
240: Collister-----	65	Not limited		Very limited Seepage Flooding	1.00 0.40
Flofeather-----	25	Not limited		Very limited Seepage Flooding	1.00 0.40
300: Shawmount, stony surface-----	75	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Droughty Too acid	1.00 1.00 0.99 0.70 0.07	Very limited Seepage Too steep for surface application Stone content Too acid Cobble content	1.00 1.00 0.41 0.07 0.01
301: Breadloaf-----	55	Very limited Slow water movement Too steep for surface application Depth to bedrock Droughty Too steep for sprinkler application	1.00 1.00 0.95 0.88 0.40	Very limited Depth to bedrock Too steep for surface application	1.00 0.78

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater		
		Rating class and limiting features	Value	Rating class and limiting features	Value	
301: Doubledia, silty clay loam-----	25	Very limited		Somewhat limited	Depth to bedrock	
		Slow water movement	1.00			0.99
		Too steep for surface application	0.68			
302: Breadloaf-----	40	Very limited		Very limited	Depth to bedrock	
		Slow water movement	1.00			1.00
		Too steep for surface application	1.00			1.00
		Too steep for sprinkler application	1.00			
		Depth to bedrock	0.95			
		Droughty	0.88			
Doubledia, silty clay loam-----	35	Very limited		Very limited	Depth to bedrock	
		Slow water movement	1.00			1.00
		Too steep for surface application	1.00			0.99
		Too steep for sprinkler application	1.00			
Hann-----	20	Very limited		Very limited	Seepage	
		Too steep for surface application	1.00			1.00
		Too steep for sprinkler application	1.00			0.37
		Slow water movement	1.00			
303: Doubledia, silty clay loam-----	40	Very limited		Very limited	Depth to bedrock	
		Slow water movement	1.00			1.00
		Too steep for surface application	1.00			0.99
		Too steep for sprinkler application	1.00			

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
303: Hann-----	25	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00  1.00  1.00	Very limited Too steep for surface application Seepage	1.00  0.37
Breadloaf-----	20	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Depth to bedrock Droughty	1.00  1.00  1.00  0.95 0.88	Very limited Too steep for surface application Depth to bedrock	1.00  1.00
304: Breadloaf-----	30	Very limited Slow water movement Too steep for surface application Depth to bedrock Droughty Too steep for sprinkler application	1.00  1.00  0.95 0.88 0.78	Very limited Depth to bedrock Too steep for surface application	1.00 1.00
Doubledia, silty clay loam-----	30	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00  1.00  1.00	Very limited Too steep for surface application Depth to bedrock	1.00  0.99
Hullsgulch, loam----	30	Very limited Too steep for surface application Too steep for sprinkler application	1.00  1.00	Very limited Seepage Too steep for surface application	1.00 1.00

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
305: Siphonlake, south slope-----	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	0.05
Solarview-----	25	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
Depth to bedrock	1.00				
306: Van Dusen-----	45	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.01	Too acid	0.01
Siphonlake-----	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	0.71
		Droughty	0.01		
307: Adaboi-----	65	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.78
		Too steep for surface application	1.00	Seepage	0.37
		Too steep for sprinkler application	0.40		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
307: Meclo-----	20	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 0.40 0.35 0.07	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 0.78 0.07
308: Breadloaf-----	40	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Depth to bedrock Droughty	1.00 1.00 1.00 0.95 0.88	Very limited Too steep for surface application Depth to bedrock	1.00 1.00
Crawley, silt loam--	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Seepage Too acid	1.00 1.00 1.00 0.01
Doubledia, clay loam	20	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Too steep for surface application Depth to bedrock	1.00 0.08
309: Hullsgulch, sandy loam-----	65	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
309: Solarview-----	25	Very limited Droughty Filtering capacity Too steep for surface application Too steep for sprinkler application Depth to bedrock	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
311: Meclo-----	35	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Depth to bedrock Too acid	1.00 1.00 1.00 0.35 0.07	Very limited Too steep for surface application Seepage Depth to bedrock Too acid	1.00 1.00 1.00 0.07
Crawley, silt loam--	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Seepage Too acid	1.00 1.00 1.00 0.01
Adaboi-----	20	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Too steep for surface application Seepage	1.00 0.37

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
328: Gacey, extremely stony surface-----	75	Very limited		Very limited	
		Droughty	1.00	Depth to cemented pan	1.00
		Depth to cemented pan	1.00	Seepage	1.00
		Slow water movement	1.00	Stone content	1.00
		Large stones on the surface	0.99	Cobble content	0.24
		Too steep for surface application	0.32		
329: Ayette-----	55	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to bedrock	0.94
Duco, stony loam, very stony surface	25	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Stone content	1.00
		Depth to bedrock	1.00	Seepage	1.00
		Slow water movement	0.62	Cobble content	0.01
330: Breadloaf-----	35	Very limited		Very limited	
		Slow water movement	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	0.98		
		Depth to bedrock	0.95		
		Droughty	0.88		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
330: Ayette, moist-----	30	Very limited Too steep for surface application Slow water movement Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Depth to bedrock	1.00 1.00 0.08
Immig, rubbly surface-----	20	Very limited Droughty Large stones on the surface Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content Stone content	1.00 1.00 1.00 0.99 0.10
331: Ayette, moist-----	50	Very limited Too steep for surface application Slow water movement Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application Depth to bedrock	1.00 1.00 0.08
Yad-----	30	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Too steep for surface application	1.00
332: Hann-----	35	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00	Very limited Too steep for surface application Seepage	1.00 0.37

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
332: Ayette, moist-----	30	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00  1.00  1.00	Very limited Too steep for surface application Seepage Depth to bedrock	1.00  1.00 0.08
Picketpin-----	20	Very limited Too steep for surface application Too steep for sprinkler application	1.00  1.00	Very limited Too steep for surface application Seepage	1.00  1.00
333: Ayette-----	50	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00  1.00  1.00	Very limited Too steep for surface application Seepage Depth to bedrock	1.00  1.00 0.94
Crawley, loam-----	15	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00  1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Seepage	1.00 1.00  1.00
Hullsgulch, loam----	15	Very limited Too steep for surface application Too steep for sprinkler application	1.00  1.00	Very limited Too steep for surface application Seepage	1.00  1.00

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
335: Gimmi, very stony surface-----	30	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	0.96	Too acid	0.03
Ayette, moist-----	25	Large stones on the surface	0.50		
		Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
Doubledia, silty clay loam-----	25	Too steep for sprinkler application	1.00	Depth to bedrock	0.08
		Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
400: Ralsen-----	35	Too steep for surface application	1.00	Depth to bedrock	0.99
		Too steep for sprinkler application	1.00		
		Very limited		Very limited	
Foxlane-----	30	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.60	Depth to saturated zone	1.00
		Very limited		Seepage	1.00
Pay-----	20	Seepage		Too level	0.50
		Filtering capacity	1.00	Very limited	
		Too acid	0.99	Flooding	0.40
Pay-----	20	Droughty	0.99		
		Very limited		Seepage	1.00
		Filtering capacity	1.00	Too acid	0.99
		Depth to saturated zone	1.00	Flooding	0.40
		Droughty	0.91		
Pay-----	20	Flooding	0.60	Very limited	
		Too acid	0.07	Flooding	1.00
				Seepage	1.00
Pay-----	20			Depth to saturated zone	1.00
				Too level	0.50
				Too acid	0.07

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
401: Staircase-----	85	Very limited Filtering capacity Too acid	0.99  0.21	Very limited Seepage Flooding Too acid	1.00 0.40 0.21
402: Crossbow-----	60	Very limited Filtering capacity Depth to saturated zone Flooding Too acid	1.00  0.98 0.60 0.14	Very limited Flooding Seepage Depth to saturated zone Too acid	1.00 1.00 0.98 0.14
Foxlane-----	20	Very limited Filtering capacity Too acid Droughty	1.00  0.99 0.99	Very limited Seepage Too acid Flooding	1.00 0.99 0.40
403: Ralsen-----	40	Very limited Depth to saturated zone Flooding	1.00  0.60	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00
Pay-----	25	Very limited Filtering capacity Depth to saturated zone Droughty Flooding Too acid	1.00  1.00 0.91 0.60 0.07	Very limited Flooding Seepage Depth to saturated zone Too level Too acid	1.00 1.00 1.00 0.50 0.07
Crossbow-----	20	Very limited Filtering capacity Depth to saturated zone Flooding Too acid	1.00  0.98 0.60 0.14	Very limited Flooding Seepage Depth to saturated zone Too acid	1.00 1.00 0.98 0.14
404: Riverpoint-----	55	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Slow water movement Droughty	1.00  1.00  0.99 0.62 0.48	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.21

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
404: Hellake-----	25	Somewhat limited Slow water movement	0.62	Very limited Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.03
		Too acid	0.03		
405: Hellake-----	65	Somewhat limited Slow water movement	0.62	Very limited Seepage	1.00
		Too acid	0.03	Too acid	0.03
Staircase-----	15	Very limited Filtering capacity	0.99	Very limited Seepage	1.00
		Too acid	0.21	Flooding	0.40
				Too acid	0.21
406: Hellake-----	75	Somewhat limited Slow water movement	0.62	Very limited Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.03
		Too acid	0.03		
407: Hellake-----	75	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Slow water movement	0.62	Too acid	0.03
		Too acid	0.03		
408: Stardust-----	75	Very limited Filtering capacity	0.99	Very limited Seepage	1.00
		Too acid	0.99	Too acid	0.99
409: Stardust-----	75	Very limited Filtering capacity	0.99	Very limited Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for surface application	0.32		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
410: Stardust-----	65	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00  1.00  0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
Riverpoint, very stony surface-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00  1.00  0.99 0.99 0.62	Very limited Seepage Too steep for surface application Stone content Too acid	1.00 1.00  1.00 0.99
411: Huston, very stony surface-----	45	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.71	Very limited Seepage Too steep for surface application Too acid Stone content Cobble content	1.00 1.00  0.99 0.06 0.01
Zeb, gravelly sandy loam-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00  1.00  1.00  0.99 0.99	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00  0.99 0.01

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
412: Huston, very stony surface-----	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.71	Very limited Seepage Too steep for surface application Too acid Stone content Cobble content	1.00 1.00 0.99 0.06 0.01
Stardust-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
413: Cloudyway-----	75	Very limited Too steep for surface application Filtering capacity Too acid Too steep for sprinkler application Droughty	1.00 0.99 0.99 0.40 0.12	Very limited Seepage Too acid Too steep for surface application	1.00 0.99 0.78
414: Hellake-----	40	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 0.62 0.03	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.03

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
414: Middlefork-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
415: Middlefork-----	55	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Pinney-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
416: Pinney, moist-----	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
416: Middlefork, moist---	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Zeb, gravelly sandy loam-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 0.99 0.01
417: Middlefork-----	60	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Zeb, fine gravelly sandy loam-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.79	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
418: Middlefork-----	55	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Zeb, fine gravelly sandy loam-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.79	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Zeb, fine gravelly sandy loam-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.79	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
420: Pioneervil-----	40	Very limited Filtering capacity Too acid	0.99  0.99	Very limited Seepage Too acid Flooding	1.00  0.99 0.40
Grimescreek-----	35	Somewhat limited Depth to saturated zone Flooding	0.98  0.60	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 0.98
421: Dumps, dredge tailings-----	50	Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Very limited Droughty Filtering capacity Too acid Depth to saturated zone	1.00 1.00 0.99 0.18	Very limited Seepage Cobble content Too acid Stone content Flooding	1.00 1.00 0.99 0.81 0.40
422: Lithic Xerorthents, very stony surface	30	Very limited Droughty Depth to bedrock Filtering capacity Too acid Too steep for surface application	1.00 1.00 0.99 0.99 0.32	Very limited Seepage Depth to bedrock Too acid Cobble content	1.00 1.00 0.99 0.28
Dumps, placer tailings-----	25	Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Very limited Droughty Filtering capacity Too acid Depth to bedrock Too steep for surface application	1.00 0.99 0.99 0.90 0.32	Very limited Seepage Depth to bedrock Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
423: Dystric Xeropsamments, very stony surface-----	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Ultic Haploxerafs--	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Lithic Xerorthents--	15	Very limited Droughty Too steep for surface application Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Depth to bedrock Too acid Too steep for surface application	1.00 1.00 0.99 0.78
424: Middlefork-----	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
424: Charters, coarse sandy loam-----	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
425: Middlefork-----	55	Very limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Slow water movement	0.62		
		Too steep for surface application	0.32		
Brassey-----	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99	Too steep for surface application	0.22
		Droughty	0.38		
		Too steep for sprinkler application	0.10		
426: Middlefork, moist---	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Slow water movement	0.62		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
427: Middlefork, moist---	85	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
428: Zeb, gravelly sandy loam-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 0.99 0.01
Republic-----	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
429: Huston, very stony surface-----	85	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.71	Very limited Seepage Too steep for surface application Too acid Stone content Cobble content	1.00 1.00 0.99 0.06 0.01

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
503: Cartwright, dry-----	85	Somewhat limited Too steep for surface application Too acid	0.32  0.01	Very limited Seepage Too acid	1.00 0.01
504: Cartwright, dry-----	85	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00  1.00  0.01	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.01
505: Brownlee-----	85	Very limited Too steep for surface application Slow water movement Too acid Too steep for sprinkler application Droughty	1.00  0.62  0.14 0.10  0.01	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 0.84 0.22  0.14
506: Brownlee-----	45	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid Droughty	1.00  1.00  0.62  0.14 0.01	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00  0.84 0.14
Robbscreek-----	20	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Too acid	1.00  1.00  0.97 0.46 0.07	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00  0.07

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
506: Whisk-----	15	Very limited Droughty Too steep for surface application Depth to bedrock Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.21
507: Shoebend-----	35	Very limited Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement Droughty	1.00 1.00 0.65 0.62 0.61	Very limited Too steep for surface application Seepage Depth to bedrock	1.00 1.00 1.00
Dobson-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.14	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.14
Jerusalem-----	20	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 0.62	Very limited Too steep for surface application Seepage	1.00 1.00
509: Arrowrock-----	35	Very limited Droughty Depth to bedrock Too steep for surface application Too steep for sprinkler application Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
509: Borid-----	25	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
Rock outcrop-----	25	Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.21	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.21
Roney, moist-----	25	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid Depth to bedrock	1.00 1.00 0.92 0.67 0.01	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.67
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.46	Very limited Seepage Too steep for surface application Depth to bedrock Cobble content	1.00 1.00 1.00 0.11
Cartwright-----	25	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.01	Very limited Too steep for surface application Seepage Too acid	1.00 1.00 0.01

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
513: Robbscreek, moist---	25	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Too acid	1.00 1.00 1.00 0.93 0.46 0.42	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.42
516: Shimo, extremely stony surface-----	35	Very limited Droughty Large stones on the surface Too steep for surface application Too steep for sprinkler application Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Cobble content	1.00 1.00 1.00 0.17
Olaton, south slope	30	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid	1.00 1.00 1.00 0.29 0.21	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.21
Schiller, south slope-----	25	Very limited Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 0.61	Very limited Seepage Too steep for surface application	1.00 1.00
525: Robbscreek-----	35	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Too acid	1.00 1.00 1.00 0.97 0.46 0.07	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.07

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
525: Dobson-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.14	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.14
Brownlee-----	20	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid Droughty	1.00 1.00 0.62 0.14 0.01	Very limited Too steep for surface application Seepage Depth to bedrock Too acid	1.00 1.00 0.84 0.14
526: Cartwright-----	35	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.01	Very limited Too steep for surface application Seepage Too acid	1.00 1.00 0.01
Brownlee, moist-----	30	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid Droughty	1.00 1.00 0.62 0.07 0.01	Very limited Too steep for surface application Seepage Depth to bedrock Too acid	1.00 1.00 0.77 0.07
Robbscreek, moist---	20	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Too acid	1.00 1.00 0.93 0.46 0.42	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.42

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
527: Dobson-----	50	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.14	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.14
Roney, dry-----	35	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.67 0.46	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.67
528: Roney, dry-----	40	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.67 0.46	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.67
Dobson-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.14	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.14
Olaton, south slope	15	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid	1.00 1.00 0.29 0.21	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.21

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
529: Roney-----	40	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.67 0.46	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.67
Kisky, fine gravelly sandy loam-----	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 1.00 0.03
Olaton, south slope	15	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid	1.00 1.00 1.00 0.29 0.21	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.21
532: Schiller, north slope-----	55	Very limited Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 1.00 0.58	Very limited Seepage Too steep for surface application	1.00 1.00
Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Depth to bedrock	1.00 1.00 1.00 1.00 0.99 0.46	Very limited Seepage Too steep for surface application Depth to bedrock Cobble content	1.00 1.00 1.00 0.11

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
533: Olaton, north slope, dry-----	60	Very limited Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 0.21 0.17	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.21
Roney, moist-----	20	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid Depth to bedrock	1.00 1.00 0.93 0.67 0.01	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.67
534: Shimo, fine gravelly loamy sand-----	50	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.84	Very limited Seepage Too steep for surface application Depth to bedrock	1.00 1.00 1.00
Kisky, fine gravelly sandy loam-----	25	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.03
Schiller-----	15	Very limited Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 1.00	Very limited Seepage Too steep for surface application Cobble content	1.00 1.00 0.32

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
538: Borid-----	65	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
Shimo, fine gravelly loamy sand-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.84	Very limited Seepage Too steep for surface application Depth to bedrock	1.00 1.00 1.00
541: Roney-----	55	Very limited Too steep for surface application Droughty Too steep for sprinkler application Too acid Depth to bedrock	1.00 1.00 1.00 0.67 0.46	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.67
Kisky, fine gravelly sandy loam-----	35	Very limited Droughty Too steep for surface application Depth to bedrock Too steep for sprinkler application Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.03

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
544: Arrowrock-----	40	Very limited Droughty Depth to bedrock Too steep for surface application Too steep for sprinkler application Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
Borid-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
Painter-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.90	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.46	Very limited Seepage Too steep for surface application Depth to bedrock Cobble content	1.00 1.00 1.00 0.11

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
551: Kisky, fine gravelly loamy sand-----	30	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.03
		Filtering capacity	0.99		
555: Brownlee-----	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Slow water movement	0.62	Depth to bedrock	0.84
		Too acid	0.14	Too acid	0.14
		Droughty	0.01		
Schiller-----	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Cobble content	0.32
556: Kisky, fine gravelly sandy loam-----	40	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.03
		Filtering capacity	0.99		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
556: Shimo, fine gravelly loamy sand-----	30	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99		
		Depth to bedrock	0.84		
Brownlee-----	20	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Slow water movement	0.62	Depth to bedrock	0.84
		Too acid	0.14	Too acid	0.14
		Droughty	0.01		
558: Kisky, fine gravelly sandy loam-----	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.03
		Filtering capacity	0.99		
Whisk-----	30	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.21
		Too acid	0.21		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
558: Roney, dry-----	25	Very limited Too steep for surface application Too steep for sprinkler application Droughty Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.67 0.46	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.67
560: Robbscreek, moist---	30	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Too acid	1.00 1.00 1.00 0.93 0.46 0.42	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.42
Hellake-----	25	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 0.62 0.03	Very limited Too steep for surface application Seepage Too acid	1.00 1.00 0.03
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Depth to bedrock	1.00 1.00 1.00 0.99 0.46	Very limited Seepage Too steep for surface application Depth to bedrock Cobble content	1.00 1.00 1.00 0.11

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99		
		Depth to bedrock	0.29		
Kisky, fine gravelly loamy sand-----	30	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.03
		Filtering capacity	0.99		
Olaton, north slope, moist-----	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.21	Too acid	0.21
562: Kisky, fine gravelly sandy loam-----	30	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.03
		Filtering capacity	0.99		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
562: Shimo, fine gravelly sandy loam-----	30	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99	Cobble content	1.00
		Depth to bedrock	0.29		
Roney-----	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	0.67	Too acid	0.67
		Depth to bedrock	0.46		
600: McDesh-----	50	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	0.90		
		Droughty	0.72		
Immig, rubbly surface-----	25	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Large stones on the surface	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Cobble content	0.99
		Too steep for sprinkler application	1.00	Stone content	0.10

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
600: Gwin, very stony loam, extremely stony surface-----	15	Very limited Droughty Large stones on the surface Depth to bedrock Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 1.00	Very limited Depth to bedrock Seepage Too steep for surface application Cobble content Stone content	1.00 1.00 1.00 0.30 0.18
601: Hann-----	45	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Too steep for surface application Seepage	1.00 0.37
Gwin, very stony loam, extremely stony surface-----	25	Very limited Droughty Large stones on the surface Depth to bedrock Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 1.00	Very limited Depth to bedrock Seepage Too steep for surface application Cobble content Stone content	1.00 1.00 1.00 0.30 0.18
Shafer-----	20	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Depth to bedrock Droughty	1.00 1.00 1.00 1.00 0.97 0.82	Very limited Depth to bedrock Too steep for surface application Seepage	1.00 1.00 0.37

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
602: Hillcreek-----	35	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 0.62	Very limited Too steep for surface application Seepage	1.00 1.00
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 0.97 0.62	Very limited Too steep for surface application Seepage Depth to bedrock Cobble content	1.00 1.00 1.00 0.23
Hann-----	20	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00	Very limited Too steep for surface application Seepage	1.00 0.37
604: Shafer-----	55	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Depth to bedrock Droughty	1.00 1.00 1.00 0.97 0.82	Very limited Depth to bedrock Too steep for surface application Seepage	1.00 1.00 0.37
Hann-----	25	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Too steep for surface application Seepage	1.00 0.37

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater			
		Rating class and limiting features	Value	Rating class and limiting features	Value		
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited		Very limited			
		Droughty	1.00	Depth to bedrock	1.00		
		Large stones on the surface	1.00	Seepage	1.00		
		Depth to bedrock	1.00	Too steep for surface application	1.00		
		Too steep for surface application	1.00	Cobble content	0.30		
		Too steep for sprinkler application	1.00	Stone content	0.18		
		Flybow-----	20	Very limited		Very limited	
				Droughty	1.00	Depth to bedrock	1.00
				Depth to bedrock	1.00	Seepage	1.00
				Too steep for surface application	1.00	Too steep for surface application	1.00
Too steep for sprinkler application	1.00			Too acid	0.03		
606: Hillcreek-----	50	Very limited		Very limited			
		Too steep for surface application	1.00	Too steep for surface application	1.00		
		Too steep for sprinkler application	1.00	Seepage	1.00		
		Slow water movement	0.62				
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited		Very limited			
		Droughty	1.00	Too steep for surface application	1.00		
		Too steep for surface application	1.00	Seepage	1.00		
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00		
		Depth to bedrock	0.97	Cobble content	0.23		
		Slow water movement	0.62				

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
607: Duco, stony loam, very stony surface	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Stone content Seepage Cobble content	1.00 1.00 1.00 1.00 0.01
Immig, very stony surface-----	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Slow water movement Cobble content	1.00 1.00 1.00 1.00 1.00	Very limited Too steep for surface application Seepage Depth to bedrock Cobble content	1.00 1.00 1.00 0.42
Rubble land-----	15	Not rated		Not rated	
608: Duco, very gravelly loam, stony surface	40	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Seepage	1.00 1.00 1.00
Hovelton, gravelly ashy loam-----	25	Very limited Too steep for surface application Too steep for sprinkler application Droughty Slow water movement Depth to bedrock	1.00 1.00 0.99 0.62 0.01	Very limited Too steep for surface application Seepage Depth to bedrock Cobble content	1.00 1.00 1.00 1.00

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
608: McDesh, south slope	20	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Depth to bedrock Droughty	1.00 1.00 1.00 0.03 0.02	Very limited Too steep for surface application Seepage Depth to bedrock	1.00 1.00 1.00
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 0.90 0.62	Very limited Too steep for surface application Seepage Depth to bedrock Stone content Cobble content	1.00 1.00 1.00 1.00 0.59
Duco, stony loam, very stony surface	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Stone content Seepage Cobble content	1.00 1.00 1.00 1.00 0.01
McDesh, south slope	20	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Depth to bedrock Droughty	1.00 1.00 1.00 0.03 0.02	Very limited Too steep for surface application Seepage Depth to bedrock	1.00 1.00 1.00

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
612: Hann-----	60	Very limited Slow water movement	1.00	Somewhat limited Seepage	0.37
		Too steep for surface application	1.00	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10		
Hillcreek, dry-----	25	Somewhat limited Too steep for surface application	0.68	Very limited Seepage	1.00
		Slow water movement	0.62		
613: Duco, stony loam, very stony surface	40	Very limited Droughty	1.00	Very limited Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Stone content	1.00
		Depth to bedrock	1.00	Seepage	1.00
		Slow water movement	0.62	Cobble content	0.01
Searles, very stony surface-----	25	Very limited Too steep for surface application	1.00	Very limited Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Depth to bedrock	0.84		
		Slow water movement	0.62		
McDesh, south slope	20	Very limited Too steep for surface application	1.00	Very limited Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
		Depth to bedrock	0.03		
		Droughty	0.02		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
618: McDesh, south slope	35	Very limited Too steep for surface application Slow water movement Too steep for sprinkler application Depth to bedrock Droughty	1.00  1.00 1.00 1.00 0.03 0.02	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
Duco, very gravelly loam, stony surface	25	Very limited Droughty Too steep for surface application Depth to bedrock Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Seepage Too steep for surface application	1.00 1.00 1.00
Shafer-----	20	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Depth to bedrock Droughty	1.00 1.00 1.00 0.97 0.82	Very limited Depth to bedrock Too steep for surface application Seepage	1.00 1.00 0.37
619: McDesh-----	35	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Depth to bedrock Droughty	1.00 1.00 1.00 0.90 0.72	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
619: Gwin, gravelly loam, stony surface-----	25	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Seepage	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.62		
Shafer-----	20	Very limited		Very limited	
		Slow water movement	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	0.37
		Depth to bedrock	0.97		
		Droughty	0.82		
620: Immig, very stony surface-----	35	Very limited		Very limited	
		Droughty	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Cobble content	0.42
		Cobble content	1.00		
McDesh, south slope	30	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
		Depth to bedrock	0.03		
		Droughty	0.02		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Stone content	1.00
		Depth to bedrock	1.00	Seepage	1.00
		Slow water movement	0.62	Cobble content	0.01
621: McDaniel-----	45	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Slow water movement	0.62		
		Droughty	0.05		
Hovelton, gravelly ashy loam-----	40	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Droughty	0.99	Depth to bedrock	1.00
		Slow water movement	0.62	Cobble content	1.00
		Depth to bedrock	0.01		
622: Hovelton, gravelly ashy loam-----	50	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Droughty	0.99	Depth to bedrock	1.00
		Slow water movement	0.62	Cobble content	1.00
		Depth to bedrock	0.01		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
622: Gwin, very stony loam, extremely stony surface-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Large stones on the surface Depth to bedrock	1.00 1.00 1.00 1.00 1.00	Very limited Depth to bedrock Too steep for surface application Seepage Cobble content Stone content	1.00 1.00 1.00 0.30 0.18
630: Gwin, very gravelly loam-----	45	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Seepage	1.00 1.00 1.00
Flybow-----	25	Very limited Droughty Depth to bedrock Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.03	Very limited Depth to bedrock Too steep for surface application Seepage Too acid	1.00 1.00 1.00 0.03
Rock outcrop-----	20	Not rated		Not rated	
631: Flybow-----	40	Very limited Droughty Depth to bedrock Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.03	Very limited Depth to bedrock Too steep for surface application Seepage Too acid	1.00 1.00 1.00 0.03
Rock outcrop-----	30	Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated	

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited Droughty Large stones on the surface Depth to bedrock Too steep for surface application Too steep for sprinkler application	 1.00 1.00 1.00 1.00 1.00	Very limited Depth to bedrock Seepage Too steep for surface application Cobble content Stone content	 1.00 1.00 1.00  0.30 0.18
McDesh, very stony loam, very stony surface-----	25	Very limited Slow water movement Large stones on the surface Too steep for surface application Too steep for sprinkler application Droughty	 1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Stone content	 1.00 1.00 1.00  0.01
Rock outcrop-----	25	Not rated		Not rated	
635: Shafer, very stony surface-----	40	Very limited Slow water movement Too steep for surface application Large stones on the surface Too steep for sprinkler application Cobble content	 1.00 1.00 1.00 1.00 1.00	Very limited Depth to bedrock Too steep for surface application Seepage	 1.00 1.00  0.37
Karney-----	25	Very limited Too steep for surface application Slow water movement Too steep for sprinkler application Droughty Depth to bedrock	 1.00 1.00 1.00 0.65 0.35	Very limited Seepage Depth to bedrock Too steep for surface application	 1.00 1.00 1.00

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
635: Yad-----	20	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Too steep for surface application	1.00
636: Hann, stony surface	30	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Cobble content	1.00 1.00 1.00 0.12	Very limited Too steep for surface application Seepage	1.00 0.37
McDesh, very stony loam, extremely bouldery surface---	30	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Large stones on the surface Droughty	1.00 1.00 1.00 1.00 0.01	Very limited Too steep for surface application Seepage Depth to bedrock Stone content	1.00 1.00 1.00 0.82
Robbscreek, moist---	25	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Too acid	1.00 1.00 0.93 0.46 0.42	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.42
638: Yad-----	35	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.10	Somewhat limited Too steep for surface application	0.22

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
638: Cranegulch-----	25	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00  1.00  0.40	Very limited Seepage Too steep for surface application	1.00  0.78
Duco, stony loam, very stony surface	25	Very limited Droughty Depth to bedrock Too steep for surface application Slow water movement Large stones on the surface	1.00 1.00 1.00  0.62 0.50	Very limited Depth to bedrock Stone content Seepage Too steep for surface application Cobble content	1.00 1.00 1.00 0.22 0.01
640: Timberbutte-----	85	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00  1.00  0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
641: Aradaran-----	45	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Too acid	1.00  1.00  0.40 0.07	Very limited Seepage Too steep for surface application Too acid	1.00 0.78  0.07
Yad-----	40	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00  1.00  0.40	Somewhat limited Too steep for surface application	0.78

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
650: Longs-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 0.99 0.54
Highvalley-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Hoff-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Seepage Cobble content	1.00 1.00 1.00 0.03
651: Hess-----	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 0.99 0.88

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
651: Lidos-----	30	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Cleymor-----	25	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
652: Hess-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 0.99 0.88
Lidos-----	30	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Filtering capacity Too acid	1.00 1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
652: Klicker-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 1.00 0.99 0.99 0.87	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
653: Lidos-----	45	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Filtering capacity Too acid	1.00 1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Klicker-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 1.00 0.99 0.99 0.87	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Hess-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 0.99 0.88

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
654: Shilling-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.01	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Highvalley-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Hoff-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Seepage Cobble content	1.00 1.00 1.00 0.03
655: Shilling, moist----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Highvalley, moist---	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
656: Shilling, moist-----	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00  1.00  0.99  0.99	Very limited Seepage Too steep for surface application Too acid	1.00  1.00  0.99
Highvalley, moist---	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00  1.00  0.99  0.99	Very limited Seepage Too steep for surface application Too acid	1.00  1.00  0.99
657: Pumpkin, stony surface-----	95	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00  1.00  0.99  0.99  0.62	Very limited Seepage Too steep for surface application Too acid Stone content	1.00  1.00  0.99  0.29
658: Cleymor-----	50	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00  1.00  1.00  0.99  0.99	Very limited Seepage Too steep for surface application Too acid	1.00  1.00  0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
658: Pumpkin, stony surface-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00  1.00  0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid Stone content	1.00 1.00  0.99 0.29
659: Hoff, south slope---	85	Very limited Droughty Too steep for surface application Depth to bedrock Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00  0.62	Very limited Depth to bedrock Seepage Too steep for surface application	1.00 1.00 1.00
660: Longs-----	60	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00  1.00  0.99 0.99	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00  0.99 0.54
Highvalley-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00  1.00  0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
661: Awley-----	50	Very limited Low adsorption Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Low adsorption Too acid	1.00 1.00 1.00 0.99
Bo-----	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
662: Awley-----	65	Very limited Low adsorption Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Low adsorption Too acid	1.00 1.00 1.00 0.99
Bo-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
663: Cleymor-----	65	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Hoff-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Slow water movement	1.00 1.00 1.00 1.00 0.62	Very limited Depth to bedrock Too steep for surface application Seepage Cobble content	1.00 1.00 1.00 0.03
666: Pachic Argixerolls, very stony surface	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Rubble land-----	30	Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Droughty Large stones on the surface	1.00 1.00 0.99 0.89 0.50	Very limited Seepage Too steep for surface application Cobble content Stone content	1.00 1.00 0.94 0.78

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
700: Drybuck-----	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 0.99 0.18
Whisk, moist-----	30	Very limited Droughty Too steep for surface application Depth to bedrock Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.67	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.67
701: Drybuck-----	55	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 0.99 0.18
Whisk, moist-----	25	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.67	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.67
702: Deerrun-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 1.00 0.99 0.99 0.78	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
702: Kisky, fine gravelly sandy loam, moist--	40	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.99
		Filtering capacity	0.99		
Drybuck, dry-----	15	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99	Depth to bedrock	0.02
704: Drybuck-----	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99	Depth to bedrock	0.18
Northfork, fine gravelly sandy loam	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Droughty	0.07		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
704: Whisk, moist-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	 1.00 1.00 1.00 1.00 0.67	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	 1.00 1.00 1.00 0.67
705: Northfork, sandy loam-----	60	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	 1.00 1.00 0.99 0.99 0.06	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00 0.99
Shirts, sandy loam, dry-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	 1.00 1.00 0.99 0.99 0.36	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	 1.00 1.00 1.00 0.99
706: Northfork, fine gravelly sandy loam	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	 1.00 1.00 0.99 0.99 0.07	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
706: Shirts, coarse sandy loam-----	25	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.98	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Zimmer-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.21
707: Packerjohn, ashy coarse sandy loam--	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Shirts, coarse sandy loam-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.98	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
707: Zimmer-----	15	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.21
708: Zimmer-----	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.21
Northfork, fine gravelly sandy loam	25	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 1.00 0.99 0.99 0.07	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Rock outcrop-----	25	Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 1.00 0.99 0.99 0.85	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
709: Charters, sandy loam	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99  0.99 0.01	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
710: Charters, fine gravelly sandy loam	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99  0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
Northfork, fine gravelly sandy loam	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99  0.99 0.07	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
Shirts, coarse sandy loam-----	15	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99  0.99 0.98	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00  1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
Shirts, sandy loam, dry-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.36	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00  1.00 0.99
Zimmer-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00  0.21
712: Charters, fine gravelly sandy loam	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
712: Shirts, coarse sandy loam-----	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.98		
Zimmer-----	15	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.21
		Too acid	0.21		
714: Shirts, sandy loam, south slope-----	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.85		
Eagleson, fine gravelly sandy loam	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
714: Charters, sandy loam	15	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.01	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited Too steep for surface application Too steep for sprinkler application Droughty Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid Cobble content	1.00 1.00 1.00 0.99 0.79
Kosh-----	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
716: Zan-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.76	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
716: Belsh-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00  1.00  1.00  1.00 0.89	Very limited Seepage Too steep for surface application Too acid Cobble content Stone content	1.00 1.00  1.00 1.00 0.14
Montchief-----	25	Very limited Too steep for surface application Too steep for sprinkler application Droughty Filtering capacity Too acid	1.00  1.00  1.00 0.99 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid Cobble content	1.00 1.00  1.00 0.99 0.25
718: Charters, fine gravelly sandy loam	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
Crumley-----	30	Very limited Too steep for surface application Too steep for sprinkler application Droughty Filtering capacity Too acid	1.00  1.00  1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
718: Eagleson, sandy loam	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.97	Very limited Seepage Too steep for surface application Depth to bedrock Too acid Cobble content	1.00 1.00  1.00 0.99 0.06
720: Drybuck, dry-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00  1.00  0.99 0.99	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00  0.99 0.02
Deerrun-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.78	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00  1.00 0.99
Kisky, fine gravelly sandy loam, moist--	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00  1.00  1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
721: Shirts, fine gravelly sandy loam	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.91		
Kosh-----	30	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.42
		Filtering capacity	0.99		
Charters, fine gravelly sandy loam, dry-----	15	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Droughty	0.04		
726: Garval-----	50	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Filtering capacity	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too acid	0.99
		Too acid	0.99		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
726: Kisky, fine gravelly loamy coarse sand--	25	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.03
730: Hellake-----	40	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 0.62 0.03	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.03
Stardust-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
731: Shirts, sandy loam, dry-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
731: Charters, fine gravelly sandy loam, dry-----	25	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
Zimmer-----	25	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00  0.21
733: Shirts, fine gravelly sandy loam	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.91	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00  0.99
Kosh-----	30	Very limited Droughty Too steep for surface application Depth to bedrock Too steep for sprinkler application Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00  0.42

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
734: Shirts, sandy loam, dry-----	45	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Kosh-----	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
735: Shirts, coarse sandy loam-----	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.98	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Zimmer-----	25	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.21

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
735: Charters, fine gravelly sandy loam	15	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
738: Tripod-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 0.99 0.09
Packerjohn, ashy coarse sandy loam--	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Droughty Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid Stone content	1.00 1.00 1.00 0.99 0.31

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
739: Shirts, sandy loam, moist-----	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.23		
Zimmer-----	25	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.21
		Too acid	0.21		
Packerjohn, ashy coarse sandy loam--	20	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
740: Charters, sandy loam	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Droughty	0.01		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
740: Eagleson, fine gravelly sandy loam	35	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
741: Zan-----	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	0.99
		Too acid	0.99		
		Droughty	0.76		
742: Crumley-----	65	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Too acid	0.99
		Filtering capacity	0.99		
		Too acid	0.99		
Eagleson, sandy loam	20	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.97	Cobble content	0.16

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
743: Packerjohn, ashy coarse sandy loam--	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Shirts, sandy loam, moist-----	35	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.23	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.99
744: Packerjohn, ashy sandy loam, cool---	60	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.35	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Shirts, sandy loam, moist-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.23	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
744: Tripod, cool-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.62	Very limited Seepage Too steep for surface application Stone content Too acid	1.00 1.00 1.00 0.99
745: Tripod, moist-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Packerjohn, ashy sandy loam-----	45	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
746: Packerjohn, ashy sandy loam-----	90	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
747: Pinney, moist-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00  1.00  0.99  0.99  0.62	Very limited Seepage Too steep for surface application Too acid	1.00  1.00   0.99
Charters, fine gravelly sandy loam	25	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99  0.99  0.04	Very limited Seepage Too steep for surface application Too acid	1.00  1.00   0.99
Shirts, sandy loam, dry-----	15	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99  0.99  0.36	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00  1.00   1.00  0.99
748: Belsh, moist-----	45	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99  0.99  0.63	Very limited Seepage Too steep for surface application Too acid Stone content Cobble content	1.00  1.00   0.99  0.59  0.09

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
748: Zan, moist-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 1.00 0.99 0.99 0.30	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
749: Quartzburg-----	50	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Charters, sandy loam	25	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 1.00 0.99 0.99 0.01	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
750: Garval-----	50	Very limited Droughty Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 1.00 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
750: Kisky, fine gravelly loamy coarse sand--	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.03
Rock outcrop-----	20	Not rated		Not rated	
751: Belsh, moist-----	50	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.63	Very limited Seepage Too steep for surface application Too acid Stone content Cobble content	1.00 1.00 0.99 0.59 0.09
Zan, moist-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.30	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
752: Josie-----	70	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.31	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.31

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
752: Zimmer, fine gravelly sandy loam	20	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	0.21
		Too acid	0.21		
753: Tripod, cool-----	45	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Stone content	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.62		
Packerjohn, ashy sandy loam, cool---	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Droughty	0.35		
Shirts, sandy loam, moist-----	20	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.23		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
754: Packerjohn, ashy sandy loam-----	55	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Shirts, sandy loam, moist-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.23	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.99
755: Zimmer-----	40	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.21
Quartzburg-----	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Rock outcrop-----	20	Not rated		Not rated	

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Droughty Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid Stone content	1.00 1.00 1.00 0.99 0.31
Tripod-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 0.99 0.09
Kosh, moist-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
758: Eagleson, sandy loam	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.97	Very limited Seepage Too steep for surface application Depth to bedrock Too acid Cobble content	1.00 1.00 1.00 0.99 0.16

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
758: Kosh, moist-----	30	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
Charters, fine gravelly sandy loam	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
759: Charters, sandy loam	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.01	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Shirts, sandy loam, south slope-----	30	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.85	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
759: Kosh, moist-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
761: Charters, fine gravelly sandy loam	45	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Middlefork, moist---	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
762: Drybuck, dry-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 0.99 0.02

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
762: Hellake-----	30	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 0.62 0.03	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.03
Deerrun-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.78	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.99
763: Eagleson, fine gravelly sandy loam	40	Very limited Droughty Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Kosh-----	35	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
Rock outcrop-----	15	Not rated		Not rated	

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
765: Backswitch, coarse sandy loam-----	40	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.65	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.99
Zimmer, warm-----	20	Very limited Droughty Too steep for surface application Depth to bedrock Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.21
Rock outcrop-----	15	Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 1.00 0.99 0.99 0.65	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.99
Charters, coarse sandy loam-----	15	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
766: Zimmer, dry-----	15	Very limited Droughty Too steep for surface application Depth to bedrock Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.21
767: Shirts, sandy loam, dry-----	45	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99
Kosh-----	25	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
Charters, fine gravelly sandy loam, dry-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
768: Shirts, sandy loam, south slope-----	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.85		
Kosh, moist-----	25	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.42
		Filtering capacity	0.99		
Eagleson, fine gravelly sandy loam	15	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
770: Shirts, sandy loam, dry-----	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Depth to bedrock	1.00
		Too acid	0.99	Too acid	0.99
		Droughty	0.36		

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
770: Charters, fine gravelly sandy loam, dry-----	20	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.04	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Kosh, moist-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
771: Backswitch, sandy loam-----	55	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.77	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 0.99 0.99
Shirts, sandy loam, dry-----	25	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00 1.00 0.99 0.99 0.36	Very limited Seepage Too steep for surface application Depth to bedrock Too acid	1.00 1.00 1.00 0.99

Table 8.--Agricultural Disposal of Wastewater by Irrigation and Overland Flow--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Droughty Too acid	1.00 1.00 1.00 1.00 1.00 0.99	Very limited Seepage Too steep for surface application Depth to bedrock Too acid Cobble content	1.00 1.00 1.00 0.99 0.99
Packerjohn, ashy sandy loam, dry----	25	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Kosh, moist-----	20	Very limited Droughty Too steep for surface application Too steep for sprinkler application Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Depth to bedrock Too steep for surface application Too acid	1.00 1.00 1.00 0.42
900: Pits, gravel-----	75	Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated	
999: Water-----	100	Not rated		Not rated	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater		
		Rating class and limiting features	Value	Rating class and limiting features	Value	
220: Oxyaquic Xerofluvents-----	45	Very limited Depth to saturated zone	1.00	Very limited Filtering capacity	0.99	
			0.60		0.99	
		Flooding		Depth to saturated zone Flooding Too acid	0.60	0.03
Cumulic Haploxerolls	40	Very limited Depth to saturated zone Slow water movement	1.00	Very limited Filtering capacity	0.99	
			0.56			
221: Bissell-----	85	Very limited Slow water movement	1.00	Very limited Filtering capacity Slow water movement	0.99	
					0.44	
222: Bissell-----	85	Very limited Slow water movement Slope	1.00	Very limited Filtering capacity Too steep for surface application Slow water movement	0.99	
			0.50		0.68	
					0.44	
223: Staircase, dry-----	85	Very limited Depth to saturated zone Slow water movement	1.00	Very limited Filtering capacity	0.99	
			0.56			
224: Porter-----	85	Very limited Depth to saturated zone Slow water movement	1.00	Very limited Filtering capacity	0.99	
			0.56			

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
225: Boise-----	85	Somewhat limited Slow water movement	0.56	Very limited Filtering capacity	0.99
		Slope	0.12	Too steep for surface application	0.32
				Too acid	0.01
226: Flofeather, very rarely flooded----	55	Somewhat limited Slow water movement	0.56	Very limited Filtering capacity	0.99
Shawmount, stony surface-----	30	Very limited Slow water movement	1.00	Very limited Filtering capacity	0.99
		Stone content	0.74	Too acid	0.07
		Cobble content	0.55		
227: Piercepark, loam----	85	Very limited Slow water movement	1.00	Not limited	
228: Piercepark, loam----	85	Very limited Slow water movement	1.00	Somewhat limited Too steep for surface application	0.68
		Slope	0.50		
229: Piercepark, coarse sandy loam-----	85	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
230: Hann-----	60	Very limited Slow water movement	1.00	Very limited Too steep for surface application	1.00
		Slope	1.00	Slow water movement	0.98
				Too steep for sprinkler irrigation	0.22

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
230: Doubledia, silty clay loam-----	15	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Slow water movement Too steep for surface application Depth to bedrock Too steep for sprinkler irrigation	1.00 1.00 0.99 0.22
232: Jasseek-----	85	Very limited Slow water movement	1.00	Somewhat limited Slow water movement	0.98
233: Jasseek-----	85	Very limited Slow water movement Slope	1.00 0.12	Somewhat limited Slow water movement Too steep for surface application	0.98 0.32
238: Adaboi-----	85	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
240: Collister-----	65	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Not limited	
Flofeather-----	25	Somewhat limited Slow water movement	0.56	Not limited	
300: Shawmount, stony surface-----	75	Very limited Slope Slow water movement Stone content Cobble content	1.00 1.00 0.74 0.55	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.07

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
301: Breadloaf-----	55	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	0.78
Doubledia, silty clay loam-----	25	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.99
		Slope	0.50	Too steep for surface application	0.68
302: Breadloaf-----	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Slow water movement	1.00
				Depth to bedrock	1.00
Doubledia, silty clay loam-----	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Slow water movement	1.00
				Depth to bedrock	0.99
Hann-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.98

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
303: Doubledia, silty clay loam-----	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
Hann-----	25	Depth to bedrock	1.00	Slow water movement	1.00
		Very limited		Depth to bedrock	0.99
		Slope	1.00	Very limited	
Breadloaf-----	20	Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Very limited		Slow water movement	0.98
304: Breadloaf-----	30	Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Slow water movement	1.00
Doubledia, silty clay loam-----	30	Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
Doubledia, silty clay loam-----	30	Slope	1.00	Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
Doubledia, silty clay loam-----	30	Slope	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	0.99
		Depth to bedrock	1.00	Very limited	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
304: Hullsgulch, loam----	30	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	1.00
305: Siphonlake, south slope-----	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Filtering capacity	0.99
				Depth to bedrock	0.05
Solarview-----	25	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
306: Van Dusen-----	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.01
Siphonlake-----	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Filtering capacity	0.99
				Depth to bedrock	0.71

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
307: Adaboi-----	65	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Slope	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	0.78
Meclo-----	20	Very limited		Very limited	
		Slow water movement	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slope	1.00	Slow water movement	0.98
				Too steep for sprinkler irrigation	0.78
				Too acid	0.07
308: Breadloaf-----	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Slow water movement	1.00
				Depth to bedrock	1.00
Crawley, silt loam--	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
				Too acid	0.01
Doubledia, clay loam	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Slow water movement	1.00
				Depth to bedrock	0.08

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
309: Hullsgulch, sandy loam-----	65	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
Solarview-----	25	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
311: Meclo-----	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
				Slow water movement	0.98
				Too acid	0.07
Crawley, silt loam--	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
				Too acid	0.01
Adaboi-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	1.00

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
328: Gacey, extremely stony surface-----	75	Very limited Slow water movement Depth to cemented pan Stone content Slope Cobble content	1.00 1.00 0.69 0.12 0.09	Very limited Depth to cemented pan Large stones on the surface Slow water movement Too steep for surface application	1.00 0.99 0.98 0.32
329: Ayette-----	55	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement Depth to bedrock	1.00 1.00 0.98 0.94
Duco, stony loam, very stony surface	25	Very limited Slope Slow water movement Depth to bedrock Stone content Cobble content	1.00 1.00 1.00 1.00 0.67	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Large stones on the surface Slow water movement	1.00 1.00 1.00 0.50 0.44
330: Breadloaf-----	35	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Slow water movement Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
330: Ayette, moist-----	30	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement Depth to bedrock	1.00 1.00 1.00 0.98 0.08
Immig, rubbly surface-----	20	Very limited Slow water movement Depth to bedrock Cobble content Slope Stone content	1.00 1.00 1.00 1.00 0.50	Very limited Large stones on the surface Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Cobble content	1.00 1.00 1.00 1.00 1.00 0.99
331: Ayette, moist-----	50	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement Depth to bedrock	1.00 1.00 1.00 0.98 0.08
Yad-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Slow water movement Too steep for sprinkler irrigation	1.00 1.00 1.00
332: Hann-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.98

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
332: Ayette, moist-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
Picketpin-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
				Too steep for sprinkler irrigation	1.00
333: Ayette-----	50	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
Crawley, loam-----	15	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface application	
Hullsgulch, loam----	15	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
				Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
335: Gimmi, very stony surface-----	30	Very limited		Very limited	
		Slow water movement	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.98
				Large stones on the surface	0.50
Ayette, moist-----	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Slow water movement	0.98
				Depth to bedrock	0.08
Doubledia, silty clay loam-----	25	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	0.99
400: Ralsen-----	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Flooding	0.60
		Flooding	0.60		
Foxlane-----	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Filtering capacity	1.00
		Slow water movement	0.56	Too acid	0.99
		Cobble content	0.01		

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
400: Pay-----	20	Very limited Depth to saturated zone Flooding	1.00 0.60	Very limited Filtering capacity Depth to saturated zone Flooding Too acid	1.00 1.00 0.60 0.07
401: Staircase-----	85	Very limited Depth to saturated zone Slow water movement	1.00 0.56	Very limited Filtering capacity Too acid	0.99 0.21
402: Crossbow-----	60	Very limited Depth to saturated zone Flooding Slow water movement	1.00 0.60 0.56	Very limited Filtering capacity Depth to saturated zone Flooding Too acid	1.00 0.98 0.60 0.14
Foxlane-----	20	Very limited Depth to saturated zone Slow water movement Cobble content	1.00 0.56 0.01	Very limited Filtering capacity Too acid	1.00 0.99
403: Ralsen-----	40	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
Pay-----	25	Very limited Depth to saturated zone Flooding	1.00 0.60	Very limited Filtering capacity Depth to saturated zone Flooding Too acid	1.00 1.00 0.60 0.07
Crossbow-----	20	Very limited Depth to saturated zone Flooding Slow water movement	1.00 0.60 0.56	Very limited Filtering capacity Depth to saturated zone Flooding Too acid	1.00 0.98 0.60 0.14

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
404: Riverpoint-----	55	Very limited Slow water movement Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Slow water movement Too acid	1.00
			1.00		1.00
					0.99
					0.44
					0.21
Hellake-----	25	Very limited Slow water movement Slope	1.00	Somewhat limited Slow water movement Too steep for surface application Too acid	0.44
			0.12		0.32
					0.03
405: Hellake-----	65	Very limited Slow water movement	1.00	Somewhat limited Slow water movement Too acid	0.44
					0.03
Staircase-----	15	Very limited Depth to saturated zone Slow water movement	1.00	Very limited Filtering capacity Too acid	0.99
			0.56		0.21
406: Hellake-----	75	Very limited Slow water movement Slope	1.00	Somewhat limited Slow water movement Too steep for surface application Too acid	0.44
			0.12		0.32
					0.03
407: Hellake-----	75	Very limited Slope Slow water movement	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement Too acid	1.00
			1.00		1.00
					0.44
					0.03

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
408: Stardust-----	75	Very limited Slow water movement	1.00	Very limited Filtering capacity Too acid	0.99 0.99
409: Stardust-----	75	Very limited Slow water movement Slope	1.00 0.12	Very limited Filtering capacity Too acid Too steep for surface application	0.99 0.99 0.32
410: Stardust-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Riverpoint, very stony surface-----	20	Very limited Slope Slow water movement Stone content Cobble content	1.00 1.00 1.00 0.10	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Large stones on the surface	1.00 1.00 1.00 0.99 0.99 0.50
411: Huston, very stony surface-----	45	Very limited Slope Slow water movement Stone content Cobble content	1.00 0.56 0.16 0.01	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
411: Zeb, gravelly sandy loam-----	35	Very limited Slope Slow water movement	1.00 0.56	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
412: Huston, very stony surface-----	50	Very limited Slope Slow water movement Stone content Cobble content	1.00 0.56 0.16 0.01	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Stardust-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
413: Cloudyway-----	75	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Filtering capacity Too acid Too steep for sprinkler irrigation	1.00 0.99 0.99 0.78

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
414: Hellake-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement Too acid	1.00 1.00 0.44 0.03
Middlefork-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
415: Middlefork-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
Pinney-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
416: Pinney, moist-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
Middlefork, moist---	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
Zeb, gravelly sandy loam-----	20	Very limited Slope Slow water movement	1.00 0.56	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
417: Middlefork-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
417: Zeb, fine gravelly sandy loam-----	20	Very limited Slope Slow water movement	1.00 0.56	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
418: Middlefork-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
Zeb, fine gravelly sandy loam-----	25	Very limited Slope Slow water movement	1.00 0.56	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
419: Zeb, fine gravelly sandy loam-----	35	Very limited Slope Slow water movement	1.00 0.56	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
420: Pioneervil-----	40	Very limited Depth to saturated zone Slow water movement	1.00 0.56	Very limited Filtering capacity Too acid	0.99 0.99
Grimescreek-----	35	Very limited Depth to saturated zone Flooding Slow water movement	1.00 0.60 0.56	Somewhat limited Depth to saturated zone Flooding	0.98 0.60
421: Dumps, dredge tailings-----	50	Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Very limited Depth to saturated zone Cobble content Stone content	1.00 1.00 0.92	Very limited Filtering capacity Too acid Depth to saturated zone	1.00 0.99 0.18
422: Lithic Xerorthents, very stony surface	30	Very limited Depth to bedrock Cobble content Stone content Slope	1.00 1.00 0.31 0.12	Very limited Depth to bedrock Filtering capacity Too acid Too steep for surface application	1.00 0.99 0.99 0.32
Dumps, placer tailings-----	25	Not rated		Not rated	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
422: Dystric Xeropsamments, very stony surface-----	20	Very limited Depth to bedrock Slope	1.00 0.12	Very limited Depth to bedrock Filtering capacity Too acid Too steep for surface application	1.00 0.99 0.99 0.32
423: Dystric Xeropsamments, very stony surface-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Ultic Haploxeraalfs--	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
Lithic Xerorthents--	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Filtering capacity Too acid Too steep for sprinkler irrigation	1.00 1.00 0.99 0.99 0.78

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
424: Middlefork-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
Charters, coarse sandy loam-----	35	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
425: Middlefork-----	55	Very limited Slow water movement Slope	1.00 0.12	Very limited Filtering capacity Too acid Slow water movement Too steep for surface application	0.99 0.99 0.44 0.32
Brassey-----	25	Very limited Slow water movement Slope	1.00 1.00	Very limited Too steep for surface application Filtering capacity Too acid Too steep for sprinkler irrigation	1.00 0.99 0.99 0.22

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
426: Middlefork, moist---	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
427: Middlefork, moist---	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
428: Zeb, gravelly sandy loam-----	45	Very limited Slope Slow water movement	1.00 0.56	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
Republic-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
429: Huston, very stony surface-----	85	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water	0.56	surface	
		movement		application	
		Stone content	0.16	Too steep for	1.00
Cobble content	0.01	sprinkler			
				irrigation	
				Filtering	0.99
				capacity	
				Too acid	0.99
503: Cartwright, dry-----	85	Very limited		Somewhat limited	
		Slow water	1.00	Too steep for	0.32
		movement		surface	
Slope	0.12	application			
		Too acid	0.01		
504: Cartwright, dry-----	85	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water	1.00	surface	
		movement		application	1.00
				Too steep for	1.00
				sprinkler	
				irrigation	
				Too acid	0.01
505: Brownlee-----	85	Very limited		Very limited	
		Slow water	1.00	Too steep for	1.00
		movement		surface	
		Depth to bedrock	1.00	application	
		Slope	1.00	Depth to bedrock	0.84
				Slow water	0.44
				movement	
				Too steep for	0.22
				sprinkler	
				irrigation	
				Too acid	0.14
506: Brownlee-----	45	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water	1.00	surface	
		movement		application	
		Depth to bedrock	1.00	Too steep for	1.00
				sprinkler	
				irrigation	
				Depth to bedrock	0.84
				Slow water	0.44
				movement	
				Too acid	0.14

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
506: Robbscreek-----	20	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Too steep for surface application Depth to bedrock Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.07
Whisk-----	15	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.21
507: Shoebend-----	35	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Slow water movement	1.00 1.00 1.00 0.44
Dobson-----	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.14
Jerusalem-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.44

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
509: Arrowrock-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity	1.00 1.00 1.00 0.99
Borid-----	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Rock outcrop-----	25	Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.21
Roney, moist-----	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.67
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Depth to bedrock Cobble content	1.00 1.00 0.60	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
513: Cartwright-----	25	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.01
Robbscreek, moist---	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.42
516: Shimo, extremely stony surface-----	35	Very limited Slope Depth to bedrock Cobble content	1.00 1.00 0.84	Very limited Large stones on the surface Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00 0.99
Olaton, south slope	30	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.21
Schiller, south slope-----	25	Very limited Slope Slow water movement Cobble content	1.00 0.56 0.45	Very limited Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
525: Robbscreek-----	35	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.07
Dobson-----	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.14
Brownlee-----	20	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Slow water movement Too acid	1.00 1.00 1.00 0.84 0.44 0.14
526: Cartwright-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.01
Brownlee, moist-----	30	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Slow water movement Too acid	1.00 1.00 0.77 0.44 0.07

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
526: Robbscreek, moist---	20	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.42
527: Dobson-----	50	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00 0.14
Roney, dry-----	35	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.67
528: Roney, dry-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.67
Dobson-----	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00 0.14

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
528: Olaton, south slope	15	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.21
529: Roney-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 0.67
Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.03
Olaton, south slope	15	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.21
532: Schiller, north slope-----	55	Very limited Slope Slow water movement Cobble content	1.00 0.56 0.01	Very limited Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
532: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Depth to bedrock Cobble content	1.00 1.00 0.60	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity	1.00 1.00 1.00 0.99
533: Olaton, north slope, dry-----	60	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.21
Roney, moist-----	20	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 0.67
534: Shimo, fine gravelly loamy sand-----	50	Very limited Slope Depth to bedrock Cobble content	1.00 1.00 0.01	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity	1.00 1.00 1.00 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
534: Kisky, fine gravelly sandy loam-----	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
			Too acid	0.03	
Schiller-----	15	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56		
538: Borid-----	65	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
Shimo, fine gravelly loamy sand-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	0.01	Depth to bedrock	1.00
				Filtering capacity	0.99
541: Roney-----	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Too acid	0.67

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
541: Kisky, fine gravelly sandy loam-----	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
			Too acid	0.03	
544: Arrowrock-----	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
Borid-----	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
Painter-----	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
			Filtering capacity	0.99	
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	0.60	Depth to bedrock	1.00
				Filtering capacity	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
551: Kisky, fine gravelly loamy sand-----	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.03
555: Brownlee-----	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.84
				Slow water movement	0.44
				Too acid	0.14
Schiller-----	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56		
556: Kisky, fine gravelly sandy loam-----	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.03

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
556: Shimo, fine gravelly loamy sand-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	0.01	Depth to bedrock	1.00
				Filtering capacity	0.99
Brownlee-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.84
				Slow water movement	0.44
				Too acid	0.14
558: Kisky, fine gravelly sandy loam-----	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.03
Whisk-----	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
Roney, dry-----	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Depth to bedrock	1.00
				Too acid	0.67

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
560: Robbscreek, moist---	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
				Too acid	0.42
Hellake-----	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
				Too acid	0.03
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	0.60	Depth to bedrock	1.00
				Filtering capacity	0.99
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
				Filtering capacity	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
561: Kisky, fine gravelly loamy sand-----	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
Olaton, north slope, moist-----	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
562: Kisky, fine gravelly sandy loam-----	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
Shimo, fine gravelly sandy loam-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	1.00	Depth to bedrock	1.00
Roney-----	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Depth to bedrock	1.00
				Too acid	0.67

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
600: McDesh-----	50	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.98
Immig, rubbly surface-----	25	Very limited Slow water movement Depth to bedrock Cobble content Slope Stone content	1.00 1.00 1.00 1.00 0.50	Very limited Large stones on the surface Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Cobble content	1.00 1.00 1.00 1.00 0.99
Gwin, very stony loam, extremely stony surface-----	15	Very limited Slow water movement Depth to bedrock Cobble content Slope Stone content	1.00 1.00 1.00 1.00 0.96	Very limited Depth to bedrock Large stones on the surface Too steep for surface application Too steep for sprinkler irrigation Cobble content	1.00 1.00 1.00 1.00 0.50
601: Hann-----	45	Very limited Slow water movement Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.98

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater		
		Rating class and limiting features	Value	Rating class and limiting features	Value	
601: Gwin, very stony loam, extremely stony surface-----	25	Very limited		Very limited		
		Slow water movement	1.00	Depth to bedrock	1.00	
		Depth to bedrock	1.00	Large stones on the surface	1.00	
		Cobble content	1.00	Too steep for surface application	1.00	
		Slope	1.00	Too steep for sprinkler irrigation	1.00	
	Shafer-----	20	Stone content	0.96	Cobble content	0.50
			Very limited		Very limited	
			Slow water movement	1.00	Depth to bedrock	1.00
			Depth to bedrock	1.00	Slow water movement	1.00
			Slope	1.00	Too steep for surface application	1.00
602: Hillcreek-----	35	Too steep for sprinkler irrigation		Too steep for sprinkler irrigation	1.00	
		Very limited		Very limited		
		Slope	1.00	Too steep for surface application	1.00	
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00	
		Slow water movement		Slow water movement	0.44	
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited		Very limited		
		Slope	1.00	Too steep for surface application	1.00	
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00	
		Depth to bedrock	1.00	Depth to bedrock	1.00	
		Cobble content	0.94	Large stones on the surface	0.50	
		Stone content	0.01	Slow water movement	0.44	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
602: Hann-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water	1.00	surface	
		movement		application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Slow water	0.98
				movement	
604: Shafer-----	55	Very limited		Very limited	
		Slow water	1.00	Depth to bedrock	1.00
		movement		Slow water	1.00
		Depth to bedrock	1.00	movement	
		Slope	1.00	Too steep for	1.00
				surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
Hann-----	25	Very limited		Very limited	
		Slow water	1.00	Too steep for	1.00
		movement		surface	
		Slope	1.00	application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Slow water	0.98
				movement	
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited		Very limited	
		Slow water	1.00	Depth to bedrock	1.00
		movement		Large stones on	1.00
		Depth to bedrock	1.00	the surface	
		Cobble content	1.00	Too steep for	1.00
		Slope	1.00	surface	
		Stone content	0.96	application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Cobble content	0.50
Flybow-----	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
		Slope	1.00	application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Too acid	0.03

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
606: Hillcreek-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.44
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited Slope Slow water movement Depth to bedrock Cobble content Stone content	1.00 1.00 1.00 0.94 0.01	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Large stones on the surface Slow water movement	1.00 1.00 1.00 0.50 0.44
607: Duco, stony loam, very stony surface	35	Very limited Slope Slow water movement Depth to bedrock Stone content Cobble content	1.00 1.00 1.00 1.00 0.67	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Large stones on the surface Slow water movement	1.00 1.00 1.00 0.50 0.44
Immig, very stony surface-----	35	Very limited Slope Slow water movement Depth to bedrock Cobble content	1.00 1.00 1.00 0.99	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Cobble content Slow water movement	1.00 1.00 1.00 1.00 0.98
Rubble land-----	15	Not rated		Not rated	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
608: Duco, very gravelly loam, stony surface	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
Hovelton, gravelly ashy loam-----	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Cobble content	1.00	Slow water movement	0.44
McDesh, south slope	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
				Slow water movement	0.98
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Cobble content	1.00	Large stones on the surface	0.50
		Stone content	1.00	Slow water movement	0.44

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
610: Duco, stony loam, very stony surface	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Stone content	1.00	Large stones on the surface	0.50
		Cobble content	0.67	Slow water movement	0.44
McDesh, south slope	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
612: Hann-----	60	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Slow water movement	0.98
Hillcreek, dry-----	25	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.68
		Slope	0.50	Slow water movement	0.44
613: Duco, stony loam, very stony surface	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Stone content	1.00	Large stones on the surface	0.50
		Cobble content	0.67	Slow water movement	0.44

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
613: Searles, very stony surface-----	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Stone content	0.07	Cobble content	0.50
				Slow water movement	0.44
McDesh, south slope	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
				Slow water movement	0.98
618: McDesh, south slope	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.98
Duco, very gravelly loam, stony surface	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
Shafer-----	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Slow water movement	1.00
				Too steep for sprinkler irrigation	1.00

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
619: McDesh-----	35	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.98
Gwin, gravelly loam, stony surface-----	25	Very limited Slope Slow water movement Depth to bedrock Cobble content	1.00 1.00 1.00 0.11	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.44
Shafer-----	20	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Depth to bedrock Too steep for surface application Slow water movement Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
620: Immig, very stony surface-----	35	Very limited Slope Slow water movement Depth to bedrock Cobble content	1.00 1.00 1.00 0.99	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Cobble content Slow water movement	1.00 1.00 1.00 1.00 1.00 0.98
McDesh, south slope	30	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Slow water movement	1.00 1.00 1.00 0.98

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Stone content	1.00	Large stones on the surface	0.50
		Cobble content	0.67	Slow water movement	0.44
621: McDaniel-----	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
Hovelton, gravelly ashy loam-----	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Cobble content	1.00	Slow water movement	0.44
622: Hovelton, gravelly ashy loam-----	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Cobble content	1.00	Slow water movement	0.44

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
622: Gwin, very stony loam, extremely stony surface-----	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	1.00	Large stones on the surface	1.00
		Stone content	0.96	Cobble content	0.50
630: Gwin, very gravelly loam-----	45	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
Flybow-----	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.03
Rock outcrop-----	20	Not rated		Not rated	
631: Flybow-----	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
Rock outcrop-----	30	Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited Slow water movement Depth to bedrock Cobble content Slope Stone content	1.00 1.00 1.00 1.00 1.00 0.96	Very limited Depth to bedrock Large stones on the surface Too steep for surface application Too steep for sprinkler irrigation Cobble content	1.00 1.00 1.00 1.00 1.00 0.50
McDesh, very stony loam, very stony surface-----	25	Very limited Slow water movement Depth to bedrock Slope Stone content	1.00 1.00 1.00 1.00 0.11	Very limited Depth to bedrock Large stones on the surface Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 1.00 1.00 0.98
Rock outcrop-----	25	Not rated		Not rated	
635: Shafer, very stony surface-----	40	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Slow water movement Depth to bedrock Large stones on the surface Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00 1.00
Karney-----	25	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Too steep for surface application Depth to bedrock Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 1.00 0.98

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
635: Yad-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
				Slow water movement	1.00
636: Hann, stony surface	30	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
				Too steep for sprinkler irrigation	1.00
McDesh, very stony loam, extremely bouldery surface---	30	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
Robbscreek, moist---	25	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface application	
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
638: Yad-----	35	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Slope	1.00	Too steep for	1.00
				surface application	
				Too steep for sprinkler irrigation	0.22

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
638: Cranegulch-----	25	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Slow water movement	0.98
				Too steep for sprinkler irrigation	0.78
Duco, stony loam, very stony surface	25	Very limited		Very limited	
		Slow water movement	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Stone content	1.00	Large stones on the surface	0.50
		Slope	1.00	Slow water movement	0.44
		Cobble content	0.67	Too steep for sprinkler irrigation	0.22
640: Timberbutte-----	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	0.01	Filtering capacity	0.99
				Too acid	0.99
641: Aradaran-----	45	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Slow water movement	0.98
				Too steep for sprinkler irrigation	0.78
				Too acid	0.07
Yad-----	40	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Slope	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	0.78

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
650: Longs-----	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Filtering capacity	0.99
		Cobble content	0.05	Too acid	0.99
				Depth to bedrock	0.54
Highvalley-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Hoff-----	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	0.68	Slow water movement	0.44
651: Hess-----	35	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slope	1.00	Filtering capacity	0.99
				Too acid	0.99
				Depth to bedrock	0.88

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
651: Lidos-----	30	Very limited Slow water movement Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00
			1.00		1.00
					0.99
					0.98
Cleymor-----	25	Very limited Slow water movement Slope	1.00	Very limited Slow water movement Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00
			1.00		1.00
					0.99
					0.99
652: Hess-----	40	Very limited Slope Slow water movement Depth to bedrock	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Depth to bedrock	1.00
			1.00		1.00
			1.00		0.99
					0.88
Lidos-----	30	Very limited Slope Slow water movement	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00
			1.00		1.00
					0.99
					0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
652: Klicker-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
				Filtering capacity	0.99
			Too acid	0.99	
653: Lidos-----	45	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
			Slow water movement	0.98	
Klicker-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
				Filtering capacity	0.99
			Too acid	0.99	
Hess-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
			Depth to bedrock	0.88	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
654: Shilling-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Highvalley-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Hoff-----	20	Very limited Slope Slow water movement Depth to bedrock Cobble content	1.00 1.00 1.00 0.68	Very limited	
				Depth to bedrock	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
655: Shilling, moist----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Highvalley, moist---	35	Very limited Slope Slow water movement	1.00 1.00	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
656: Shilling, moist-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity Too acid	0.99 0.99
Highvalley, moist---	40	Very limited Slope Slow water movement	1.00 1.00	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity Too acid	0.99 0.99
657: Pumpkin, stony surface-----	95	Very limited Slope Slow water movement Stone content	1.00 1.00 0.35	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity Too acid	0.99 0.99
				Large stones on the surface	0.50
658: Cleymor-----	50	Very limited Slow water movement Slope	1.00 1.00	Very limited	
				Slow water movement	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity Too acid	0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
658: Pumpkin, stony surface-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	1.00	surface application	
		Stone content	0.35	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Large stones on the surface	0.50
659: Hoff, south slope---	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
660: Longs-----	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Filtering capacity	0.99
		Cobble content	0.05	Too acid	0.99
				Depth to bedrock	0.54
Highvalley-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
661: Awley-----	50	Very limited Slope Slow water movement	1.00 0.56	Very limited Low adsorption Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Bo-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
662: Awley-----	65	Very limited Slope Slow water movement	1.00 0.56	Very limited Low adsorption Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Bo-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
663: Cleymor-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Slow water movement Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 1.00 0.99 0.99
Hoff-----	20	Very limited Slope Slow water movement Depth to bedrock Cobble content	1.00 1.00 1.00 0.68	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.44
666: Pachic Argixerolls, very stony surface	40	Very limited Slope Slow water movement Stone content Cobble content	1.00 1.00 0.59 0.11	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 1.00 0.99 0.99 0.44
Rubble land-----	30	Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Very limited Slope Cobble content Stone content Slow water movement	1.00 1.00 0.90 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Large stones on the surface	1.00 1.00 1.00 0.99 0.50

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
700: Drybuck-----	50	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Depth to bedrock	1.00 1.00 1.00 0.99 0.99 0.18
Whisk, moist-----	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.67
701: Drybuck-----	55	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Depth to bedrock	1.00 1.00 1.00 0.99 0.99 0.18
Whisk, moist-----	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.67
702: Deerrun-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
702: Kisky, fine gravelly sandy loam, moist--	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Drybuck, dry-----	15	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Filtering capacity	0.99
				Too acid	0.99
				Depth to bedrock	0.02
704: Drybuck-----	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Filtering capacity	0.99
				Too acid	0.99
				Depth to bedrock	0.18
Northfork, fine gravelly sandy loam	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
704: Whisk, moist-----	20	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.67
705: Northfork, sandy loam-----	60	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Shirts, sandy loam, dry-----	20	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
706: Northfork, fine gravelly sandy loam	40	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
706: Shirts, coarse sandy loam-----	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Depth to bedrock	1.00
Zimmer-----	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
707: Packerjohn, ashy coarse sandy loam--	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
Shirts, coarse sandy loam-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Depth to bedrock	1.00
Zimmer-----	15	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Too acid	0.21

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
708: Zimmer-----	35	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.21
Northfork, fine gravelly sandy loam	25	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Rock outcrop-----	25	Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 1.00 0.99 0.99
Charters, sandy loam	30	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
710: Charters, fine gravelly sandy loam	35	Very limited Slope Slow water movement	1.00 0.56	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Northfork, fine gravelly sandy loam	35	Very limited Slope Slow water movement	1.00 0.56	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Shirts, coarse sandy loam-----	15	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Depth to bedrock	1.00
				Filtering capacity	0.99
				Too acid	0.99
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Slope Slow water movement	1.00 0.56	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
711: Shirts, sandy loam, dry-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water movement	0.56	application	1.00
Zimmer-----	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for	1.00
		Slow water movement	0.56	surface	
712: Charters, fine gravelly sandy loam	40	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	0.56	surface	
				application	1.00
Shirts, coarse sandy loam-----	35	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water movement	0.56	application	1.00
Zimmer-----	15	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for	1.00
		Slow water movement	0.56	surface	
				application	1.00
				Too steep for	1.00
				sprinkler	
				irrigation	0.21
				Too acid	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
714: Shirts, sandy loam, south slope-----	40	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water movement	0.56	application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Depth to bedrock	1.00
				Filtering	0.99
				capacity	
				Too acid	0.99
Eagleson, fine gravelly sandy loam	35	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water movement	0.56	application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Depth to bedrock	1.00
				Filtering	0.99
				capacity	
				Too acid	0.99
Charters, sandy loam	15	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water movement	0.56	surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Filtering	0.99
				capacity	
				Too acid	0.99
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Cobble content	1.00	application	
Slow water movement	0.56			Too steep for	1.00
				sprinkler	
				irrigation	
				Depth to bedrock	1.00
				Filtering	0.99
				capacity	
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
715: Kosh-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.42
716: Zan-----	45	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
Belsh-----	25	Very limited Slope Cobble content Stone content	1.00 0.46 0.01	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Montchief-----	25	Very limited Slope Depth to bedrock Cobble content	1.00 1.00 0.63	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
718: Charters, fine gravelly sandy loam	35	Very limited Slope Slow water movement	1.00 0.56	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
Crumley-----	30	Very limited Slope Slow water movement	1.00 0.56	Too acid	0.99
				Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
Eagleson, sandy loam	20	Very limited Slope Depth to bedrock Slow water movement Cobble content	1.00 1.00 0.56 0.10	Filtering capacity	0.99
				Too acid	0.99
				Very limited	
				Too steep for surface application	1.00
720: Drybuck, dry-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Depth to bedrock	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Depth to bedrock	0.02
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
720: Deerrun-----	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Kisky, fine gravelly sandy loam, moist--	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
721: Shirts, fine gravelly sandy loam	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Kosh-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.42

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
721: Charters, fine gravelly sandy loam, dry-----	15	Very limited Slope Slow water movement	1.00 0.56	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
726: Garval-----	50	Very limited Slope Depth to bedrock	1.00 1.00	Very limited	
				Filtering capacity	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
Kisky, fine gravelly loamy coarse sand--	25	Very limited Slope Depth to bedrock	1.00 1.00	Depth to bedrock	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
730: Hellake-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited	
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Slow water movement	0.44
				Too acid	0.03

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
730: Stardust-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
731: Shirts, sandy loam, dry-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Charters, fine gravelly sandy loam, dry-----	25	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Zimmer-----	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.21

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
733: Shirts, fine gravelly sandy loam	50	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water movement	0.56	application	
				Depth to bedrock	1.00
				Too steep for	1.00
				sprinkler irrigation	
				Filtering capacity	0.99
				Too acid	0.99
Kosh-----	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for	1.00
				surface	
				application	
				Too steep for	1.00
				sprinkler irrigation	
				Filtering capacity	0.99
				Too acid	0.42
734: Shirts, sandy loam, dry-----	45	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water movement	0.56	application	
				Too steep for	1.00
				sprinkler irrigation	
				Depth to bedrock	1.00
				Filtering capacity	0.99
				Too acid	0.99
Kosh-----	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for	1.00
				surface	
				application	
				Too steep for	1.00
				sprinkler irrigation	
				Filtering capacity	0.99
				Too acid	0.42

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
735: Shirts, coarse sandy loam-----	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Depth to bedrock	1.00
Zimmer-----	25	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
Charters, fine gravelly sandy loam	15	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
738: Tripod-----	35	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Cobble content	0.14	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
Packerjohn, ashy coarse sandy loam--	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
738: Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Slope Depth to bedrock Stone content	1.00 1.00 0.84	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.99
739: Shirts, sandy loam, moist-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Zimmer-----	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.21
Packerjohn, ashy coarse sandy loam--	20	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
740: Charters, sandy loam	40	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Eagleson, fine gravelly sandy loam	35	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
741: Zan-----	85	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
742: Crumley-----	65	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
742: Eagleson, sandy loam	20	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water	0.56	application	
		movement		Too steep for	1.00
		Cobble content	0.25	sprinkler	
				irrigation	
				Depth to bedrock	1.00
				Filtering	0.99
				capacity	
				Too acid	0.99
743: Packerjohn, ashy coarse sandy loam--	50	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
				surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Filtering	0.99
				capacity	
				Too acid	0.99
Shirts, sandy loam, moist-----	35	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water	0.56	application	
		movement		Depth to bedrock	1.00
				Too steep for	1.00
				sprinkler	
				irrigation	
				Filtering	0.99
				capacity	
				Too acid	0.99
744: Packerjohn, ashy sandy loam, cool---	60	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
				surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Filtering	0.99
				capacity	
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
744: Shirts, sandy loam, moist-----	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
Tripod, cool-----	15	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Stone content	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Too acid	0.99
745: Tripod, moist-----	50	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Too acid	0.99
Packerjohn, ashy sandy loam-----	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
746: Packerjohn, ashy sandy loam-----	90	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
747: Pinney, moist-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
Charters, fine gravelly sandy loam	25	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Shirts, sandy loam, dry-----	15	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
748: Belsh, moist-----	45	Very limited Slope Cobble content Stone content	1.00 0.19 0.07	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Zan, moist-----	40	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
749: Quartzburg-----	50	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Charters, sandy loam	25	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
750: Garval-----	50	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
750: Kisky, fine gravelly loamy coarse sand--	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.03
Rock outcrop-----	20	Not rated		Not rated	
751: Belsh, moist-----	50	Very limited Slope Cobble content Stone content	1.00 0.19 0.07	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Zan, moist-----	40	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
752: Josie-----	70	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.31

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
752: Zimmer, fine gravelly sandy loam	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
753: Tripod, cool-----	45	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Stone content	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Too acid	0.99
Packerjohn, ashy sandy loam, cool---	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Shirts, sandy loam, moist-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.56	Depth to bedrock	1.00
				Filtering capacity	0.99
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
754: Packerjohn, ashy sandy loam-----	55	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Shirts, sandy loam, moist-----	20	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Depth to bedrock Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
755: Zimmer-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.21
Quartzburg-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Rock outcrop-----	20	Not rated		Not rated	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Slope Depth to bedrock Stone content	1.00 1.00 0.84	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.99
Tripod-----	25	Very limited Slope Cobble content	1.00 0.14	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.99
Kosh, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.42
758: Eagleson, sandy loam	40	Very limited Slope Depth to bedrock Slow water movement Cobble content	1.00 1.00 0.56 0.25	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
758: Kosh, moist-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.42
Charters, fine gravelly sandy loam	20	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
759: Charters, sandy loam	30	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Shirts, sandy loam, south slope-----	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
759: Kosh, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.42
761: Charters, fine gravelly sandy loam	45	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Middlefork, moist---	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Slow water movement	1.00 1.00 0.99 0.99 0.44
762: Drybuck, dry-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Depth to bedrock	1.00 1.00 1.00 0.99 0.99 0.02

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
762: Hellake-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Slow water	1.00	surface	
		movement		application	
				Too steep for	1.00
			sprinkler		
			irrigation		
			Slow water	0.44	
			movement		
			Too acid	0.03	
Deerrun-----	20	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water	0.56	application	
		movement		Depth to bedrock	1.00
				Too steep for	1.00
			sprinkler		
			irrigation		
			Filtering	0.99	
			capacity		
			Too acid	0.99	
763: Eagleson, fine gravelly sandy loam	40	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water	0.56	application	
		movement		Too steep for	1.00
				sprinkler	
			irrigation		
			Depth to bedrock	1.00	
			Filtering	0.99	
			capacity		
			Too acid	0.99	
Kosh-----	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for	1.00
				surface	
				application	
			Too steep for	1.00	
			sprinkler		
			irrigation		
			Filtering	0.99	
			capacity		
			Too acid	0.42	
Rock outcrop-----	15	Not rated		Not rated	

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
765: Backswitch, coarse sandy loam-----	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Zimmer, warm-----	20	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
Rock outcrop-----	15	Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
Charters, coarse sandy loam-----	15	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.56	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
766: Zimmer, dry-----	15	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.21
767: Shirts, sandy loam, dry-----	45	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.99
Kosh-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.42
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
768: Shirts, sandy loam, south slope-----	35	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water movement	0.56	application	
Kosh, moist-----	25			Too steep for	1.00
				sprinkler	
				irrigation	
				Depth to bedrock	1.00
				Filtering	0.99
				capacity	
Eagleson, fine gravelly sandy loam	15	Very limited		Very limited	
		Slope	1.00	Too steep for	1.00
		Depth to bedrock	1.00	surface	
		Slow water movement	0.56	application	
770: Shirts, sandy loam, dry-----	50			Too steep for	1.00
				sprinkler	
				irrigation	
				Depth to bedrock	1.00
				Filtering	0.99
				capacity	
		Too acid	0.99		

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
770: Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Slow water movement	1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Kosh, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.42
771: Backswitch, sandy loam-----	55	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid Depth to bedrock	1.00 1.00 1.00 0.99 0.99 0.99
Shirts, sandy loam, dry-----	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.56	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Filtering capacity Too acid	1.00 1.00 1.00 1.00 0.99 0.99

Table 9.--Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Slope Depth to bedrock Cobble content	1.00 1.00 0.99	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Too acid	1.00 1.00 1.00 1.00 0.99
Packerjohn, ashy sandy loam, dry----	25	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
Kosh, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 1.00 0.99 0.42
900: Pits, gravel-----	75	Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated	
999: Water-----	100	Not rated		Not rated	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities

(Composition of forest species based on percent canopy cover. Composition of range species based on percent by weight. Absence of an entry indicates that data are not available.)

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
220: Oxyaquic Xerofluvents---	Riparian cottonwood/willow subseries (HCSX)	---	---	Black cottonwood Bluegrass Brome Horsetail Rose Willow		
Cumulic Haploxerolls---	Riparian shrub/bunchgrass subseries (SDGX)	---	---	Basin wildrye Big sagebrush Bluegrass Needlegrass Rabbitbrush Wheatgrass		
221: Bissell-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable Normal Unfavorable	1,200 850 650	Bluebunch wheatgrass Basin big sagebrush Basin wildrye Sandberg bluegrass Arrowleaf balsamroot Bottlebrush squirreltail Rubber rabbitbrush		40 20 10 5 5 5 5
222: Bissell-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable Normal Unfavorable	1,200 950 650	Bluebunch wheatgrass Basin big sagebrush Basin wildrye Sandberg bluegrass Arrowleaf balsamroot Bottlebrush squirreltail Rubber rabbitbrush		40 20 10 5 5 5 5
223: Staircase, dry--	LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)	Favorable Normal Unfavorable	1,600 1,200 800	Basin wildrye Basin big sagebrush Sandberg bluegrass Bluebunch wheatgrass Bottlebrush squirreltail Rubber rabbitbrush		50 20 5 5 5 5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
224: Porter-----	LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)	Favorable	1,600	Basin wildrye		50
		Normal	1,200	Basin big sagebrush		20
		Unfavorable	800	Sandberg bluegrass		5
				Bluebunch wheatgrass		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
225: Boise-----	SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)	Favorable	1,000	Bluebunch wheatgrass		30
		Normal	800	Thurber needlegrass		15
		Unfavorable	500	Antelope bitterbrush		15
				Basin big sagebrush		15
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
226: Flofeather, very rarely flooded	LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)	Favorable	1,600	Basin wildrye		50
		Normal	1,200	Basin big sagebrush		20
		Unfavorable	800	Sandberg bluegrass		5
				Bluebunch wheatgrass		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
Shawmount, stony surface-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
227: Piercepark, loam	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
228: Piercepark, loam	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
229: Piercepark, coarse sandy loam-----	SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)	Favorable	1,000	Bluebunch wheatgrass		30
		Normal	800	Thurber needlegrass		15
		Unfavorable	500	Antelope bitterbrush		15
				Basin big sagebrush		15
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
230: Hann-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Doubledia, silty clay loam-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
232: Jasseek-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
233: Jasseek-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
238: Adaboi-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
240: Collister-----	LOAMY BOTTOM 8-14 ARTRT/LECI4 8"-14" (R011XY015ID)	Favorable	1,600	Basin wildrye		50
		Normal	1,200	Basin big sagebrush		20
		Unfavorable	800	Sandberg bluegrass		5
				Bluebunch wheatgrass		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
Flofeather-----	LOAMY BOTTOM 8-14 ARTRT/LECI4 (R011XY015ID)	Favorable	1,600	Basin wildrye		50
		Normal	1,200	Basin big sagebrush		20
		Unfavorable	800	Sandberg bluegrass		5
				Bluebunch wheatgrass		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
300: Shawmount, stony surface-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
301: Breadloaf-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
Doubledia, silty clay loam-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
302: Breadloaf-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
302: Doubledia, silty clay loam-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Hann-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
303: Doubledia, silty clay loam-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Hann-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
303: Breadloaf-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
304: Breadloaf-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
Doubledia, silty clay loam-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Hullsgulch, loam	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
305: Siphonlake, south slope----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
Solarview-----	SAND 8-12 ARTRT/ACHY (R011XY011ID)	Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
		Favorable	950	Antelope bitterbrush		15
		Normal	650	Basin big sagebrush		15
		Unfavorable	450	Bluebunch wheatgrass		15
				Needle and thread		10
				Indian ricegrass		5
		Arrowleaf balsamroot		5		
		Bottlebrush squirreltail		5		
		Rubber rabbitbrush		5		
		Sand dropseed		5		
306: Van Dusen-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
		Antelope bitterbrush		5		
		Arrowleaf balsamroot		5		
		Prairie Junegrass		5		
		Tapertip hawksbeard		5		
Siphonlake-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
		Tapertip hawksbeard		5		

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
307: Adaboi-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
Meclo-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
308: Breadloaf-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
Crawley, silt loam-----	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
308: Doubledia, clay loam-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
309: Hullsgulch, sandy loam----	SOUTH SLOPE SANDY 10-14 ARTRT/PSSP6 (R011XY025ID)	Favorable	1,000	Bluebunch wheatgrass		30
		Normal	800	Thurber needlegrass		15
		Unfavorable	500	Antelope bitterbrush		15
				Basin big sagebrush		15
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
Solarview-----	SAND 8-12 ARTRT/ACHY (R011XY011ID)	Favorable	950	Antelope bitterbrush		15
		Normal	650	Basin big sagebrush		15
		Unfavorable	450	Bluebunch wheatgrass		15
				Needle and thread		10
				Indian ricegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Sand dropseed		5
				311: Meclo-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable
Normal	950	Basin big sagebrush				20
Unfavorable	650	Basin wildrye				10
		Sandberg bluegrass				5
		Arrowleaf balsamroot				5
		Bottlebrush squirreltail				5
		Rubber rabbitbrush				5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
311: Crawley, silt loam-----	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
				Tapertip hawksbeard		5
Adaboi-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
328: Gacey, extremely stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
				Tapertip hawksbeard		5
329: Ayette-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
329: Duco, stony loam, very stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
				Tapertip hawksbeard		5
330: Breadloaf-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
Ayette, moist---	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Immig, rubbly surface-----	STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)	Favorable	1,200	Bluebunch wheatgrass		45
		Normal	1,000	Basin big sagebrush		15
		Unfavorable	600	Sandberg bluegrass		10
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
		Buckwheat		5		

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
331: Ayette, moist---	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Yad-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
332: Hann-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Ayette, moist---	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
332: Picketpin-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
333: Ayyette-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
Crawley, loam---	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
				Tapertip hawksbeard		5
Hullsgulch, loam	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
335: Gimmi, very stony surface--	STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)	Favorable	1,200	Bluebunch wheatgrass		45
		Normal	1,000	Basin big sagebrush		15
		Unfavorable	600	Sandberg bluegrass		10
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition			
		Kind of year	Dry Weight		Forest	Range		
			Lb/acre		Pct	Pct		
335: Ayette, moist---	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25		
		Normal	1,600	Bluebunch wheatgrass		25		
		Unfavorable	1,000	Xeric big sagebrush		15		
				Sandberg bluegrass		5		
				Antelope bitterbrush		5		
				Arrowleaf balsamroot		5		
				Prairie Junegrass		5		
				Tapertip hawksbeard		5		
Doubledia, silty clay loam-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25		
		Normal	1,600	Bluebunch wheatgrass		25		
		Unfavorable	1,000	Xeric big sagebrush		15		
				Sandberg bluegrass		5		
				Antelope bitterbrush		5		
				Arrowleaf balsamroot		5		
				Prairie Junegrass		5		
				Tapertip hawksbeard		5		
400: Ralsen-----	WET MEADOW (R043AY007ID)	Favorable	4,500	Sedge		50		
		Normal	3,600	Rush		10		
		Unfavorable	3,000	Tufted hairgrass		10		
				Willow		10		
				Cinquefoil		5		
				Clover		5		
Foxlane-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry	40			
				Elk sedge	15			
				Arrowleaf balsamroot	5			
				Heartleaf arnica	5			
				Pinegrass	5			
				Ponderosa pine	5			
				Saskatoon serviceberry	5			
Pay-----	WET MEADOW (R043AY007ID)	Favorable	4,500	Sedge		50		
		Normal	3,600	Rush		10		
		Unfavorable	3,000	Tufted hairgrass		10		
				Willow		10		
				Cinquefoil		5		
				Clover		5		

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
401: Staircase-----	Ponderosa pine/Lemmon's needlegrass (CPG124)	---	---	Lemmon's needlegrass Antelope bitterbrush Arrowleaf balsamroot Bluebunch wheatgrass Elk sedge Ponderosa pine	25 5 5 5 5 5	
402: Crossbow-----	SEMIWET MEADOW (R043AY008ID)	Favorable Normal Unfavorable	4,000 2,250 1,600	Mountain brome Slender wheatgrass Lemmon's needlegrass Clover Cinquefoil Sedge Shrubby cinquefoil Tufted hairgrass		25 25 10 10 5 5 5 5
Foxlane-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
403: Ralsen-----	WET MEADOW (R043AY007ID)	Favorable Normal Unfavorable	4,500 3,600 3,000	Sedge Rush Tufted hairgrass Willow Cinquefoil Clover		50 10 10 10 5 5
Pay-----	WET MEADOW (R043AY007ID)	Favorable Normal Unfavorable	4,500 3,600 3,000	Sedge Rush Tufted hairgrass Willow Cinquefoil Clover		50 10 10 10 5 5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
403: Crossbow-----	SEMIWET MEADOW (R043AY008ID)	Favorable	4,000	Mountain brome		25
		Normal	2,250	Slender wheatgrass		25
		Unfavorable	1,600	Lemmon's needlegrass		10
				Clover		10
				Cinquefoil		5
				Sedge		5
				Shrubby cinquefoil		5
				Tufted hairgrass		5
404: Riverpoint-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry	40	
				Elk sedge	15	
				Arrowleaf balsamroot	5	
				Heartleaf arnica	5	
				Pinegrass	5	
				Ponderosa pine	5	
				Saskatoon serviceberry	5	
Hellake-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry	40	
				Elk sedge	15	
				Arrowleaf balsamroot	5	
				Heartleaf arnica	5	
				Pinegrass	5	
				Ponderosa pine	5	
				Saskatoon serviceberry	5	
405: Hellake-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry	40	
				Elk sedge	15	
				Arrowleaf balsamroot	5	
				Heartleaf arnica	5	
				Pinegrass	5	
				Ponderosa pine	5	
				Saskatoon serviceberry	5	
Staircase-----	Ponderosa pine/Lemmon's needlegrass (CPG124)	---	---	Lemmon's needlegrass	25	
				Antelope bitterbrush	5	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
				Elk sedge	5	
				Ponderosa pine	5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
406: Hellake-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
407: Hellake-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
408: Stardust-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
409: Stardust-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
410: Stardust-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
410: Riverpoint, very stony surface--	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
411: Huston, very stony surface--	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
Zeb, gravelly sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
412: Huston, very stony surface--	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
Stardust-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
413: Cloudyway-----	Ponderosa pine/Lemmon's needlegrass (CPG124)	---	---	Lemmon's needlegrass Antelope bitterbrush Arrowleaf balsamroot Bluebunch wheatgrass Elk sedge Ponderosa pine	25 5 5 5 5 5	
414: Hellake-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
Middlefork-----	Douglas-fir/common snowberry- ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
415: Middlefork-----	Douglas-fir/common snowberry- ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
Pinney-----	Grand fir/white spirea (CWS323)	---	---	White spirea Western meadowrue Common snowberry Heartleaf arnica Pinegrass Prince's pine Sierra pea Grand fir	20 15 10 10 10 10 10 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
416: Pinney, moist---	Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Middlefork, moist-----	Douglas-fir/mallow ninebark-pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Zeb, gravelly sandy loam----	Douglas-fir/mallow ninebark-pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
417: Middlefork-----	Douglas-fir/common snowberry-ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
Zeb, fine gravelly sandy loam-----	Douglas-fir/common snowberry-ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
418: Middlefork-----	Douglas-fir/common snowberry- ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
Zeb, fine gravelly sandy loam-----	Douglas-fir/common snowberry- ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
419: Charters, fine gravelly sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Zeb, fine gravelly sandy loam-----	Douglas-fir/common snowberry- ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
420: Pioneervil-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
420: Grimescreek-----	SEMIWET MEADOW (R043AY008ID)	Favorable	4,000	Mountain brome		25
		Normal	2,250	Slender wheatgrass		25
		Unfavorable	1,600	Lemmon's needlegrass		10
				Clover		10
				Cinquefoil		5
				Sedge		5
				Shrubby cinquefoil		5
				Tufted hairgrass		5
421: Dumps, dredge tailings-----	---	---	---			
Oxyaquic Xerorthents, very stony surface-----	Riparian mixed conifer subseries (CDHX)	---	---	Antelope bitterbrush		
				Black cottonwood		
				Bluegrass		
				Douglas-fir		
				Lodgepole pine		
				Snowberry		
				Willow		
422: Lithic Xerorthents, very stony surface-----	Upland shrub/bunchgrass subseries (SMGX)	---	---	Antelope bitterbrush		
				Elk sedge		
				Heartleaf arnica		
				Saskatoon serviceberry		
				Willow		
Dumps, placer tailings-----	---	---	---			

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
422: Dystric Xeropsamments, very stony surface-----	Upland mixed conifer subseries (CDSX)	---	---	Antelope bitterbrush Bluegrass Currant Elk sedge Ponderosa pine Saskatoon serviceberry Willow		
423: Dystric Xeropsamments, very stony surface-----	Upland mixed conifer subseries (CDSX)	---	---	Antelope bitterbrush Bluegrass Currant Elk sedge Ponderosa pine Saskatoon serviceberry Willow		
Ultic Haploxeralfs---	Upland mixed conifer subseries (CDSX)	---	---	Currant Elk sedge Heartleaf arnica Idaho fescue Ponderosa pine Saskatoon serviceberry Snowberry		
Lithic Xerorthents----	Upland shrub/bunchgrass subseries (SMGX)	---	---	Antelope bitterbrush Elk sedge Heartleaf arnica Saskatoon serviceberry Willow		

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
424: Middlefork-----	Douglas-fir/common snowberry- ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
Charters, coarse sandy loam-----	Douglas-fir/elk sedge-ponderosa pine phase (CDG142)	---	---	Elk sedge Common chokecherry Heartleaf arnica Mountain snowberry Ponderosa pine Saskatoon serviceberry Wax currant	50 5 5 5 5 5 5	
425: Middlefork-----	Douglas-fir/common snowberry- ponderosa pine phase (CDS627)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
Brassey-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	Common snowberry Elk sedge White spirea Pinegrass Douglas-fir Heartleaf arnica Saskatoon serviceberry	30 20 15 10 5 5 5	
426: Middlefork, moist-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
427: Middlefork, moist-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
428: Zeb, gravelly sandy loam----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Republic-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
429: Huston, very stony surface--	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
503: Cartwright, dry	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable Normal Unfavorable	1,900 1,200 800	Bluebunch wheatgrass Xeric big sagebrush Thurber needlegrass Arrowleaf balsamroot Sandberg bluegrass Antelope bitterbrush Tapertip hawksbeard		40 15 10 10 5 5 5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
504: Cartwright, dry	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
505: Brownlee-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
506: Brownlee-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
Robbscreek-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
Whisk-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
507: Shoebend-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
Dobson-----	SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)	Favorable	700	Bluebunch wheatgrass		25
		Normal	500	Basin big sagebrush		20
		Unfavorable	350	Thurber needlegrass		10
				Antelope bitterbrush		10
				Indian ricegrass		5
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Buckwheat		5
				Tapertip hawksbeard		5
Jerusalem-----	LOAMY 10-14 ARTRT/PSSP6 (R011XY026ID)	Favorable	1,200	Bluebunch wheatgrass		40
		Normal	950	Basin big sagebrush		20
		Unfavorable	650	Basin wildrye		10
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
509: Arrowrock-----	SAND 8-12 ARTRT/ACHY (R011XY011ID)	Favorable	950	Antelope bitterbrush		15
		Normal	650	Basin big sagebrush		15
		Unfavorable	450	Bluebunch wheatgrass		15
				Needle and thread		10
				Indian ricegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Sand dropseed		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
509: Borid-----	SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)	Favorable	700	Bluebunch wheatgrass		25
		Normal	500	Basin big sagebrush		20
		Unfavorable	350	Thurber needlegrass		10
				Antelope bitterbrush		10
				Indian ricegrass		5
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Buckwheat		5
				Tapertip hawksbeard		5
Rock outcrop----	---	---	---			
511: Olaton, north slope, moist---	NORTH SLOPE BRUSH 16-20 PREM/ELGLG (R010XY027ID)	Favorable	1,300	Bitter cherry		35
		Normal	1,000	Common chokecherry		15
		Unfavorable	700	Blue wildrye		10
				Mallow ninebark		10
				Idaho fescue		5
				Bluebunch wheatgrass		5
				Currant		5
				Xeric big sagebrush		5
Roney, moist----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
513: Shimo, fine gravelly loamy sand, north slope-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5
Cartwright-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Robbscreek, moist-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5
516: Shimo, extremely stony surface--	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
516: Olaton, south slope-----	SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)	Favorable	1,200	Bluebunch wheatgrass		35
		Normal	900	Xeric big sagebrush		15
		Unfavorable	700	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Bitter cherry		5
				Common chokecherry		5
				Lupine		5
Schiller, south slope-----	SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)	Favorable	1,200	Bluebunch wheatgrass		35
		Normal	900	Xeric big sagebrush		15
		Unfavorable	700	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Bitter cherry		5
				Common chokecherry		5
				Lupine		5
525: Robbscreek-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
Dobson-----	SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)	Favorable	700	Bluebunch wheatgrass		25
		Normal	500	Basin big sagebrush		20
		Unfavorable	350	Thurber needlegrass		10
				Antelope bitterbrush		10
				Indian ricegrass		5
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Buckwheat		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
525: Brownlee-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
526: Cartwright-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Brownlee, moist	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Robbscreek, moist-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
527: Dobson-----	SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)	Favorable	700	Bluebunch wheatgrass		25
		Normal	500	Basin big sagebrush		20
		Unfavorable	350	Thurber needlegrass		10
				Antelope bitterbrush		10
				Indian ricegrass		5
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Buckwheat		5
				Tapertip hawksbeard		5
Roney, dry-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
528: Roney, dry-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
Dobson-----	SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)	Favorable	700	Bluebunch wheatgrass		25
		Normal	500	Basin big sagebrush		20
		Unfavorable	350	Thurber needlegrass		10
				Antelope bitterbrush		10
				Indian ricegrass		5
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Buckwheat		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
528: Olaton, south slope-----	SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)	Favorable	1,200	Bluebunch wheatgrass		35
		Normal	900	Xeric big sagebrush		15
		Unfavorable	700	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Bitter cherry		5
				Common chokecherry		5
				Lupine		5
529: Roney-----	SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)	Favorable	1,200	Bluebunch wheatgrass		35
		Normal	900	Xeric big sagebrush		15
		Unfavorable	700	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Bitter cherry		5
				Common chokecherry		5
				Lupine		5
Kisky, fine gravelly sandy loam-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
Olaton, south slope-----	SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)	Favorable	1,200	Bluebunch wheatgrass		35
		Normal	900	Xeric big sagebrush		15
		Unfavorable	700	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Bitter cherry		5
				Common chokecherry		5
				Lupine		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition					
		Kind of year	Dry Weight		Forest	Range				
			Lb/acre		Pct	Pct				
532: Schiller, north slope-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25				
		Normal	1,600	Bluebunch wheatgrass		25				
		Unfavorable	1,000	Xeric big sagebrush		15				
				Sandberg bluegrass		5				
				Antelope bitterbrush		5				
				Arrowleaf balsamroot		5				
				Prairie Junegrass		5				
				Tapertip hawksbeard		5				
				Shimo, fine gravelly loamy sand, north slope-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
						Normal	1,000	Idaho fescue		20
Unfavorable	700	Xeric big sagebrush				10				
		Sandberg bluegrass				5				
		Antelope bitterbrush				5				
		Arrowleaf balsamroot				5				
		Bottlebrush squirreltail				5				
		Buckwheat				5				
		Lupine				5				
		533: Olaton, north slope, dry-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)			Favorable	2,200	Idaho fescue		25
Normal	1,600			Bluebunch wheatgrass		25				
Unfavorable	1,000			Xeric big sagebrush		15				
				Sandberg bluegrass		5				
				Antelope bitterbrush		5				
				Arrowleaf balsamroot		5				
				Prairie Junegrass		5				
				Tapertip hawksbeard		5				
				Roney, moist----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
						Normal	1,000	Idaho fescue		20
Unfavorable	700	Xeric big sagebrush				10				
		Sandberg bluegrass				5				
		Antelope bitterbrush				5				
		Arrowleaf balsamroot				5				
		Bottlebrush squirreltail				5				
		Buckwheat				5				
		Lupine				5				

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
534: Shimo, fine gravelly loamy sand-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
		Kisky, fine gravelly sandy loam-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass
Normal	800			Xeric big sagebrush		15
Unfavorable	600			Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
Schiller-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)			Favorable	1,000	Bluebunch wheatgrass
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
		538: Borid-----	SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)	Favorable	700	Bluebunch wheatgrass
Normal	500			Basin big sagebrush		20
Unfavorable	350			Thurber needlegrass		10
				Antelope bitterbrush		10
				Indian ricegrass		5
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Buckwheat		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
538: Shimo, fine gravelly loamy sand-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
		541: Roney-----	SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)	Favorable	1,200	Bluebunch wheatgrass
Normal	900			Xeric big sagebrush		15
Unfavorable	700			Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Bitter cherry		5
				Common chokecherry		5
				Lupine		5
Kisky, fine gravelly sandy loam-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)			Favorable	1,000	Bluebunch wheatgrass
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
		544: Arrowrock-----	SAND 8-12 ARTRT/ACHY (R011XY011ID)	Favorable	950	Antelope bitterbrush
Normal	650			Basin big sagebrush		15
Unfavorable	450			Bluebunch wheatgrass		15
				Needle and thread		10
				Indian ricegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
		Sand dropseed		5		

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
544: Borid-----	SOUTH SLOPE GRANITIC 8-12 ARTRT/PSSP6 (R011XY018ID)	Favorable	700	Bluebunch wheatgrass		25
		Normal	500	Basin big sagebrush		20
		Unfavorable	350	Thurber needlegrass		10
				Antelope bitterbrush		10
				Indian ricegrass		5
				Sandberg bluegrass		5
				Arrowleaf balsamroot		5
				Buckwheat		5
				Tapertip hawksbeard		5
Painter-----	SAND 8-12 ARTRT/ACHY (R011XY011ID)	Favorable	950	Antelope bitterbrush		15
		Normal	650	Basin big sagebrush		15
		Unfavorable	450	Bluebunch wheatgrass		15
				Needle and thread		10
				Indian ricegrass		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Sand dropseed		5
551: Shimo, fine gravelly loamy sand, north slope-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5
Kisky, fine gravelly loamy sand-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
555: Brownlee-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
Schiller-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
556: Kisky, fine gravelly sandy loam-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
Shimo, fine gravelly loamy sand-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
556: Brownlee-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
558: Kisky, fine gravelly sandy loam-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
Whisk-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5
Roney, dry-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
560: Robbscreek, moist-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5
Hellake-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry	40	
				Elk sedge	15	
				Arrowleaf balsamroot	5	
				Heartleaf arnica	5	
				Pinegrass	5	
				Ponderosa pine	5	
				Saskatoon serviceberry	5	
Shimo, fine gravelly loamy sand, north slope-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5
561: Shimo, fine gravelly sandy loam, north slope-----	NORTH SLOPE BRUSH 16-20 PREM/ELGLG (R010XY027ID)	Favorable	1,300	Bitter cherry		35
		Normal	1,000	Common chokecherry		15
		Unfavorable	700	Blue wildrye		10
				Mallow ninebark		10
				Idaho fescue		5
				Bluebunch wheatgrass		5
				Currant		5
				Xeric big sagebrush		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
561: Kisky, fine gravelly loamy sand-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5
		Olaton, north slope, moist---	NORTH SLOPE BRUSH 16-20 PREM/ELGLG (R010XY027ID)	Favorable	1,300	Bitter cherry
Normal	1,000			Common chokecherry		15
Unfavorable	700			Blue wildrye		10
				Mallow ninebark		10
				Idaho fescue		5
				Bluebunch wheatgrass		5
				Currant		5
		Xeric big sagebrush		5		
562: Kisky, fine gravelly sandy loam-----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	800	Xeric big sagebrush		15
		Unfavorable	600	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Basin big sagebrush		5
				Bottlebrush squirreltail		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
562: Shimo, fine gravelly sandy loam-----	SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)	Favorable	1,200	Bluebunch wheatgrass		35
		Normal	900	Xeric big sagebrush		15
		Unfavorable	700	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Bitter cherry		5
				Common chokecherry		5
				Lupine		5
Roney-----	SOUTH SLOPE GRANITIC 16-20 ARTRX/PSSP6 (R010XY028ID)	Favorable	1,200	Bluebunch wheatgrass		35
		Normal	900	Xeric big sagebrush		15
		Unfavorable	700	Antelope bitterbrush		10
				Sandberg bluegrass		5
				Thurber needlegrass		5
				Arrowleaf balsamroot		5
				Bitter cherry		5
				Common chokecherry		5
				Lupine		5
600: McDesh-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Immig, rubbly surface-----	STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)	Favorable	1,200	Bluebunch wheatgrass		45
		Normal	1,000	Basin big sagebrush		15
		Unfavorable	600	Sandberg bluegrass		10
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
600: Gwin, very stony loam, extremely stony surface--	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5
601: Hann-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Gwin, very stony loam, extremely stony surface--	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5
Shafer-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
602: Hillcreek-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Hovelton, cobbly ashy loam, moist, very stony surface--	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Hann-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
604: Shafer-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
604: Hann-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
605: Gwin, very stony loam, extremely stony surface--	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5
Flybow-----	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5
606: Hillcreek-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
606: Hovelton, cobbly ashy loam, moist, very stony surface--	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
607: Duco, stony loam, very stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
				Tapertip hawksbeard		5
Immig, very stony surface--	STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)	Favorable	1,200	Bluebunch wheatgrass		45
		Normal	1,000	Basin big sagebrush		15
		Unfavorable	600	Sandberg bluegrass		10
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
Rubble land----	---	---	---			

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition		
		Kind of year	Dry Weight		Forest	Range	
			Lb/acre		Pct	Pct	
608: Duco, very gravelly loam, stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35	
		Normal	600	Basin big sagebrush		15	
		Unfavorable	300	Sandberg bluegrass		10	
				Arrowleaf balsamroot		10	
				Thurber needlegrass		5	
				Antelope bitterbrush		5	
				Buckwheat		5	
				Tapertip hawksbeard		5	
Hovelton, gravelly ashy loam-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40	
		Normal	1,200	Xeric big sagebrush		15	
		Unfavorable	800	Thurber needlegrass		10	
				Arrowleaf balsamroot		10	
				Sandberg bluegrass		5	
				Antelope bitterbrush		5	
				Tapertip hawksbeard		5	
McDesh, south slope-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40	
		Normal	1,200	Xeric big sagebrush		15	
		Unfavorable	800	Thurber needlegrass		10	
				Arrowleaf balsamroot		10	
				Sandberg bluegrass		5	
				Antelope bitterbrush		5	
				Tapertip hawksbeard		5	
610: Hovelton, cobbly ashy loam, very stony surface--	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40	
		Normal	1,200	Xeric big sagebrush		15	
		Unfavorable	800	Thurber needlegrass		10	
				Arrowleaf balsamroot		10	
				Sandberg bluegrass		5	
				Antelope bitterbrush		5	
				Tapertip hawksbeard		5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
610: Duco, stony loam, very stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
		Tapertip hawksbeard		5		
McDesh, south slope-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
612: Hann-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
		Tapertip hawksbeard		5		
Hillcreek, dry--	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition		
		Kind of year	Dry Weight		Forest	Range	
			Lb/acre		Pct	Pct	
613: Duco, stony loam, very stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35	
		Normal	600	Basin big sagebrush		15	
		Unfavorable	300	Sandberg bluegrass		10	
				Arrowleaf balsamroot		10	
				Thurber needlegrass		5	
				Antelope bitterbrush		5	
				Buckwheat		5	
				Tapertip hawksbeard		5	
Searles, very stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35	
		Normal	600	Basin big sagebrush		15	
		Unfavorable	300	Sandberg bluegrass		10	
				Arrowleaf balsamroot		10	
				Thurber needlegrass		5	
				Antelope bitterbrush		5	
				Buckwheat		5	
				Tapertip hawksbeard		5	
McDesh, south slope-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40	
		Normal	1,200	Xeric big sagebrush		15	
		Unfavorable	800	Thurber needlegrass		10	
				Arrowleaf balsamroot		10	
				Sandberg bluegrass		5	
				Antelope bitterbrush		5	
				Tapertip hawksbeard		5	
618: McDesh, south slope-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40	
		Normal	1,200	Xeric big sagebrush		15	
		Unfavorable	800	Thurber needlegrass		10	
				Arrowleaf balsamroot		10	
				Sandberg bluegrass		5	
				Antelope bitterbrush		5	
				Tapertip hawksbeard		5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition			
		Kind of year	Dry Weight		Forest	Range		
			Lb/acre		Pct	Pct		
618: Duco, very gravelly loam, stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35		
		Normal	600	Basin big sagebrush		15		
		Unfavorable	300	Sandberg bluegrass		10		
				Arrowleaf balsamroot		10		
				Thurber needlegrass		5		
				Antelope bitterbrush		5		
				Buckwheat		5		
				Tapertip hawksbeard		5		
		Shafer-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
				Normal	500	Sandberg bluegrass		15
Unfavorable	400			Antelope bitterbrush		10		
				Nineleaf biscuitroot		10		
				Xeric big sagebrush		10		
				Hooker's balsamroot		5		
				Barestem biscuitroot		5		
				Bottlebrush squirreltail		5		
				Rubber rabbitbrush		5		
				Tapertip hawksbeard		5		
619: McDesh-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25		
		Normal	1,600	Bluebunch wheatgrass		25		
		Unfavorable	1,000	Xeric big sagebrush		15		
				Sandberg bluegrass		5		
				Antelope bitterbrush		5		
				Arrowleaf balsamroot		5		
				Prairie Junegrass		5		
		Tapertip hawksbeard		5				
Gwin, gravelly loam, stony surface-----	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55		
		Normal	600	Buckwheat		10		
		Unfavorable	400	Sandberg bluegrass		5		
				Antelope bitterbrush		5		
				Arrowleaf balsamroot		5		
				Biscuitroot		5		
		Phlox		5				

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
619: Shafer-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
620: Immig, very stony surface--	STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)	Favorable	1,200	Bluebunch wheatgrass		45
		Normal	1,000	Basin big sagebrush		15
		Unfavorable	600	Sandberg bluegrass		10
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
McDesh, south slope-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
Duco, stony loam, very stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
621: McDaniel-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
Hovelton, gravelly ashy loam-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
622: Hovelton, gravelly ashy loam-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
Gwin, very stony loam, extremely stony surface--	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
630: Gwin, very gravelly loam--	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5
Flybow-----	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5
Rock outcrop----	---	---	---			
631: Flybow-----	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5
Rock outcrop----	---	---	---			
Rubble land-----	---	---	---			
634: Gwin, very stony loam, extremely stony surface--	SHALLOW SOUTH STONY 14-18 PSSP6- POSE (R010XY018ID)	Favorable	800	Bluebunch wheatgrass		55
		Normal	600	Buckwheat		10
		Unfavorable	400	Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Biscuitroot		5
				Phlox		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
634: McDesh, very stony loam, very stony surface-----	STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)	Favorable	1,200	Bluebunch wheatgrass		45
		Normal	1,000	Basin big sagebrush		15
		Unfavorable	600	Sandberg bluegrass		10
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
Rock outcrop----	---	---	---			
635: Shafer, very stony surface--	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
Karney-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
Yad-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
636: Hann, stony surface-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5
McDesh, very stony loam, extremely bouldery surface-----	STONY LOAM 12-16 ARTRT/PSSP6 (R010XY009ID)	Unfavorable	600	Sandberg bluegrass		10
		Favorable	1,200	Bluebunch wheatgrass		45
		Normal	1,000	Basin big sagebrush		15
		Unfavorable	600	Sandberg bluegrass		10
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
Robbscreek, moist-----	NORTH SLOPE GRANITIC 12-16 ARTRX/FEID (R010XY014ID)	Favorable	1,300	Bluebunch wheatgrass		30
		Normal	1,000	Idaho fescue		20
		Unfavorable	700	Xeric big sagebrush		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Bottlebrush squirreltail		5
				Buckwheat		5
				Lupine		5
638: Yad-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
638: Cranegulch-----	LOAMY 12-16 ARTRX/PSSP6 (R010XY007ID)	Favorable	1,900	Bluebunch wheatgrass		40
		Normal	1,200	Xeric big sagebrush		15
		Unfavorable	800	Thurber needlegrass		10
				Arrowleaf balsamroot		10
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Tapertip hawksbeard		5
Duco, stony loam, very stony surface--	SOUTH SLOPE STONY 12-16 ARTRT/PSSP6 (R010XY011ID)	Favorable	1,000	Bluebunch wheatgrass		35
		Normal	600	Basin big sagebrush		15
		Unfavorable	300	Sandberg bluegrass		10
				Arrowleaf balsamroot		10
				Thurber needlegrass		5
				Antelope bitterbrush		5
				Buckwheat		5
				Tapertip hawksbeard		5
640: Timberbutte-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark	45	
				Elk sedge	15	
				Common snowberry	10	
				White spirea	10	
				Heartleaf arnica	5	
				Pinegrass	5	
641: Aradaran-----	NORTH SLOPE LOAMY 12-16 ARTRX/PSSP6 (R010XY010ID)	Favorable	2,200	Idaho fescue		25
		Normal	1,600	Bluebunch wheatgrass		25
		Unfavorable	1,000	Xeric big sagebrush		15
				Sandberg bluegrass		5
				Antelope bitterbrush		5
				Arrowleaf balsamroot		5
				Prairie Junegrass		5
				Tapertip hawksbeard		5

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
641: Yad-----	CHURNING CLAY 8-16 ARTRX/PSSP6 (R010XY006ID)	Favorable	700	Bluebunch wheatgrass		20
		Normal	500	Sandberg bluegrass		15
		Unfavorable	400	Antelope bitterbrush		10
				Nineleaf biscuitroot		10
				Xeric big sagebrush		10
				Hooker's balsamroot		5
				Barestem biscuitroot		5
				Bottlebrush squirreltail		5
				Rubber rabbitbrush		5
				Tapertip hawksbeard		5
650: Longs-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark	45	
				Elk sedge	15	
				Common snowberry	10	
				White spirea	10	
				Heartleaf arnica	5	
				Pinegrass	5	
Highvalley-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark	45	
				Elk sedge	15	
				Common snowberry	10	
				White spirea	10	
				Heartleaf arnica	5	
				Pinegrass	5	
Hoff-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea	35	
				Elk sedge	25	
				Arrowleaf balsamroot	5	
				Bluebunch wheatgrass	5	
				Mountain brome	5	
				Ponderosa pine	5	
651: Hess-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark	45	
				Elk sedge	15	
				Common snowberry	10	
				White spirea	10	
				Heartleaf arnica	5	
				Pinegrass	5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
651: Lidos-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Cleymor-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
652: Hess-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Lidos-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Klicker-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
653: Lidos-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
653: Klicker-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Hess-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
654: Shilling-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Highvalley-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Hoff-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
655: Shilling, moist	Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Balldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Highvalley, moist-----	Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Balldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
656: Shilling, moist	Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Balldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Highvalley, moist-----	Grand fir/Rocky mountain maple-mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Balldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
657: Pumpkin, stony surface-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
658: Cleymor-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Pumpkin, stony surface-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
659: Hoff, south slope-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
660: Longs-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
660: Highvalley-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
661: Awley-----	Subalpine fir/Rocky mountain maple (CES141)	---	---	Western meadowrue Rocky Mountain maple Heartleaf arnica Eastern showy aster Elk sedge Mountain snowberry Subalpine fir Utah honeysuckle	30 20 10 5 5 5 5 5	
Bo-----	Subalpine fir/Rocky mountain maple (CES141)	---	---	Western meadowrue Rocky Mountain maple Heartleaf arnica Eastern showy aster Elk sedge Mountain snowberry Subalpine fir Utah honeysuckle	30 20 10 5 5 5 5 5	
662: Awley-----	Subalpine fir/Rocky mountain maple (CES141)	---	---	Western meadowrue Rocky Mountain maple Heartleaf arnica Eastern showy aster Elk sedge Mountain snowberry Subalpine fir Utah honeysuckle	30 20 10 5 5 5 5 5	
Bo-----	Subalpine fir/Rocky mountain maple (CES141)	---	---	Western meadowrue Rocky Mountain maple Heartleaf arnica Eastern showy aster Elk sedge Mountain snowberry Subalpine fir Utah honeysuckle	30 20 10 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
663: Cleymor-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Hoff-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
666: Pachic Argixerolls, very stony surface-----	Upland mixed conifer subseries (CDSX)	---	---	Cherry Douglas-fir Mallow ninebark Ponderosa pine Saskatoon serviceberry Snowberry Snowbrush ceanothus Wheatgrass		
Rubble land-----	---	---	---			
Typic Haploxerolls, extremely stony surface-----	Upland shrub/bunchgrass subseries (SMGX)	---	---	Antelope bitterbrush Arrowleaf balsamroot Big sagebrush Buckwheat Cherry Idaho fescue Wheatgrass		

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
700: Drybuck-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
Whisk, moist----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Elk sedge	20 15 5 5	
701: Drybuck-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
Whisk, moist----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Elk sedge	20 15 5 5	
702: Deerrun-----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Ponderosa pine	20 20 5 5	
Kisky, fine gravelly sandy loam, moist----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Buckwheat Elk sedge Mountain big sagebrush Thurber needlegrass	15 15 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
702: Drybuck, dry----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Ponderosa pine	20 20 5 5	
704: Drybuck-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
Northfork, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge White spirea Common snowberry Heartleaf arnica Pinegrass	35 20 20 10 5 5	
Whisk, moist----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Elk sedge	20 15 5 5	
705: Northfork, sandy loam-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Shirts, sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
706: Northfork, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Shirts, coarse sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
707: Packerjohn, ashy coarse sandy loam-----	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Shirts, coarse sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
707: Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
708: Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
Northfork, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Rock outcrop----	---	---	---			
709: Shirts, sandy loam, south slope-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Charters, sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
710: Charters, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Northfork, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Shirts, coarse sandy loam----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
711: Charters, fine gravelly sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Shirts, sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
711: Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
712: Charters, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Shirts, coarse sandy loam----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
714: Shirts, sandy loam, south slope-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
714: Eagleson, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Charters, sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
715: Eagleson, fine gravelly sandy loam, dry-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Bluebunch wheatgrass Arrowleaf balsamroot Douglas-fir Mountain big sagebrush Snowbrush ceanothus Wax currant	35 15 5 5 5 5 5	
Kosh-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Antelope bitterbrush Bitter cherry Bluebunch wheatgrass Arrowleaf balsamroot Mountain big sagebrush	25 10 10 10 5 5	
716: Zan-----	Subalpine fir/Rocky mountain maple (CES141)	---	---	Western meadowrue Rocky Mountain maple Heartleaf arnica Eastern showy aster Elk sedge Mountain snowberry Subalpine fir Utah honeysuckle	30 20 10 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
716: Belsh-----	Subalpine fir/Rocky mountain maple (CES141)	---	---	Western meadowrue Rocky Mountain maple Heartleaf arnica Eastern showy aster Elk sedge Mountain snowberry Subalpine fir Utah honeysuckle	30 20 10 5 5 5 5 5	
Montchief-----	Subalpine fir/Rocky mountain maple (CES141)	---	---	Western meadowrue Rocky Mountain maple Heartleaf arnica Eastern showy aster Elk sedge Mountain snowberry Subalpine fir Utah honeysuckle	30 20 10 5 5 5 5 5	
718: Charters, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Crumley-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Eagleson, sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
720: Drybuck, dry----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Ponderosa pine	20 20 5 5	
Deerrun-----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Ponderosa pine	20 20 5 5	
Kisky, fine gravelly sandy loam, moist----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Buckwheat Elk sedge Mountain big sagebrush Thurber needlegrass	15 15 5 5 5 5 5	
721: Shirts, fine gravelly sandy loam-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Bluebunch wheatgrass Arrowleaf balsamroot Douglas-fir Mountain big sagebrush Snowbrush ceanothus Wax currant	35 15 5 5 5 5 5	
Kosh-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Antelope bitterbrush Bitter cherry Bluebunch wheatgrass Arrowleaf balsamroot Mountain big sagebrush	25 10 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
721: Charters, fine gravelly sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
726: Garval-----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Ponderosa pine	20 20 5 5	
Kisky, fine gravelly loamy coarse sand----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable Normal Unfavorable	1,000 800 600	Antelope bitterbrush Bluebunch wheatgrass Thurber needlegrass Arrowleaf balsamroot Sandberg bluegrass Buckwheat Elk sedge Lupine Ponderosa pine Xeric big sagebrush		20 20 10 10 5 5 5 5 5 5
730: Hellake-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
Stardust-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
731: Shirts, sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Charters, fine gravelly sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
733: Shirts, fine gravelly sandy loam-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Bluebunch wheatgrass Arrowleaf balsamroot Douglas-fir Mountain big sagebrush Snowbrush ceanothus Wax currant	35 15 5 5 5 5 5	
Kosh-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Antelope bitterbrush Bitter cherry Bluebunch wheatgrass Arrowleaf balsamroot Mountain big sagebrush	25 10 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
734: Shirts, sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Kosh-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Antelope bitterbrush Bitter cherry Bluebunch wheatgrass Arrowleaf balsamroot Mountain big sagebrush	25 10 10 10 5 5	
735: Shirts, coarse sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
Charters, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
738: Tripod-----	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Packerjohn, ashy coarse sandy loam-----	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Pajo, fine gravelly ashy coarse sandy loam-----	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
739: Shirts, sandy loam, moist----	Grand fir/white spirea (CWS323)	---	---	White spirea Western meadowrue Common snowberry Heartleaf arnica Pinegrass Prince's pine Sierra pea Grand fir	20 15 10 10 10 10 10 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
739: Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
Packerjohn, ashy coarse sandy loam-----	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
740: Charters, sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Eagleson, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
741: Zan-----	Subalpine fir/Rocky mountain maple (CES141)	---	---	Western meadowrue Rocky Mountain maple Heartleaf arnica Eastern showy aster Elk sedge Mountain snowberry Subalpine fir Utah honeysuckle	30 20 10 5 5 5 5 5	
742: Crumley-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Eagleson, sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
743: Packerjohn, ashy coarse sandy loam-----	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
743: Shirts, sandy loam, moist----	Grand fir/white spirea (CWS323)	---	---	White spirea Western meadowrue Common snowberry Heartleaf arnica Pinegrass Prince's pine Sierra pea Grand fir	20 15 10 10 10 10 10 5	
744: Packerjohn, ashy sandy loam, cool-----	Grand fir/white spirea (CWS323)	---	---	White spirea Western meadowrue Common snowberry Heartleaf arnica Pinegrass Prince's pine Sierra pea Grand fir	20 15 10 10 10 10 10 5	
Shirts, sandy loam, moist----	Grand fir/white spirea (CWS323)	---	---	White spirea Western meadowrue Common snowberry Heartleaf arnica Pinegrass Prince's pine Sierra pea Grand fir	20 15 10 10 10 10 10 5	
Tripod, cool----	Grand fir/white spirea (CWS323)	---	---	White spirea Western meadowrue Common snowberry Heartleaf arnica Pinegrass Prince's pine Sierra pea Grand fir	20 15 10 10 10 10 10 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
745: Tripod, moist---	Grand fir/thinleaf (blue) huckleberry (CWS231)	---	---	Blue huckleberry Utah honeysuckle Douglas-fir Elk sedge Grand fir Western meadowrue	60 10 5 5 5 5	
Packerjohn, ashy sandy loam-----	Grand fir/thinleaf (blue) huckleberry (CWS231)	---	---	Blue huckleberry Utah honeysuckle Douglas-fir Elk sedge Grand fir Western meadowrue	60 10 5 5 5 5	
746: Packerjohn, ashy sandy loam-----	Grand fir/thinleaf (blue) huckleberry (CWS231)	---	---	Blue huckleberry Utah honeysuckle Douglas-fir Elk sedge Grand fir Western meadowrue	60 10 5 5 5 5	
747: Pinney, moist---	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Charters, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
747: Shirts, sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
748: Belsh, moist----	Subalpine fir/thinleaf (blue) huckleberry (CES331)	---	---	Blue huckleberry Utah honeysuckle Heartleaf arnica Pinegrass Rocky Mountain maple Subalpine fir Western meadowrue	50 10 5 5 5 5 5	
Zan, moist-----	Subalpine fir/thinleaf (blue) huckleberry (CES331)	---	---	Blue huckleberry Utah honeysuckle Heartleaf arnica Pinegrass Rocky Mountain maple Subalpine fir Western meadowrue	50 10 5 5 5 5 5	
749: Quartzburg-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Charters, sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
750: Garval-----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Ponderosa pine	20 20 5 5	
Kisky, fine gravelly loamy coarse sand----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable Normal Unfavorable	1,000 800 600	Antelope bitterbrush Bluebunch wheatgrass Thurber needlegrass Arrowleaf balsamroot Sandberg bluegrass Buckwheat Elk sedge Lupine Ponderosa pine Xeric big sagebrush		20 20 10 10 5 5 5 5 5 5
Rock outcrop----	---	---	---			
751: Belsh, moist----	Subalpine fir/thinleaf (blue) huckleberry (CES331)	---	---	Blue huckleberry Utah honeysuckle Heartleaf arnica Pinegrass Rocky Mountain maple Subalpine fir Western meadowrue	50 10 5 5 5 5 5	
Zan, moist-----	Subalpine fir/thinleaf (blue) huckleberry (CES331)	---	---	Blue huckleberry Utah honeysuckle Heartleaf arnica Pinegrass Rocky Mountain maple Subalpine fir Western meadowrue	50 10 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition		
		Kind of year	Dry Weight		Forest	Range	
			Lb/acre		Pct	Pct	
752: Josie-----	SUBALPINE SLOPE LOAMY 20+ ARTRS2/FEID (R012XY024ID)	Favorable	1,600	Subalpine big sagebrush		20	
		Normal	1,425	Idaho fescue		10	
		Unfavorable	1,000	Wyeth buckwheat		10	
				Arrowleaf balsamroot		10	
				Bluebunch wheatgrass		10	
				Lupine		10	
				Letterman's needlegrass		5	
				Geranium		5	
				Mountain goldenrod		5	
				Mountain snowberry		5	
Zimmer, fine gravelly sandy loam----	SUBALPINE SLOPE LOAMY 20+ ARTRS2/FEID (R012XY024ID)	Favorable	1,600	Subalpine big sagebrush		20	
		Normal	1,425	Idaho fescue		10	
		Unfavorable	1,000	Wyeth buckwheat		10	
				Arrowleaf balsamroot		10	
				Bluebunch wheatgrass		10	
				Lupine		10	
				Letterman's needlegrass		5	
				Geranium		5	
				Mountain goldenrod		5	
				Mountain snowberry		5	
753: Tripod, cool----	Grand fir/white spirea (CWS323)	---	---	White spirea	20		
					Western meadowrue	15	
					Common snowberry	10	
					Heartleaf arnica	10	
					Pinegrass	10	
					Prince's pine	10	
					Sierra pea	10	
					Grand fir	5	
Packerjohn, ashy sandy loam, cool-----	Grand fir/white spirea (CWS323)	---	---	White spirea	20		
					Western meadowrue	15	
					Common snowberry	10	
					Heartleaf arnica	10	
					Pinegrass	10	
					Prince's pine	10	
					Sierra pea	10	
					Grand fir	5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
753: Shirts, sandy loam, moist----	Grand fir/white spirea (CWS323)	---	---	White spirea Western meadowrue Common snowberry Heartleaf arnica Pinegrass Prince's pine Sierra pea Grand fir	20 15 10 10 10 10 10 5	
754: Packerjohn, ashy sandy loam-----	Grand fir/thinleaf (blue) huckleberry (CWS231)	---	---	Blue huckleberry Utah honeysuckle Douglas-fir Elk sedge Grand fir Western meadowrue	60 10 5 5 5 5	
Shirts, sandy loam, moist----	Grand fir/white spirea (CWS323)	---	---	White spirea Western meadowrue Common snowberry Heartleaf arnica Pinegrass Prince's pine Sierra pea Grand fir	20 15 10 10 10 10 10 5	
755: Zimmer-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
Quartzburg-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Rock outcrop----	---	---	---			

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
756: Pajo, fine gravelly ashy coarse sandy loam-----	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Tripod-----	Grand fir/Rocky mountain maple- mallow ninebark phase (CWS542)	---	---	Mallow ninebark Blue huckleberry Common snowberry Utah honeysuckle White spirea Baldhip rose Grand fir Heartleaf arnica Pinegrass	25 15 10 10 10 5 5 5 5	
Kosh, moist-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
758: Eagleson, sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Kosh, moist-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
758: Charters, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
759: Charters, sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Shirts, sandy loam, south slope-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Kosh, moist-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
761: Charters, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
761: Middlefork, moist-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
762: Drybuck, dry----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Ponderosa pine	20 20 5 5	
Hellake-----	Ponderosa pine/common snowberry (CPS526)	---	---	Common snowberry Elk sedge Arrowleaf balsamroot Heartleaf arnica Pinegrass Ponderosa pine Saskatoon serviceberry	40 15 5 5 5 5 5	
Deerrun-----	Ponderosa pine/antelope bitterbrush-bluebunch wheatgrass phase (CPS227)	---	---	Antelope bitterbrush Bluebunch wheatgrass Arrowleaf balsamroot Ponderosa pine	20 20 5 5	
763: Eagleson, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
Kosh-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Antelope bitterbrush Bitter cherry Bluebunch wheatgrass Arrowleaf balsamroot Mountain big sagebrush	25 10 10 10 5 5	
Rock outcrop----	---	---	---			

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
765: Backswitch, coarse sandy loam-----	Douglas-fir/elk sedge-ponderosa pine phase (CDG142)	---	---	Elk sedge Common chokecherry Heartleaf arnica Mountain snowberry Ponderosa pine Saskatoon serviceberry Wax currant	50 5 5 5 5 5 5	
Zimmer, warm----	SOUTH SLOPE GRANITIC 12-16 PUTR2/PSSP6 (R010XY012ID)	Favorable Normal Unfavorable	1,000 800 600	Antelope bitterbrush Bluebunch wheatgrass Thurber needlegrass Arrowleaf balsamroot Sandberg bluegrass Buckwheat Elk sedge Lupine Mountain big sagebrush Ponderosa pine		20 20 10 10 5 5 5 5 5 5
Rock outcrop----	---	---	---			
766: Backswitch, coarse sandy loam-----	Douglas-fir/elk sedge-ponderosa pine phase (CDG142)	---	---	Elk sedge Common chokecherry Heartleaf arnica Mountain snowberry Ponderosa pine Saskatoon serviceberry Wax currant	50 5 5 5 5 5 5	
Charters, coarse sandy loam----	Douglas-fir/elk sedge-ponderosa pine phase (CDG142)	---	---	Elk sedge Common chokecherry Heartleaf arnica Mountain snowberry Ponderosa pine Saskatoon serviceberry Wax currant	50 5 5 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
766: Zimmer, dry-----	Douglas-fir/elk sedge-ponderosa pine phase (CDG142)	---	---	Elk sedge Antelope bitterbrush Arrowleaf balsamroot Bluebunch wheatgrass Buckwheat Lupine Thurber needlegrass	35 15 5 5 5 5 5	
767: Shirts, sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Kosh-----	Douglas-fir/mountain snowberry (CDS626)	---	---	Mountain snowberry Antelope bitterbrush Bitter cherry Bluebunch wheatgrass Arrowleaf balsamroot Mountain big sagebrush	25 10 10 10 5 5	
Charters, fine gravelly sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
768: Shirts, sandy loam, south slope-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
768: Kosh, moist-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	
Eagleson, fine gravelly sandy loam-----	Douglas-fir/mallow ninebark- pinegrass phase (CDS717)	---	---	Elk sedge Mallow ninebark Pinegrass White spirea Douglas-fir Heartleaf arnica	35 25 10 10 5 5	
770: Shirts, sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Charters, fine gravelly sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
Kosh, moist-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			Lb/acre		Pct	Pct
771: Backswitch, sandy loam-----	Douglas-fir/dwarf bilberry (huckleberry) (CDS815)	---	---	Elk sedge Pinegrass Heartleaf arnica Prince's pine Douglas-fir Dwarf huckleberry White spirea	30 20 10 10 5 5 5	
Shirts, sandy loam, dry-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Pinegrass Heartleaf arnica Douglas-fir Ponderosa pine	35 15 15 10 5 5	
772: Pajo, fine gravelly ashy sandy loam-----	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Packerjohn, ashy sandy loam, dry	Douglas-fir/mallow ninebark- ponderosa pine phase (CDS717- PIPO)	---	---	Mallow ninebark Elk sedge Common snowberry White spirea Heartleaf arnica Pinegrass	45 15 10 10 5 5	
Kosh, moist-----	Douglas-fir/white spirea- ponderosa pine phase (CDS635)	---	---	White spirea Elk sedge Arrowleaf balsamroot Bluebunch wheatgrass Mountain brome Ponderosa pine	35 25 5 5 5 5	

Table 10.--Ecological Sites, Habitat Types, and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site, forest habitat type, or ecoclass habitat type	Total production		Characteristic vegetation	Composition	
		Kind of year	Dry Weight		Forest	Range
			<i>Lb/acre</i>		<i>Pct</i>	<i>Pct</i>
900: Pits, gravel----	---	---	---			
Dumps, gravel---	---	---	---			
901: Dumps, landfill	---	---	---			
999: Water-----	---	---	---			

Table 11.--Forest Productivity

(Only the soils that are forested are included in this table. An "(e)" in the "Site index standard deviation" column indicates that the productivity values were estimated. Absence of an entry indicates that data are not available.)

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
400: Ralsen-----	---	---	---	---	---	---	---
Foxlane-----	Ponderosa pine-----	108	(e)	100	118	40	Ponderosa pine
Pay-----	---	---	---	---	---	---	---
401: Staircase-----	Ponderosa pine-----	108	(e)	100	118	40	Ponderosa pine
402: Crossbow-----	---	---	---	---	---	---	---
Foxlane-----	Ponderosa pine-----	108	(e)	100	118	40	Ponderosa pine
404: Riverpoint-----	Ponderosa pine-----	106	(e)	100	114	40	Ponderosa pine
Hellake-----	Ponderosa pine-----	112	(e)	100	126	40	Ponderosa pine
405: Hellake-----	Ponderosa pine-----	112	(e)	100	126	40	Ponderosa pine
Staircase-----	Ponderosa pine-----	108	(e)	100	118	40	Ponderosa pine
406: Hellake-----	Ponderosa pine-----	112	(e)	100	126	40	Ponderosa pine
407: Hellake-----	Ponderosa pine-----	112	(e)	100	126	40	Ponderosa pine
408: Stardust-----	Ponderosa pine-----	110	8.5	100	122	40	Ponderosa pine
409: Stardust-----	Ponderosa pine-----	110	8.5	100	122	40	Ponderosa pine

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
410: Stardust-----	Ponderosa pine-----	110	8.5	100	122	40	Ponderosa pine
Riverpoint, very stony surface-----	Ponderosa pine-----	105	(e)	100	112	40	Ponderosa pine
411: Huston, very stony surface-----	Ponderosa pine-----	104	(e)	100	110	40	Ponderosa pine
Zeb, gravelly sandy loam	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
412: Huston, very stony surface-----	Ponderosa pine-----	104	(e)	100	110	40	Ponderosa pine
Stardust-----	Ponderosa pine-----	110	8.5	100	122	40	Ponderosa pine
413: Cloudyway-----	Ponderosa pine-----	107	(e)	100	116	40	Ponderosa pine
414: Hellake-----	Ponderosa pine-----	112	(e)	100	126	40	Ponderosa pine
Middlefork-----	Douglas-fir-----	68	8.2	50	58	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	6.7	100	101	40	
415: Middlefork-----	Douglas-fir-----	68	8.2	50	58	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	6.7	100	101	40	
Pinney-----	Douglas-fir-----	73	9.1	50	67	---	Douglas-fir, ponderosa pine
	Grand fir-----	86	(e)	50	125	100	
	Ponderosa pine-----	101	5.8	100	104	40	
416: Pinney, moist-----	Douglas-fir-----	68	4.4	50	58	105	Douglas-fir, ponderosa pine
	Grand fir-----	85	(e)	50	124	---	
	Ponderosa pine-----	105	(e)	100	112	40	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
416:							
Middlefork, moist-----	Douglas-fir-----	72	(e)	50	65	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	101	4.9	100	104	40	
Zeb, gravelly sandy loam	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
417:							
Middlefork-----	Douglas-fir-----	68	8.2	50	58	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	6.7	100	101	40	
Zeb, fine gravelly sandy loam-----	Douglas-fir-----	65	(e)	50	52	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	97	(e)	100	97	40	
418:							
Middlefork-----	Douglas-fir-----	68	8.2	50	58	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	6.7	100	101	40	
Zeb, fine gravelly sandy loam-----	Douglas-fir-----	65	(e)	50	52	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	97	(e)	100	97	40	
419:							
Charters, fine gravelly sandy loam, dry-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	104	(e)	100	110	40	
Zeb, fine gravelly sandy loam-----	Douglas-fir-----	65	(e)	50	52	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	97	(e)	100	97	40	
420:							
Pioneervil-----	Ponderosa pine-----	106	(e)	100	114	40	Ponderosa pine
Grimescreek-----	---	---	---	---	---	---	---
421:							
Dumps, dredge tailings.							

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
421: Oxyaquic Xerorthents, very stony surface-----	Black cottonwood----	---	---		---	---	---
	Lodgepole pine-----	---	---		---	---	
	Ponderosa pine-----	---	---		---	---	
422: Lithic Xerorthents, very stony surface-----	---	---	---	---	---	---	---
Dumps, placer tailings.							
Dystric Xeropsamments, very stony surface-----	Douglas-fir-----	---	---		---	---	---
	Lodgepole pine-----	---	---		---	---	
	Ponderosa pine-----	---	---		---	---	
423: Dystric Xeropsamments, very stony surface-----	Douglas-fir-----	---	---		---	---	---
	Lodgepole pine-----	---	---		---	---	
	Ponderosa pine-----	---	---		---	---	
Ultic Haploxeralfs-----	Douglas-fir-----	---	---		---	---	---
	Ponderosa pine-----	---	---		---	---	
Lithic Xerorthents-----	---	---	---	---	---	---	---
424: Middlefork-----	Douglas-fir-----	68	8.2	50	58	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	6.7	100	101	40	
Charters, coarse sandy loam-----	Douglas-fir-----	64	(e)	50	51	---	Ponderosa pine
	Ponderosa pine-----	98	(e)	100	99	40	
425: Middlefork-----	Douglas-fir-----	68	8.2	50	58	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	6.7	100	101	40	
Brassey-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	(e)	100	101	40	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
426: Middlefork, moist-----	Douglas-fir-----	72	(e)	50	65	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	101	4.9	100	104	40	
427: Middlefork, moist-----	Douglas-fir-----	72	(e)	50	65	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	101	4.9	100	104	40	
428: Zeb, gravelly sandy loam	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
Republic-----	Douglas-fir-----	73	(e)	50	67	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	100	(e)	100	102	40	
429: Huston, very stony surface-----	Ponderosa pine-----	104	(e)	100	110	40	Ponderosa pine
560: Robbscreek, moist-----	---	---	---	---	---	---	---
Hellake-----	Ponderosa pine-----	112	(e)	100	126	40	Ponderosa pine
Shimo, fine gravelly loamy sand, north slope-----	---	---	---	---	---	---	---
640: Timberbutte-----	Douglas-fir-----	61	(e)	50	46	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
650: Longs-----	Douglas-fir-----	61	(e)	50	46	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	86	(e)	100	78	40	
Highvalley-----	Douglas-fir-----	61	6.7	50	46	109	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
Hoff-----	---	---	---	---	---	---	---

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
651:							
Hess-----	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	(e)	100	80	40	
Lidos-----	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
Cleymor-----	Douglas-fir-----	67	8.2	50	56	105	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	(e)	100	101	40	
652:							
Hess-----	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	(e)	100	80	40	
Lidos-----	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
Klicker-----	Douglas-fir-----	68	6.9	50	58	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	98	2.6	100	99	40	
653:							
Lidos-----	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
Klicker-----	Douglas-fir-----	68	6.9	50	58	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	98	2.6	100	99	40	
Hess-----	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	(e)	100	80	40	
654:							
Shilling-----	Douglas-fir-----	61	(e)	50	46	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	98	(e)	100	99	40	
Highvalley-----	Douglas-fir-----	61	6.7	50	46	109	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
Hoff-----	---	---	---	---	---	---	---

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
655:							
Shilling, moist-----	Douglas-fir-----	66	1.7	50	54	106	Douglas-fir, ponderosa pine
	Grand fir-----	64	7.6	50	83	117	
	Ponderosa pine-----	93	6.9	100	90	40	
Highvalley, moist-----	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Grand fir-----	67	(e)	50	89	---	
	Ponderosa pine-----	92	(e)	100	88	40	
656:							
Shilling, moist-----	Douglas-fir-----	66	1.7	50	54	106	Douglas-fir, ponderosa pine
	Grand fir-----	64	7.6	50	83	117	
	Ponderosa pine-----	93	6.9	100	90	40	
Highvalley, moist-----	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Grand fir-----	67	(e)	50	89	---	
	Ponderosa pine-----	92	(e)	100	88	40	
657:							
Pumpkin, stony surface--	Douglas-fir-----	69	3.2	50	59	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	7.1	100	101	40	
658:							
Cleymor-----	Douglas-fir-----	67	8.2	50	56	105	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	(e)	100	101	40	
Pumpkin, stony surface--	Douglas-fir-----	69	3.2	50	59	104	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	7.1	100	101	40	
660:							
Longs-----	Douglas-fir-----	61	(e)	50	46	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	86	(e)	100	78	40	
Highvalley-----	Douglas-fir-----	61	6.7	50	46	109	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
661:							
Awley-----	Douglas-fir-----	74	(e)	50	69	---	Douglas-fir
	Subalpine fir-----	86	(e)	100	85	---	
Bo-----	Douglas-fir-----	74	(e)	50	69	---	Douglas-fir
	Subalpine fir-----	86	(e)	100	85	---	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
662:							
Awley-----	Douglas-fir-----	74	(e)	50	69	---	Douglas-fir
	Subalpine fir-----	86	(e)	100	85	---	
Bo-----	Douglas-fir-----	74	(e)	50	69	---	Douglas-fir
	Subalpine fir-----	86	(e)	100	85	---	
663:							
Cleymor-----	Douglas-fir-----	67	8.2	50	56	105	Douglas-fir, ponderosa pine
	Ponderosa pine-----	99	(e)	100	101	40	
Hoff-----	---	---	---	---	---	---	---
666:							
Pachic Argixerolls, very stony surface-----	Douglas-fir-----	---	---	---	---	---	---
	Ponderosa pine-----	---	---	---	---	---	---
Rubble land.							
Typic Haploxerolls, extremely stony surface-----	---	---	---	---	---	---	---
700:							
Drybuck-----	Ponderosa pine-----	109	10.0	100	120	40	Ponderosa pine
Whisk, moist-----	---	---	---	---	---	---	---
701:							
Drybuck-----	Ponderosa pine-----	109	10.0	100	120	40	Ponderosa pine
Whisk, moist-----	---	---	---	---	---	---	---
702:							
Deerrun-----	Ponderosa pine-----	94	4.2	100	92	40	Ponderosa pine
Kisky, fine gravelly sandy loam, moist-----	---	---	---	---	---	---	---
Drybuck, dry-----	Ponderosa pine-----	95	(e)	100	94	40	Ponderosa pine

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
704:							
Drybuck-----	Ponderosa pine-----	109	10.0	100	120	40	Ponderosa pine
Northfork, fine gravelly sandy loam-----	Douglas-fir-----	78	1.7	50	77	98	Douglas-fir, ponderosa pine
	Ponderosa pine-----	113	5.0	100	128	40	
Whisk, moist-----	---	---	---	---	---	---	---
705:							
Northfork, sandy loam---	Douglas-fir-----	68	(e)	50	58	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	107	(e)	100	116	40	
Shirts, sandy loam, dry	Douglas-fir-----	57	8.5	50	40	112	Douglas-fir, ponderosa pine
	Ponderosa pine-----	84	(e)	100	75	50	
706:							
Northfork, fine gravelly sandy loam-----	Douglas-fir-----	78	1.7	50	77	98	Douglas-fir, ponderosa pine
	Ponderosa pine-----	113	5.0	100	128	40	
Shirts, coarse sandy loam-----	Douglas-fir-----	65	6.6	50	52	106	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	10.0	100	80	40	
Zimmer-----	---	---	---	---	---	---	---
707:							
Packerjohn, ashy coarse sandy loam-----	Douglas-fir-----	68	8.9	50	58	104	Douglas-fir, ponderosa pine
	Grand fir-----	76	(e)	50	106	---	
	Ponderosa pine-----	98	7.1	100	99	40	
Shirts, coarse sandy loam-----	Douglas-fir-----	65	6.6	50	52	106	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	10.0	100	80	40	
Zimmer-----	---	---	---	---	---	---	---

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
708: Zimmer.							
Northfork, fine gravelly sandy loam-----	Douglas-fir-----	78	1.7	50	77	98	Douglas-fir, ponderosa pine
	Ponderosa pine-----	113	5.0	100	128	40	
Rock outcrop.							
709: Shirts, sandy loam, south slope-----	Douglas-fir-----	63	6.2	50	49	108	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	4.3	100	88	40	
Charters, sandy loam----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
710: Charters, fine gravelly sandy loam-----	Douglas-fir-----	76	2.1	50	73	99	Douglas-fir, ponderosa pine
	Ponderosa pine-----	96	8.5	100	96	40	
Northfork, fine gravelly sandy loam-----	Douglas-fir-----	78	1.7	50	77	98	Douglas-fir, ponderosa pine
	Ponderosa pine-----	113	5.0	100	128	40	
Shirts, coarse sandy loam-----	Douglas-fir-----	65	6.6	50	52	106	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	10.0	100	80	40	
711: Charters, fine gravelly sandy loam, dry-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	104	(e)	100	110	40	
Shirts, sandy loam, dry	Douglas-fir-----	57	8.5	50	40	112	Douglas-fir, ponderosa pine
	Ponderosa pine-----	84	(e)	100	75	50	
Zimmer-----	---	---	---	---	---	---	---

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
712:							
Charters, fine gravelly sandy loam-----	Douglas-fir-----	76	2.1	50	73	99	Douglas-fir, ponderosa pine
	Ponderosa pine-----	96	8.5	100	96	40	
Shirts, coarse sandy loam-----	Douglas-fir-----	65	6.6	50	52	106	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	10.0	100	80	40	
Zimmer-----	---	---	---	---	---	---	---
714:							
Shirts, sandy loam, south slope-----	Douglas-fir-----	63	6.2	50	49	108	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	4.3	100	88	40	
Eagleson, fine gravelly sandy loam-----	Douglas-fir-----	63	(e)	50	49	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
Charters, sandy loam----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
715:							
Eagleson, fine gravelly sandy loam, dry-----	Douglas-fir-----	60	(e)	50	44	---	---
	Ponderosa pine-----	85	(e)	100	77	40	
Kosh-----	---	---	---	---	---	---	---
716:							
Zan-----	Douglas-fir-----	67	4.6	50	56	105	Douglas-fir
	Subalpine fir-----	87	6.8	100	86	95	
Belsh-----	Douglas-fir-----	67	(e)	50	56	---	Douglas-fir
	Subalpine fir-----	85	(e)	100	83	95	
Montchief-----	Douglas-fir-----	64	(e)	50	51	105	Douglas-fir
	Subalpine fir-----	84	(e)	100	82	---	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
718: Charters, fine gravelly sandy loam-----	Douglas-fir-----	76	2.1	50	73	99	Douglas-fir, ponderosa pine
	Ponderosa pine-----	96	8.5	100	96	40	
Crumley-----	Douglas-fir-----	70	3.4	50	61	103	Douglas-fir, ponderosa pine
	Ponderosa pine-----	93	(e)	100	90	40	
Eagleson, sandy loam---	Douglas-fir-----	65	(e)	50	52	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	(e)	100	80	40	
720: Drybuck, dry-----	Ponderosa pine-----	95	(e)	100	94	40	Ponderosa pine
Deerrun-----	Ponderosa pine-----	94	4.2	100	92	40	Ponderosa pine
Kisky, fine gravelly sandy loam, moist-----	---	---	---	---	---	---	---
721: Shirts, fine gravelly sandy loam-----	Douglas-fir-----	62	5.6	50	47	109	---
	Ponderosa pine-----	85	10.0	100	77	40	
Kosh-----	---	---	---	---	---	---	---
Charters, fine gravelly sandy loam, dry-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	104	(e)	100	110	40	
726: Garval-----	Ponderosa pine-----	91	9.3	100	87	40	Ponderosa pine
Kisky, fine gravelly loamy coarse sand-----	---	---	---	---	---	---	---
730: Hellake-----	Ponderosa pine-----	112	(e)	100	126	40	Ponderosa pine
Stardust-----	Ponderosa pine-----	110	8.5	100	122	40	Ponderosa pine

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
731:							
Shirts, sandy loam, dry	Douglas-fir-----	57	8.5	50	40	112	Douglas-fir, ponderosa pine
	Ponderosa pine-----	84	(e)	100	75	50	
Charters, fine gravelly sandy loam, dry-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	104	(e)	100	110	40	
Zimmer-----	---	---	---	---	---	---	---
733:							
Shirts, fine gravelly sandy loam-----	Douglas-fir-----	62	5.6	50	47	109	---
	Ponderosa pine-----	85	10.0	100	77	40	
Kosh-----	---	---	---	---	---	---	---
734:							
Shirts, sandy loam, dry	Douglas-fir-----	57	8.5	50	40	112	Douglas-fir, ponderosa pine
	Ponderosa pine-----	84	(e)	100	75	50	
Kosh-----	---	---	---	---	---	---	---
735:							
Shirts, coarse sandy loam-----	Douglas-fir-----	65	6.6	50	52	106	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	10.0	100	80	40	
Zimmer-----	---	---	---	---	---	---	---
Charters, fine gravelly sandy loam-----	Douglas-fir-----	76	2.1	50	73	99	Douglas-fir, ponderosa pine
	Ponderosa pine-----	96	8.5	100	96	40	
738:							
Tripod-----	Douglas-fir-----	70	3.3	50	61	102	Douglas-fir, ponderosa pine
	Grand fir-----	73	(e)	50	100	111	
	Ponderosa pine-----	98	5.5	100	99	40	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
738: Packerjohn, ashy coarse sandy loam-----	Douglas-fir-----	68	8.9	50	58	104	Douglas-fir, ponderosa pine
	Grand fir-----	76	(e)	50	106	---	
	Ponderosa pine-----	98	7.1	100	99	40	
Pajo, fine gravelly ashy coarse sandy loam-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Grand fir-----	66	(e)	50	87	---	
	Ponderosa pine-----	94	(e)	100	92	40	
739: Shirts, sandy loam, moist-----	Douglas-fir-----	61	1.7	50	46	109	Douglas-fir, ponderosa pine
	Grand fir-----	65	(e)	50	85	---	
	Ponderosa pine-----	94	4.7	100	92	40	
Zimmer-----	---	---	---	---	---	---	---
Packerjohn, ashy coarse sandy loam-----	Douglas-fir-----	68	8.9	50	58	104	Douglas-fir, ponderosa pine
	Grand fir-----	76	(e)	50	106	---	
	Ponderosa pine-----	98	7.1	100	99	40	
740: Charters, sandy loam----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
Eagleson, fine gravelly sandy loam-----	Douglas-fir-----	63	(e)	50	49	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
741: Zan-----	Douglas-fir-----	67	4.6	50	56	105	Douglas-fir
	Subalpine fir-----	87	6.8	100	86	95	
742: Crumley-----	Douglas-fir-----	70	3.4	50	61	103	Douglas-fir, ponderosa pine
	Ponderosa pine-----	93	(e)	100	90	40	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
742: Eagleson, sandy loam----	Douglas-fir-----	65	(e)	50	52	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	(e)	100	80	40	
743: Packerjohn, ashy coarse sandy loam-----	Douglas-fir-----	68	8.9	50	58	104	Douglas-fir, ponderosa pine
	Grand fir-----	76	(e)	50	106	---	
	Ponderosa pine-----	98	7.1	100	99	40	
Shirts, sandy loam, moist-----	Douglas-fir-----	61	1.7	50	46	109	Douglas-fir, ponderosa pine
	Grand fir-----	65	(e)	50	85	---	
	Ponderosa pine-----	94	4.7	100	92	40	
744: Packerjohn, ashy sandy loam, cool-----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Grand fir-----	77	(e)	50	108	---	
	Ponderosa pine-----	98	(e)	100	99	40	
Shirts, sandy loam, moist-----	Douglas-fir-----	61	1.7	50	46	109	Douglas-fir, ponderosa pine
	Grand fir-----	65	(e)	50	85	---	
	Ponderosa pine-----	94	4.7	100	92	40	
Tripod, cool-----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Grand fir-----	74	(e)	50	102	111	
	Ponderosa pine-----	98	(e)	100	99	40	
745: Tripod, moist-----	Douglas-fir-----	73	(e)	50	67	---	Douglas-fir, Engelmann spruce, lodgepole pine
	Engelmann spruce----	93	(e)	50	96	90	
	Grand fir-----	83	(e)	50	120	---	
	Lodgepole pine-----	91	(e)	100	80	90	
	Ponderosa pine-----	97	(e)	100	97	40	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
745: Packerjohn, ashy sandy loam-----	Douglas-fir-----	73	6.0	50	67	101	Douglas-fir, Engelmann spruce, lodgepole pine
	Engelmann spruce----	93	7.6	50	96	90	
	Grand fir-----	83	4.0	50	120	104	
	Lodgepole pine-----	91	4.7	100	80	90	
	Ponderosa pine-----	97	0.6	100	97	40	
746: Packerjohn, ashy sandy loam-----	Douglas-fir-----	73	6.0	50	67	101	Douglas-fir, Engelmann spruce, lodgepole pine
	Engelmann spruce----	93	7.6	50	96	90	
	Grand fir-----	83	4.0	50	120	104	
	Lodgepole pine-----	91	4.7	100	80	90	
	Ponderosa pine-----	97	0.6	100	97	40	
747: Pinney, moist-----	Douglas-fir-----	68	4.4	50	58	105	Douglas-fir, ponderosa pine
	Grand fir-----	85	(e)	50	124	---	
	Ponderosa pine-----	105	(e)	100	112	40	
Charters, fine gravelly sandy loam-----	Douglas-fir-----	76	2.1	50	73	99	Douglas-fir, ponderosa pine
	Ponderosa pine-----	96	8.5	100	96	40	
Shirts, sandy loam, dry	Douglas-fir-----	57	8.5	50	40	112	Douglas-fir, ponderosa pine
	Ponderosa pine-----	84	(e)	100	75	50	
748: Belsh, moist-----	Douglas-fir-----	61	4.6	50	46	106	Douglas-fir, Engelmann spruce, lodgepole pine
	Engelmann spruce----	92	(e)	50	94	90	
	Lodgepole pine-----	90	8.1	100	79	90	
	Subalpine fir-----	78	(e)	100	73	100	
Zan, moist-----	Douglas-fir-----	63	(e)	50	49	---	Douglas-fir, Engelmann spruce, lodgepole pine
	Engelmann spruce----	95	6.7	50	99	90	
	Lodgepole pine-----	93	(e)	100	82	90	
	Subalpine fir-----	80	(e)	100	76	100	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
749:							
Quartzburg-----	Douglas-fir-----	57	(e)	50	40	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	83	(e)	100	74	40	
Charters, sandy loam----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
750:							
Garval-----	Ponderosa pine-----	91	9.3	100	87	40	Ponderosa pine
Kisky, fine gravelly loamy coarse sand-----	---	---	---	---	---	---	---
Rock outcrop.							
751:							
Belsh, moist-----	Douglas-fir-----	61	4.6	50	46	106	Douglas-fir, Engelmann spruce, lodgepole pine
	Engelmann spruce----	92	(e)	50	94	90	
	Lodgepole pine-----	90	8.1	100	79	90	
	Subalpine fir-----	78	(e)	100	73	100	
Zan, moist-----	Douglas-fir-----	63	(e)	50	49	---	Douglas-fir, Engelmann spruce, lodgepole pine
	Engelmann spruce----	95	6.7	50	99	90	
	Lodgepole pine-----	93	(e)	100	82	90	
	Subalpine fir-----	80	(e)	100	76	100	
753:							
Tripod, cool-----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Grand fir-----	74	(e)	50	102	111	
	Ponderosa pine-----	98	(e)	100	99	40	
Packerjohn, ashy sandy loam, cool-----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Grand fir-----	77	(e)	50	108	---	
	Ponderosa pine-----	98	(e)	100	99	40	
Shirts, sandy loam, moist-----	Douglas-fir-----	61	1.7	50	46	109	Douglas-fir, ponderosa pine
	Grand fir-----	65	(e)	50	85	---	
	Ponderosa pine-----	94	4.7	100	92	40	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
754: Packerjohn, ashy sandy loam-----	Douglas-fir-----	73	6.0	50	67	101	Douglas-fir, Engelmann spruce, lodgepole pine
	Engelmann spruce----	93	7.6	50	96	90	
	Grand fir-----	83	4.0	50	120	104	
	Lodgepole pine-----	91	4.7	100	80	90	
	Ponderosa pine-----	97	0.6	100	97	40	
Shirts, sandy loam, moist-----	Douglas-fir-----	61	1.7	50	46	109	Douglas-fir, ponderosa pine
	Grand fir-----	65	(e)	50	85	---	
	Ponderosa pine-----	94	4.7	100	92	40	
755: Zimmer-----	---	---	---	---	---	---	---
Quartzburg-----	Douglas-fir-----	57	(e)	50	40	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	83	(e)	100	74	40	
Rock outcrop.							
756: Pajo, fine gravelly ashy coarse sandy loam-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Grand fir-----	66	(e)	50	87	---	
	Ponderosa pine-----	94	(e)	100	92	40	
Tripod-----	Douglas-fir-----	70	3.3	50	61	102	Douglas-fir, ponderosa pine
	Grand fir-----	73	(e)	50	100	111	
	Ponderosa pine-----	98	5.5	100	99	40	
Kosh, moist-----	---	---	---	---	---	---	---
758: Eagleson, sandy loam----	Douglas-fir-----	65	(e)	50	52	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	87	(e)	100	80	40	
Kosh, moist.							

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
758: Charters, fine gravelly sandy loam-----	Douglas-fir-----	76	2.1	50	73	99	Douglas-fir, ponderosa pine
	Ponderosa pine-----	96	8.5	100	96	40	
759: Charters, sandy loam----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	94	(e)	100	92	40	
Shirts, sandy loam, south slope-----	Douglas-fir-----	63	6.2	50	49	108	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	4.3	100	88	40	
Kosh, moist-----	---	---	---	---	---	---	---
761: Charters, fine gravelly sandy loam-----	Douglas-fir-----	76	2.1	50	73	99	Douglas-fir, ponderosa pine
	Ponderosa pine-----	96	8.5	100	96	40	
Middlefork, moist-----	Douglas-fir-----	72	(e)	50	65	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	101	4.9	100	104	40	
762: Drybuck, dry-----	Ponderosa pine-----	95	(e)	100	94	40	Ponderosa pine
Hellake-----	Ponderosa pine-----	112	(e)	100	126	40	Ponderosa pine
Deerrun-----	Ponderosa pine-----	94	4.2	100	92	40	Ponderosa pine
763: Eagleson, fine gravelly sandy loam-----	Douglas-fir-----	63	(e)	50	49	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	
Kosh-----	---	---	---	---	---	---	---
Rock outcrop.							

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
765: Backswitch, coarse sandy loam-----	Douglas-fir-----	53	2.5	50	34	114	Ponderosa pine
	Ponderosa pine-----	87	6.7	100	80	40	
Zimmer, warm-----	---	---	---	---	---	---	---
Rock outcrop.							
766: Backswitch, coarse sandy loam-----	Douglas-fir-----	53	2.5	50	34	114	Ponderosa pine
	Ponderosa pine-----	87	6.7	100	80	40	
Charters, coarse sandy loam-----	Douglas-fir-----	64	(e)	50	51	---	Ponderosa pine
	Ponderosa pine-----	98	(e)	100	99	40	
Zimmer, dry-----	---	---	---	---	---	---	---
767: Shirts, sandy loam, dry	Douglas-fir-----	57	8.5	50	40	112	Douglas-fir, ponderosa pine
	Ponderosa pine-----	84	(e)	100	75	50	
Kosh-----	---	---	---	---	---	---	---
Charters, fine gravelly sandy loam, dry-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	104	(e)	100	110	40	
768: Shirts, sandy loam, south slope-----	Douglas-fir-----	63	6.2	50	49	108	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	4.3	100	88	40	
Kosh, moist-----	---	---	---	---	---	---	---
Eagleson, fine gravelly sandy loam-----	Douglas-fir-----	63	(e)	50	49	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	40	

Table 11.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity						Trees to manage
	Common trees	Site index average	Site index standard deviation	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		<i>Ft</i>		<i>Yrs</i>	<i>Cu ft/ac/yr</i>	<i>Yrs</i>	
770:							
Shirts, sandy loam, dry	Douglas-fir-----	57	8.5	50	40	112	Douglas-fir, ponderosa pine
	Ponderosa pine-----	84	(e)	100	75	50	
Charters, fine gravelly sandy loam, dry-----	Douglas-fir-----	66	(e)	50	54	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	104	(e)	100	110	40	
Kosh, moist-----	---	---	---	---	---	---	---
771:							
Backswitch, sandy loam--	Douglas-fir-----	57	5.2	50	40	112	Douglas-fir, lodgepole pine
	Lodgepole pine-----	95	(e)	100	84	90	
	Ponderosa pine-----	83	(e)	100	74	40	
Shirts, sandy loam, dry	Douglas-fir-----	57	8.5	50	40	112	Douglas-fir, ponderosa pine
	Ponderosa pine-----	84	(e)	100	75	50	
772:							
Pajo, fine gravelly ashy sandy loam-----	Douglas-fir-----	70	(e)	50	61	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	92	(e)	100	88	50	
Packerjohn, ashy sandy loam, dry-----	Douglas-fir-----	72	(e)	50	65	---	Douglas-fir, ponderosa pine
	Ponderosa pine-----	96	(e)	100	96	50	
Kosh, moist-----	---	---	---	---	---	---	---

Table 12a.--Forestland Management (Part I)

(Only the soils that are forested are included in this table. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
400: Ralsen-----	35	Severe Flooding Wetness	1.00 1.00	Poorly suited Flooding	1.00	Moderate Low strength	0.50
Foxlane-----	30	Slight		Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Pay-----	20	Severe Flooding Wetness	1.00 1.00	Poorly suited Flooding Sandiness	1.00 0.50	Moderate Low strength	0.50
401: Staircase-----	85	Slight		Well suited		Moderate Low strength	0.50
402: Crossbow-----	60	Severe Flooding	1.00	Poorly suited Flooding	1.00	Moderate Low strength	0.50
Foxlane-----	20	Slight		Moderately suited Sandiness	0.50	Moderate Low strength	0.50
404: Riverpoint-----	55	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Hellake-----	25	Moderate Low strength	0.50	Moderately suited Low strength	0.50	Severe Low strength	1.00
405: Hellake-----	65	Moderate Low strength	0.50	Moderately suited Low strength	0.50	Severe Low strength	1.00
Staircase-----	15	Slight		Well suited		Moderate Low strength	0.50
406: Hellake-----	75	Moderate Low strength	0.50	Moderately suited Low strength	0.50	Severe Low strength	1.00
407: Hellake-----	75	Moderate Slope Sandiness	0.50 0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
408: Stardust-----	75	Slight		Well suited		Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
409: Stardust-----	75	Slight		Well suited		Moderate Low strength	0.50
410: Stardust-----	65	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Riverpoint, very stony surface-----	20	Moderate Slope Sandiness	0.50 0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderate Low strength	0.50
411: Huston, very stony surface-----	45	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zeb, gravelly sandy loam-----	35	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
412: Huston, very stony surface-----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Stardust-----	30	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
413: Cloudyway-----	75	Slight		Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
414: Hellake-----	40	Moderate Slope Sandiness	0.50 0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Middlefork-----	40	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
415: Middlefork-----	55	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Pinney-----	20	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
416: Pinney, moist-----	35	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
416: Middlefork, moist---	30	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Zeb, gravelly sandy loam-----	20	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
417: Middlefork-----	60	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Zeb, fine gravelly sandy loam-----	20	Moderate Slope	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderate Low strength	0.50
418: Middlefork-----	55	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Zeb, fine gravelly sandy loam-----	25	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
419: Charters, fine gravelly sandy loam, dry-----	50	Moderate Slope	0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zeb, fine gravelly sandy loam-----	35	Moderate Slope	0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
420: Pioneervil-----	40	Slight		Well suited		Moderate Low strength	0.50
Grimescreek-----	35	Severe Flooding	1.00	Poorly suited Flooding	1.00	Moderate Low strength	0.50
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Slight Strength	0.10

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
422: Lithic Xerorthents, very stony surface-	30	Severe Restrictive layer Sandiness	1.00 0.50	Moderately suited Sandiness	0.50	Slight Strength	0.10
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Slight		Well suited		Moderate Low strength	0.50
423: Dystric Xeropsamments, very stony surface-----	35	Moderate Restrictive layer Slope	0.50 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Ultic Haploxeralfs--	35	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Lithic Xerorthents--	15	Severe Restrictive layer	1.00	Moderately suited Slope	0.50	Moderate Low strength	0.50
424: Middlefork-----	50	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Charters, coarse sandy loam-----	35	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
425: Middlefork-----	55	Moderate Low strength	0.50	Moderately suited Low strength	0.50	Severe Low strength	1.00
Brassey-----	25	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
426: Middlefork, moist---	85	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
427: Middlefork, moist---	85	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
428: Zeb, gravelly sandy loam-----	45	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Republic-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
429: Huston, very stony surface-----	85	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
560: Robbscreek, moist---	30	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Hellake-----	25	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Shimo, fine gravelly loamy sand, north slope-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
640: Timberbutte-----	85	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Slight Strength	0.10
650: Longs-----	40	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Highvalley-----	30	Moderate Slope	0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Hoff-----	20	Severe Restrictive layer Slope	1.00 0.50	Poorly suited Slope	1.00	Slight Strength	0.10
651: Hess-----	35	Moderate Slope Restrictive layer	0.50 0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Lidos-----	30	Moderate Slope Stickiness/slope	0.50 0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Cleymor-----	25	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
652: Hess-----	40	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Lidos-----	30	Moderate Slope Stickiness/slope	0.50 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Klicker-----	20	Severe Restrictive layer Slope	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
653: Lidos-----	45	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Klicker-----	30	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Hess-----	20	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
654: Shilling-----	40	Severe Slope	1.00	Poorly suited Slope	1.00	Slight Strength	0.10
Highvalley-----	30	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Hoff-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Slight Strength	0.10
655: Shilling, moist----	40	Moderate Slope	0.50	Poorly suited Slope	1.00	Slight Strength	0.10
Highvalley, moist---	35	Moderate Slope	0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
656: Shilling, moist----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Slight Strength	0.10
Highvalley, moist---	40	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
657: Pumpkin, stony surface-----	95	Moderate Slope Sandiness	0.50 0.50	Moderately suited Slope Sandiness Low strength	0.50 0.50 0.50	Severe Low strength	1.00

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
658: Cleymor-----	50	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Pumpkin, stony surface-----	30	Moderate Slope Sandiness	0.50 0.50	Moderately suited Slope Sandiness Low strength	0.50 0.50 0.50	Severe Low strength	1.00
660: Longs-----	60	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Highvalley-----	30	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
661: Awley-----	50	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Bo-----	35	Moderate Slope	0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
662: Awley-----	65	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Bo-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
663: Cleymor-----	65	Moderate Slope	0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Hoff-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Slight Strength	0.10
666: Pachic Argixerolls, very stony surface	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Rubble land-----	30	Not rated		Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Severe Slope Stoniness	1.00 0.50	Poorly suited Slope Rock fragments	1.00 0.50	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
700: Drybuck-----	50	Moderate Slope Restrictive layer	0.50 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Whisk, moist-----	30	Severe Restrictive layer Slope	1.00 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
701: Drybuck-----	55	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Whisk, moist-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
702: Deerrun-----	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kisky, fine gravelly sandy loam, moist--	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Drybuck, dry-----	15	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
704: Drybuck-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Northfork, fine gravelly sandy loam	30	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Whisk, moist-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
705: Northfork, sandy loam-----	60	Moderate Slope	0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Shirts, sandy loam, dry-----	20	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
706: Northfork, fine gravelly sandy loam	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Shirts, coarse sandy loam-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zimmer-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
707: Packerjohn, ashy coarse sandy loam--	40	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Shirts, coarse sandy loam-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zimmer-----	15	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
708: Zimmer-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Northfork, fine gravelly sandy loam	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, sandy loam	30	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
710: Charters, fine gravelly sandy loam	35	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Northfork, fine gravelly sandy loam	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Shirts, coarse sandy loam-----	15	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
711: Charters, fine gravelly sandy loam, dry-----	30	Moderate Slope	0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Shirts, sandy loam, dry-----	30	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
711: Zimmer-----	30	Severe Restrictive layer Slope	1.00 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
712: Charters, fine gravelly sandy loam	40	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Shirts, coarse sandy loam-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zimmer-----	15	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
714: Shirts, sandy loam, south slope-----	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Eagleson, fine gravelly sandy loam	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, sandy loam	15	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
715: Eagleson, fine gravelly sandy loam, dry-----	45	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kosh-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
716: Zan-----	45	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Belsh-----	25	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Montchief-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
718: Charters, fine gravelly sandy loam	35	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Crumley-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Severe Low strength	1.00

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
718: Eagleson, sandy loam	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
720: Drybuck, dry-----	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Deerrun-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kisky, fine gravelly sandy loam, moist--	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
721: Shirts, fine gravelly sandy loam	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kosh-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, fine gravelly sandy loam, dry-----	15	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
726: Garval-----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kisky, fine gravelly loamy coarse sand--	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
730: Hellake-----	40	Moderate Slope Sandiness	0.50 0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Stardust-----	40	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
731: Shirts, sandy loam, dry-----	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, fine gravelly sandy loam, dry-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zimmer-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
733: Shirts, fine gravelly sandy loam	50	Severe Restrictive layer Slope	1.00 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Kosh-----	30	Severe Restrictive layer Slope	1.00 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
734: Shirts, sandy loam, dry-----	45	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kosh-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
735: Shirts, coarse sandy loam-----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zimmer-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, fine gravelly sandy loam	15	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
738: Tripod-----	35	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Packerjohn, ashy coarse sandy loam--	30	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Pajo, fine gravelly ashy coarse sandy loam-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
739: Shirts, sandy loam, moist-----	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zimmer-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Packerjohn, ashy coarse sandy loam--	20	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
740: Charters, sandy loam	40	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Eagleson, fine gravelly sandy loam	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
741: Zan-----	85	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
742: Crumley-----	65	Severe Slope	1.00	Poorly suited Slope	1.00	Severe Low strength	1.00
Eagleson, sandy loam	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
743: Packerjohn, ashy coarse sandy loam--	50	Moderate Slope Sandiness	0.50 0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderate Low strength	0.50
Shirts, sandy loam, moist-----	35	Moderate Slope Restrictive layer	0.50 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
744: Packerjohn, ashy sandy loam, cool---	60	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Shirts, sandy loam, moist-----	20	Moderate Slope Restrictive layer	0.50 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Tripod, cool-----	15	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
745: Tripod, moist-----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Packerjohn, ashy sandy loam-----	45	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
746: Packerjohn, ashy sandy loam-----	90	Moderate Slope	0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
747: Pinney, moist-----	40	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Charters, fine gravelly sandy loam	25	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Shirts, sandy loam, dry-----	15	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
748: Belsh, moist-----	45	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Zan, moist-----	40	Moderate Slope	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderate Low strength	0.50
749: Quartzburg-----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, sandy loam	25	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
750: Garval-----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kisky, fine gravelly loamy coarse sand--	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
751: Belsh, moist-----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Zan, moist-----	40	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
753: Tripod, cool-----	45	Moderate Slope	0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Packerjohn, ashy sandy loam, cool---	25	Moderate Slope	0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
753: Shirts, sandy loam, moist-----	20	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
754: Packerjohn, ashy sandy loam-----	55	Moderate Slope	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderate Low strength	0.50
Shirts, sandy loam, moist-----	20	Moderate Slope Restrictive layer	0.50 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
755: Zimmer-----	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Quartzburg-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Tripod-----	25	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Kosh, moist-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
758: Eagleson, sandy loam	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kosh, moist-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, fine gravelly sandy loam	20	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
759: Charters, sandy loam	30	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Shirts, sandy loam, south slope-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
759: Kosh, moist-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
761: Charters, fine gravelly sandy loam	45	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Middlefork, moist---	40	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
762: Drybuck, dry-----	40	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Hellake-----	30	Moderate Slope Sandiness	0.50 0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Deerrun-----	20	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
763: Eagleson, fine gravelly sandy loam	40	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kosh-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Moderate Slope Restrictive layer	0.50 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Zimmer, warm-----	20	Severe Restrictive layer Slope	1.00 0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50
Rock outcrop-----	15	Not rated		Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Moderate Slope Restrictive layer	0.50 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, coarse sandy loam-----	15	Moderate Slope	0.50	Moderately suited Slope	0.50	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
766: Zimmer, dry-----	15	Severe Restrictive layer Slope	1.00 0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
767: Shirts, sandy loam, dry-----	45	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kosh-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, fine gravelly sandy loam, dry-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
768: Shirts, sandy loam, south slope-----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kosh, moist-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Eagleson, fine gravelly sandy loam	15	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
770: Shirts, sandy loam, dry-----	50	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Charters, fine gravelly sandy loam, dry-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Kosh, moist-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
771: Backswitch, sandy loam-----	55	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Shirts, sandy loam, dry-----	25	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
772: Pajo, fine gravelly ashy sandy loam----	35	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50

Table 12a.--Forestland Management (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
772: Packerjohn, ashy sandy loam, dry----	25	Severe Slope	1.00	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
Kosh, moist-----	20	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50

Table 12b.--Forestland Management (Part II)

(Only the soils that are forested are included in this table. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
400: Ralsen-----	35	Slight		Slight		Poorly suited Flooding	1.00
Foxlane-----	30	Slight		Slight		Moderately suited Sandiness	0.50
Pay-----	20	Slight		Slight		Poorly suited Flooding Sandiness	1.00 0.50
401: Staircase-----	85	Slight		Slight		Well suited	
402: Crossbow-----	60	Slight		Slight		Poorly suited Flooding	1.00
Foxlane-----	20	Slight		Slight		Moderately suited Sandiness	0.50
404: Riverpoint-----	55	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Low strength	0.50 0.50
Hellake-----	25	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength	0.50
405: Hellake-----	65	Slight		Slight		Moderately suited Low strength	0.50
Staircase-----	15	Slight		Slight		Well suited	
406: Hellake-----	75	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength	0.50
407: Hellake-----	75	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Low strength	0.50 0.50
408: Stardust-----	75	Slight		Slight		Well suited	
409: Stardust-----	75	Slight		Moderate Slope/erodibility	0.50	Well suited	

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
410: Stardust-----	65	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Riverpoint, very stony surface-----	20	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Sandiness	0.50 0.50
411: Huston, very stony surface-----	45	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zeb, gravelly sandy loam-----	35	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
412: Huston, very stony surface-----	50	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Stardust-----	30	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
413: Cloudyway-----	75	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
414: Hellake-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Middlefork-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
415: Middlefork-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Pinney-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
416: Pinney, moist-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Middlefork, moist---	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
416: Zeb, gravelly sandy loam-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
417: Middlefork-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Zeb, fine gravelly sandy loam-----	20	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Sandiness	0.50 0.50
418: Middlefork-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Zeb, fine gravelly sandy loam-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
419: Charters, fine gravelly sandy loam, dry-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zeb, fine gravelly sandy loam-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
420: Pioneervil-----	40	Slight		Slight		Well suited	
Grimescreek-----	35	Slight		Slight		Poorly suited Flooding	1.00
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Slight		Slight		Moderately suited Sandiness	0.50
422: Lithic Xerorthents, very stony surface	30	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness	0.50
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
422: Dystric Xeropsamments, very stony surface-----	20	Slight		Moderate Slope/erodibility	0.50	Well suited	
423: Dystric Xeropsamments, very stony surface-----	35	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Ultic Haploxerafals--	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Lithic Xerorthents--	15	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
424: Middlefork-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Charters, coarse sandy loam-----	35	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
425: Middlefork-----	55	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength	0.50
Brassey-----	25	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
426: Middlefork, moist---	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
427: Middlefork, moist---	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
428: Zeb, gravelly sandy loam-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Republic-----	35	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
429: Huston, very stony surface-----	85	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
560: Robbscreek, moist---	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Hellake-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Shimo, fine gravelly loamy sand, north slope-----	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
640: Timberbutte-----	85	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
650: Longs-----	40	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Poorly suited Slope Low strength	1.00 0.50
Highvalley-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Hoff-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
651: Hess-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Lidos-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Cleymor-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
652: Hess-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Lidos-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Klicker-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
653: Lidos-----	45	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Klicker-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Hess-----	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
654: Shilling-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Highvalley-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Hoff-----	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
655: Shilling, moist-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Highvalley, moist---	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
656: Shilling, moist-----	50	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Highvalley, moist---	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
657: Pumpkin, stony surface-----	95	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Sandiness Low strength	0.50 0.50 0.50
658: Cleymor-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Pumpkin, stony surface-----	30	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Sandiness Low strength	0.50 0.50 0.50

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
660: Longs-----	60	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Highvalley-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
661: Awley-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Bo-----	35	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Poorly suited Slope	1.00
662: Awley-----	65	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Bo-----	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
663: Cleymor-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Hoff-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
666: Pachic Argixerolls, very stony surface	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rubble land-----	30	Not rated		Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Rock fragments	1.00 0.50
700: Drybuck-----	50	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Whisk, moist-----	30	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
701: Drybuck-----	55	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Whisk, moist-----	25	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
702: Deerrun-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kisky, fine gravelly sandy loam, moist--	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Drybuck, dry-----	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
704: Drybuck-----	35	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Northfork, fine gravelly sandy loam	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Whisk, moist-----	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
705: Northfork, sandy loam-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Shirts, sandy loam, dry-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
706: Northfork, fine gravelly sandy loam	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Shirts, coarse sandy loam-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zimmer-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
707: Packerjohn, ashy coarse sandy loam--	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Shirts, coarse sandy loam-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zimmer-----	15	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
708: Zimmer-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
708: Northfork, fine gravelly sandy loam	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, sandy loam	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
710: Charters, fine gravelly sandy loam	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Northfork, fine gravelly sandy loam	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Shirts, coarse sandy loam-----	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
711: Charters, fine gravelly sandy loam, dry-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Shirts, sandy loam, dry-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zimmer-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
712: Charters, fine gravelly sandy loam	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Shirts, coarse sandy loam-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zimmer-----	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
714: Shirts, sandy loam, south slope-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Eagleson, fine gravelly sandy loam	35	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, sandy loam	15	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kosh-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
716: Zan-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Belsh-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Montchief-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
718: Charters, fine gravelly sandy loam	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Crumley-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Eagleson, sandy loam	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
720: Drybuck, dry-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Deerrun-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kisky, fine gravelly sandy loam, moist--	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
721: Shirts, fine gravelly sandy loam	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kosh-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam, dry-----	15	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
726: Garval-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kisky, fine gravelly loamy coarse sand--	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
730: Hellake-----	40	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Low strength	0.50 0.50
Stardust-----	40	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
731: Shirts, sandy loam, dry-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam, dry-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zimmer-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
733: Shirts, fine gravelly sandy loam	50	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Kosh-----	30	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
734: Shirts, sandy loam, dry-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kosh-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
735: Shirts, coarse sandy loam-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zimmer-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
738: Tripod-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Packerjohn, ashy coarse sandy loam--	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Pajo, fine gravelly ashy coarse sandy loam-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
739: Shirts, sandy loam, moist-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zimmer-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Packerjohn, ashy coarse sandy loam--	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
740: Charters, sandy loam	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Eagleson, fine gravelly sandy loam	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
741: Zan-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
742: Crumley-----	65	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
742: Eagleson, sandy loam	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
743: Packerjohn, ashy coarse sandy loam--	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Sandiness	0.50 0.50
Shirts, sandy loam, moist-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
744: Packerjohn, ashy sandy loam, cool---	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Shirts, sandy loam, moist-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Tripod, cool-----	15	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
745: Tripod, moist-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Packerjohn, ashy sandy loam-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
746: Packerjohn, ashy sandy loam-----	90	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
747: Pinney, moist-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Charters, fine gravelly sandy loam	25	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Shirts, sandy loam, dry-----	15	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
748: Belsh, moist-----	45	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
748: Zan, moist-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Sandiness	0.50 0.50
749: Quartzburg-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, sandy loam	25	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
750: Garval-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kisky, fine gravelly loamy coarse sand--	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
751: Belsh, moist-----	50	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Zan, moist-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
753: Tripod, cool-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Packerjohn, ashy sandy loam, cool---	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Shirts, sandy loam, moist-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
754: Packerjohn, ashy sandy loam-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Sandiness	0.50 0.50
Shirts, sandy loam, moist-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
755: Zimmer-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
755: Quartzburg-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Tripod-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Kosh, moist-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
758: Eagleson, sandy loam	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kosh, moist-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
759: Charters, sandy loam	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Shirts, sandy loam, south slope-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kosh, moist-----	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
761: Charters, fine gravelly sandy loam	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Middlefork, moist---	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
762: Drybuck, dry-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
762: Hellake-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Deerrun-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
763: Eagleson, fine gravelly sandy loam	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kosh-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Zimmer, warm-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Rock outcrop-----	15	Not rated		Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, coarse sandy loam-----	15	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Zimmer, dry-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
767: Shirts, sandy loam, dry-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kosh-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam, dry-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
768: Shirts, sandy loam, south slope-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12b.--Forestland Management (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
768: Kosh, moist-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Eagleson, fine gravelly sandy loam	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
770: Shirts, sandy loam, dry-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam, dry-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Kosh, moist-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
771: Backswitch, sandy loam-----	55	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Shirts, sandy loam, dry-----	25	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
772: Pajo, fine gravelly ashy sandy loam----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Packerjohn, ashy sandy loam, dry----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Kosh, moist-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)

(Only the soils that are forested are included in this table. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
400: Ralsen-----	35	Well suited		Well suited		Poorly suited Wetness	1.00
Foxlane-----	30	Moderately suited Sandiness Rock fragments	0.50 0.50	Poorly suited Rock fragments Sandiness	0.75 0.50	Moderately suited Sandiness	0.50
Pay-----	20	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Poorly suited Wetness Sandiness	1.00 0.50
401: Staircase-----	85	Well suited		Moderately suited Rock fragments	0.50	Well suited	
402: Crossbow-----	60	Well suited		Well suited		Well suited	
Foxlane-----	20	Moderately suited Sandiness Rock fragments	0.50 0.50	Poorly suited Rock fragments Sandiness	0.75 0.50	Moderately suited Sandiness	0.50
404: Riverpoint-----	55	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Low strength	0.50
Hellake-----	25	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
405: Hellake-----	65	Well suited		Well suited		Moderately suited Low strength	0.50
Staircase-----	15	Well suited		Moderately suited Rock fragments	0.50	Well suited	
406: Hellake-----	75	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
407: Hellake-----	75	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
408: Stardust-----	75	Well suited		Moderately suited Rock fragments	0.50	Well suited	
409: Stardust-----	75	Well suited		Moderately suited Rock fragments Slope	0.50 0.50	Well suited	

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
410: Stardust-----	65	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Well suited	
Riverpoint, very stony surface-----	20	Moderately suited Sandiness	0.50	Moderately suited Slope Rock fragments Sandiness	0.50 0.50 0.50	Moderately suited Sandiness	0.50
411: Huston, very stony surface-----	45	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Zeb, gravelly sandy loam-----	35	Moderately suited Sandiness Slope Rock fragments	0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 0.75 0.50	Poorly suited Slope Sandiness	1.00 0.50
412: Huston, very stony surface-----	50	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Stardust-----	30	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Well suited	
413: Cloudyway-----	75	Moderately suited Sandiness	0.50	Moderately suited Sandiness Slope Rock fragments	0.50 0.50 0.50	Moderately suited Sandiness	0.50
414: Hellake-----	40	Well suited		Poorly suited Slope	0.75	Moderately suited Low strength Slope	0.50 0.50
Middlefork-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00	Moderately suited Slope Low strength	0.50 0.50
415: Middlefork-----	55	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
Pinney-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00	Moderately suited Slope Low strength	0.50 0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
416: Pinney, moist-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00	Moderately suited Slope Low strength	0.50 0.50
Middlefork, moist---	30	Moderately suited Slope	0.50	Unsuited Slope	1.00	Moderately suited Slope Low strength	0.50 0.50
Zeb, gravelly sandy loam-----	20	Moderately suited Sandiness Slope Rock fragments	0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 0.75 0.50	Moderately suited Slope Sandiness	0.50 0.50
417: Middlefork-----	60	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
Zeb, fine gravelly sandy loam-----	20	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness Rock fragments	0.50 0.50 0.50	Moderately suited Sandiness	0.50
418: Middlefork-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00	Moderately suited Slope Low strength	0.50 0.50
Zeb, fine gravelly sandy loam-----	25	Moderately suited Sandiness Slope	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Moderately suited Slope Sandiness	0.50 0.50
419: Charters, fine gravelly sandy loam, dry-----	50	Well suited		Unsuited Slope Rock fragments	1.00 0.50	Moderately suited Slope	0.50
Zeb, fine gravelly sandy loam-----	35	Moderately suited Sandiness	0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Moderately suited Slope Sandiness	0.50 0.50
420: Pioneervil-----	40	Well suited		Moderately suited Rock fragments	0.50	Well suited	
Grimescreek-----	35	Well suited		Well suited		Well suited	

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Moderately suited Sandiness Rock fragments	0.50 0.50	Unsuited Rock fragments Sandiness	1.00 0.50	Moderately suited Sandiness	0.50
422: Lithic Xerorthents, very stony surface	30	Unsuited Restrictive layer Sandiness Rock fragments	1.00 0.50 0.50	Unsuited Rock fragments Restrictive layer Sandiness Slope	1.00 1.00 0.50 0.50	Moderately suited Sandiness	0.50
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Well suited		Moderately suited Rock fragments Slope	0.50 0.50	Well suited	
423: Dystric Xeropsamments, very stony surface-----	35	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Well suited	
Ultic Haploxeralfs--	35	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Lithic Xerorthents--	15	Poorly suited Rock fragments	0.75	Unsuited Rock fragments Slope	1.00 0.50	Well suited	
424: Middlefork-----	50	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
Charters, coarse sandy loam-----	35	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Well suited	
425: Middlefork-----	55	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
Brassey-----	25	Moderately suited Sandiness Rock fragments	0.50 0.50	Poorly suited Rock fragments Sandiness Slope	0.75 0.50 0.50	Moderately suited Sandiness	0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
426: Middlefork, moist---	85	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
427: Middlefork, moist---	85	Moderately suited Slope	0.50	Unsuited Slope	1.00	Moderately suited Slope Low strength	0.50 0.50
428: Zeb, gravelly sandy loam-----	45	Moderately suited Sandiness Slope Rock fragments	0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 0.75 0.50	Moderately suited Slope Sandiness	0.50 0.50
Republic-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
429: Huston, very stony surface-----	85	Well suited		Moderately suited Rock fragments Slope	0.50 0.50	Well suited	
560: Robbscreek, moist---	30	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Hellake-----	25	Well suited		Unsuited Slope	1.00	Moderately suited Low strength Slope	0.50 0.50
Shimo, fine gravelly loamy sand, north slope-----	20	Moderately suited Sandiness Slope	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope	1.00
640: Timberbutte-----	85	Moderately suited Slope Sandiness Rock fragments	0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 0.75 0.50	Poorly suited Slope Sandiness	1.00 0.50
650: Longs-----	40	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Low strength Slope	0.50 0.50
Highvalley-----	30	Well suited		Poorly suited Slope	0.75	Moderately suited Low strength Slope	0.50 0.50
Hoff-----	20	Moderately suited Rock fragments	0.50	Unsuited Rock fragments Slope	1.00 0.75	Moderately suited Slope	0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
651: Hess-----	35	Well suited		Poorly suited Slope	0.75	Moderately suited Low strength Slope	0.50 0.50
Lidos-----	30	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Rock fragments Stickiness; high plasticity index	0.75 0.50 0.50	Moderately suited Low strength Slope	0.50 0.50
Cleymor-----	25	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Stickiness; high plasticity index	0.75 0.50	Moderately suited Low strength Slope	0.50 0.50
652: Hess-----	40	Well suited		Poorly suited Slope	0.75	Moderately suited Low strength Slope	0.50 0.50
Lidos-----	30	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Rock fragments Stickiness; high plasticity index	0.75 0.50 0.50	Moderately suited Low strength Slope	0.50 0.50
Klicker-----	20	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Low strength Slope	0.50 0.50
653: Lidos-----	45	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Unsuited Slope Rock fragments Stickiness; high plasticity index	1.00 0.50 0.50	Poorly suited Slope Low strength	1.00 0.50
Klicker-----	30	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50
Hess-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope Low strength	1.00 0.50
654: Shilling-----	40	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Highvalley-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope Low strength	1.00 0.50
Hoff-----	20	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 1.00	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
655: Shilling, moist-----	40	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Highvalley, moist---	35	Well suited		Poorly suited Slope	0.75	Moderately suited Low strength Slope	0.50 0.50
656: Shilling, moist-----	50	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Highvalley, moist---	40	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope Low strength	1.00 0.50
657: Pumpkin, stony surface-----	95	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness Rock fragments	0.50 0.50 0.50	Moderately suited Low strength Sandiness	0.50 0.50
658: Cleymor-----	50	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Stickiness; high plasticity index	0.75 0.50	Moderately suited Low strength Slope	0.50 0.50
Pumpkin, stony surface-----	30	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness Rock fragments	0.50 0.50 0.50	Moderately suited Low strength Sandiness	0.50 0.50
660: Longs-----	60	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50
Highvalley-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope Low strength	1.00 0.50
661: Awley-----	50	Moderately suited Sandiness	0.50	Poorly suited Slope Sandiness	0.75 0.50	Moderately suited Sandiness Slope	0.50 0.50
Bo-----	35	Well suited		Poorly suited Slope	0.75	Moderately suited Slope	0.50
662: Awley-----	65	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness	1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
662: Bo-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
663: Cleymor-----	65	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Stickiness; high plasticity index	0.75 0.50	Moderately suited Low strength Slope	0.50 0.50
Hoff-----	20	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 1.00	Moderately suited Slope	0.50
666: Pachic Argixerolls, very stony surface	40	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Rubble land-----	30	Not rated		Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope Rock fragments	1.00 0.50
700: Drybuck-----	50	Well suited		Moderately suited Slope	0.50	Well suited	
Whisk, moist-----	30	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Well suited	
701: Drybuck-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
Whisk, moist-----	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
702: Deerrun-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
Kisky, fine gravelly sandy loam, moist--	40	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
Drybuck, dry-----	15	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
704: Drybuck-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
704: Northfork, fine gravelly sandy loam	30	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Whisk, moist-----	20	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
705: Northfork, sandy loam-----	60	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Shirts, sandy loam, dry-----	20	Well suited		Poorly suited Slope	0.75	Moderately suited Slope	0.50
706: Northfork, fine gravelly sandy loam	40	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Shirts, coarse sandy loam-----	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Zimmer-----	20	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
707: Packerjohn, ashy coarse sandy loam--	40	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
Shirts, coarse sandy loam-----	30	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Zimmer-----	15	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
708: Zimmer-----	35	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
708: Northfork, fine gravelly sandy loam	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Charters, sandy loam	30	Moderately suited Sandiness	0.50	Poorly suited Slope Sandiness	0.75 0.50	Moderately suited Sandiness Slope	0.50 0.50
710: Charters, fine gravelly sandy loam	35	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
Northfork, fine gravelly sandy loam	35	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Shirts, coarse sandy loam-----	15	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
711: Charters, fine gravelly sandy loam, dry-----	30	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Shirts, sandy loam, dry-----	30	Well suited		Poorly suited Slope	0.75	Moderately suited Slope	0.50
Zimmer-----	30	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
712: Charters, fine gravelly sandy loam	40	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
712: Shirts, coarse sandy loam-----	35	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Zimmer-----	15	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
714: Shirts, sandy loam, south slope-----	40	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Eagleson, fine gravelly sandy loam	35	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
Charters, sandy loam	15	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness	1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
715: Eagleson, fine gravelly sandy loam, dry-----	45	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 1.00	Poorly suited Slope	1.00
Kosh-----	35	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
716: Zan-----	45	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Belsh-----	25	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
Montchief-----	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
718: Charters, fine gravelly sandy loam	35	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
Crumley-----	30	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
718: Eagleson, sandy loam	20	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
720: Drybuck, dry-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
Deerrun-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
Kisky, fine gravelly sandy loam, moist--	20	Moderately suited Rock fragments Slope	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
721: Shirts, fine gravelly sandy loam	40	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Kosh-----	30	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam, dry-----	15	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
726: Garval-----	50	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope	1.00
Kisky, fine gravelly loamy coarse sand--	25	Moderately suited Slope Sandiness Rock fragments	0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 0.75 0.50	Poorly suited Slope	1.00
730: Hellake-----	40	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength	0.50
Stardust-----	40	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Well suited	
731: Shirts, sandy loam, dry-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
731: Charters, fine gravelly sandy loam, dry-----	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Zimmer-----	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
733: Shirts, fine gravelly sandy loam	50	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Well suited	
Kosh-----	30	Moderately suited Rock fragments	0.50	Poorly suited Rock fragments Slope	0.75 0.50	Well suited	
734: Shirts, sandy loam, dry-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
Kosh-----	35	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
735: Shirts, coarse sandy loam-----	50	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Zimmer-----	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam	15	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
738: Tripod-----	35	Moderately suited Slope Sandiness Rock fragments	0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
Packerjohn, ashy coarse sandy loam--	30	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
738: Pajo, fine gravelly ashy coarse sandy loam-----	20	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
739: Shirts, sandy loam, moist-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
Zimmer-----	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Packerjohn, ashy coarse sandy loam--	20	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
740: Charters, sandy loam	40	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness	1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
Eagleson, fine gravelly sandy loam	35	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
741: Zan-----	85	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
742: Crumley-----	65	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
Eagleson, sandy loam	20	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
743: Packerjohn, ashy coarse sandy loam--	50	Moderately suited Sandiness	0.50	Poorly suited Slope Sandiness Rock fragments	0.75 0.50 0.50	Moderately suited Sandiness Slope	0.50 0.50
Shirts, sandy loam, moist-----	35	Well suited		Poorly suited Slope	0.75	Moderately suited Slope	0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
744: Packerjohn, ashy sandy loam, cool---	60	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Shirts, sandy loam, moist-----	20	Well suited		Poorly suited Slope	0.75	Moderately suited Slope	0.50
Tripod, cool-----	15	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
745: Tripod, moist-----	50	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Packerjohn, ashy sandy loam-----	45	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness	1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
746: Packerjohn, ashy sandy loam-----	90	Moderately suited Sandiness	0.50	Poorly suited Slope Sandiness	0.75 0.50	Moderately suited Sandiness Slope	0.50 0.50
747: Pinney, moist-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope Low strength	1.00 0.50
Charters, fine gravelly sandy loam	25	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
Shirts, sandy loam, dry-----	15	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
748: Belsh, moist-----	45	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Zan, moist-----	40	Moderately suited Sandiness	0.50	Poorly suited Slope Sandiness Rock fragments	0.75 0.50 0.50	Moderately suited Sandiness Slope	0.50 0.50
749: Quartzburg-----	50	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 0.50 0.50	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
749: Charters, sandy loam	25	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness	1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
750: Garval-----	50	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope	1.00
Kisky, fine gravelly loamy coarse sand--	20	Moderately suited Slope Sandiness Rock fragments	0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 0.75 0.50	Poorly suited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
751: Belsh, moist-----	50	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Zan, moist-----	40	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
753: Tripod, cool-----	45	Well suited		Unsuited Slope Rock fragments	1.00 0.50	Moderately suited Slope	0.50
Packerjohn, ashy sandy loam, cool---	25	Well suited		Unsuited Slope Rock fragments	1.00 0.50	Moderately suited Slope	0.50
Shirts, sandy loam, moist-----	20	Well suited		Unsuited Slope	1.00	Moderately suited Slope	0.50
754: Packerjohn, ashy sandy loam-----	55	Moderately suited Sandiness	0.50	Poorly suited Slope Sandiness	0.75 0.50	Moderately suited Sandiness Slope	0.50 0.50
Shirts, sandy loam, moist-----	20	Well suited		Poorly suited Slope	0.75	Moderately suited Slope	0.50
755: Zimmer-----	40	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
755: Quartzburg-----	35	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 0.50 0.50	Poorly suited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Tripod-----	25	Moderately suited Slope Sandiness Rock fragments	0.50 0.50 0.50	Unsuited Slope Rock fragments Sandiness	1.00 1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
Kosh, moist-----	20	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
758: Eagleson, sandy loam	40	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
Kosh, moist-----	30	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
Charters, fine gravelly sandy loam	20	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50
759: Charters, sandy loam	30	Moderately suited Sandiness Slope	0.50 0.50	Unsuited Slope Sandiness	1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
Shirts, sandy loam, south slope-----	30	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Kosh, moist-----	20	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
761: Charters, fine gravelly sandy loam	45	Moderately suited Sandiness	0.50	Unsuited Slope Sandiness Rock fragments	1.00 0.50 0.50	Moderately suited Slope Sandiness	0.50 0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
761: Middlefork, moist---	40	Well suited		Poorly suited Slope	0.75	Moderately suited Low strength Slope	0.50 0.50
762: Drybuck, dry-----	40	Well suited		Unsuited Slope	1.00	Moderately suited Slope	0.50
Hellake-----	30	Well suited		Poorly suited Slope	0.75	Moderately suited Low strength Slope	0.50 0.50
Deerrun-----	20	Well suited		Unsuited Slope	1.00	Moderately suited Slope	0.50
763: Eagleson, fine gravelly sandy loam	40	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
Kosh-----	35	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Zimmer, warm-----	20	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Rock outcrop-----	15	Not rated		Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
Charters, coarse sandy loam-----	15	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Well suited	
Zimmer, dry-----	15	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderately suited Slope	0.50
767: Shirts, sandy loam, dry-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00	Moderately suited Slope	0.50

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
767: Kosh-----	25	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Moderately suited Slope	0.50
Charters, fine gravelly sandy loam, dry-----	20	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderately suited Slope	0.50
768: Shirts, sandy loam, south slope-----	35	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00
Kosh, moist-----	25	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
Eagleson, fine gravelly sandy loam	15	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00
770: Shirts, sandy loam, dry-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00	Moderately suited Slope	0.50
Charters, fine gravelly sandy loam, dry-----	20	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderately suited Slope	0.50
Kosh, moist-----	20	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Moderately suited Slope	0.50
771: Backswitch, sandy loam-----	55	Moderately suited Sandiness Slope	0.50 0.50	Unsuited Slope Sandiness	1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
Shirts, sandy loam, dry-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00	Poorly suited Slope	1.00
772: Pajo, fine gravelly ashy sandy loam----	35	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Poorly suited Slope	1.00

Table 12c.--Forestland Management (Part III)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
772: Packerjohn, ashy sandy loam, dry----	25	Moderately suited Slope Sandiness	0.50 0.50	Unsuited Slope Sandiness	1.00 0.50	Poorly suited Slope Sandiness	1.00 0.50
Kosh, moist-----	20	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75	Poorly suited Slope	1.00

Table 12d.--Forestland Management (Part IV)

(Only the soils that are forested are included in this table. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
400: Ralsen-----	35	Well suited		Unsuited Wetness	1.00
Foxlane-----	30	Poorly suited Rock fragments	0.50	Well suited	
Pay-----	20	Well suited		Unsuited Wetness	1.00
401: Staircase-----	85	Well suited		Well suited	
402: Crossbow-----	60	Well suited		Well suited	
Foxlane-----	20	Poorly suited Rock fragments	0.50	Well suited	
404: Riverpoint-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Hellake-----	25	Well suited		Well suited	
405: Hellake-----	65	Well suited		Well suited	
Staircase-----	15	Well suited		Well suited	
406: Hellake-----	75	Well suited		Well suited	
407: Hellake-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
408: Stardust-----	75	Well suited		Well suited	
409: Stardust-----	75	Well suited		Well suited	
410: Stardust-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Riverpoint, very stony surface-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
411: Huston, very stony surface-----	45	Unsuited Slope	1.00	Unsuited Slope	1.00
Zeb, gravelly sandy loam-----	35	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
412: Huston, very stony surface-----	50	Unsuited Slope	1.00	Unsuited Slope	1.00
Stardust-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
413: Cloudyway-----	75	Well suited		Well suited	
414: Hellake-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Middlefork-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
415: Middlefork-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Pinney-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
416: Pinney, moist-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Middlefork, moist---	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Zeb, gravelly sandy loam-----	20	Poorly suited Slope Rock fragments	0.50 0.50	Poorly suited Slope	0.50
417: Middlefork-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Zeb, fine gravelly sandy loam-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
418: Middlefork-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
418: Zeb, fine gravelly sandy loam-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
419: Charters, fine gravelly sandy loam, dry-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Zeb, fine gravelly sandy loam-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
420: Pioneervil-----	40	Well suited		Well suited	
Grimescreek-----	35	Well suited		Well suited	
421: Dumps, dredge tailings-----	50	Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Poorly suited Rock fragments	0.50	Poorly suited Rock fragments	0.50
422: Lithic Xerorthents, very stony surface	30	Unsuited Restrictive layer Rock fragments	1.00 0.50	Unsuited Restrictive layer Rock fragments	1.00 0.50
Dumps, placer tailings-----	25	Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Well suited		Well suited	
423: Dystric Xeropsamments, very stony surface-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Ultic Haploxerafals--	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lithic Xerorthents--	15	Poorly suited Rock fragments	0.50	Unsuited Restrictive layer	1.00
424: Middlefork-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
424: Charters, coarse sandy loam-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
425: Middlefork-----	55	Well suited		Well suited	
Brassey-----	25	Poorly suited Rock fragments	0.50	Well suited	
426: Middlefork, moist---	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
427: Middlefork, moist---	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
428: Zeb, gravelly sandy loam-----	45	Poorly suited Slope Rock fragments	0.50 0.50	Poorly suited Slope	0.50
Republic-----	35	Unsuited Slope	1.00	Unsuited Slope	1.00
429: Huston, very stony surface-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
560: Robbscreek, moist---	30	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Hellake-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Shimo, fine gravelly loamy sand, north slope-----	20	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
640: Timberbutte-----	85	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
650: Longs-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Highvalley-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
650: Hoff-----	20	Poorly suited Slope	0.50	Unsuited Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
				Rock fragments	0.50
651: Hess-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lidos-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Cleymor-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
652: Hess-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lidos-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Klicker-----	20	Poorly suited Slope	0.50	Poorly suited Restrictive layer	0.50
				Slope	0.50
653: Lidos-----	45	Unsuited Slope	1.00	Unsuited Slope	1.00
Klicker-----	30	Unsuited Slope	1.00	Unsuited Slope	1.00
				Restrictive layer	0.50
Hess-----	20	Unsuited Slope	1.00	Unsuited Slope	1.00
654: Shilling-----	40	Unsuited Slope	1.00	Unsuited Slope	1.00
		Rock fragments	0.50		
Highvalley-----	30	Unsuited Slope	1.00	Unsuited Slope	1.00
Hoff-----	20	Unsuited Slope	1.00	Unsuited Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
				Rock fragments	0.50
655: Shilling, moist----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Highvalley, moist---	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
656: Shilling, moist-----	50	Unsuited Slope	1.00	Unsuited Slope	1.00
Highvalley, moist---	40	Unsuited Slope	1.00	Unsuited Slope	1.00
657: Pumpkin, stony surface-----	95	Poorly suited Slope	0.50	Poorly suited Slope	0.50
658: Cleymor-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Pumpkin, stony surface-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
660: Longs-----	60	Unsuited Slope	1.00	Unsuited Slope	1.00
Highvalley-----	30	Unsuited Slope	1.00	Unsuited Slope	1.00
661: Awley-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Bo-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
662: Awley-----	65	Unsuited Slope	1.00	Unsuited Slope	1.00
Bo-----	20	Unsuited Slope	1.00	Unsuited Slope	1.00
663: Cleymor-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Hoff-----	20	Poorly suited Slope Rock fragments	0.50 0.50	Unsuited Restrictive layer Slope Rock fragments	1.00 0.50 0.50
666: Pachic Argixerolls, very stony surface	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Rubble land-----	30	Not rated		Not rated	

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
666: Typic Haploxerolls, extremely stony surface-----	15	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Rock fragments	1.00 0.50
700: Drybuck-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Whisk, moist-----	30	Poorly suited Slope	0.50	Unsuited Restrictive layer Slope	1.00 0.50
701: Drybuck-----	55	Unsuited Slope	1.00	Unsuited Slope	1.00
Whisk, moist-----	25	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
702: Deerrun-----	40	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Kisky, fine gravelly sandy loam, moist--	40	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Restrictive layer Slope	1.00 1.00
Drybuck, dry-----	15	Unsuited Slope	1.00	Unsuited Slope	1.00
704: Drybuck-----	35	Unsuited Slope	1.00	Unsuited Slope	1.00
Northfork, fine gravelly sandy loam	30	Unsuited Slope	1.00	Unsuited Slope	1.00
Whisk, moist-----	20	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
705: Northfork, sandy loam-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Shirts, sandy loam, dry-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
706: Northfork, fine gravelly sandy loam	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Shirts, coarse sandy loam-----	25	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Zimmer-----	20	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
707: Packerjohn, ashy coarse sandy loam--	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Shirts, coarse sandy loam-----	30	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Zimmer-----	15	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
708: Zimmer-----	35	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
Northfork, fine gravelly sandy loam	25	Unsuited Slope	1.00	Unsuited Slope	1.00
Rock outcrop-----	25	Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Poorly suited Slope	0.50	Poorly suited Restrictive layer Slope	0.50 0.50
Charters, sandy loam	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
710: Charters, fine gravelly sandy loam	35	Unsuited Slope	1.00	Unsuited Slope	1.00
Northfork, fine gravelly sandy loam	35	Unsuited Slope	1.00	Unsuited Slope	1.00

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
710: Shirts, coarse sandy loam-----	15	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
711: Charters, fine gravelly sandy loam, dry-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Shirts, sandy loam, dry-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Zimmer-----	30	Poorly suited Slope	0.50	Unsuited Restrictive layer Slope	1.00 0.50
712: Charters, fine gravelly sandy loam	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Shirts, coarse sandy loam-----	35	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Zimmer-----	15	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
714: Shirts, sandy loam, south slope-----	40	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Eagleson, fine gravelly sandy loam	35	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 0.50
Charters, sandy loam	15	Unsuited Slope	1.00	Unsuited Slope	1.00
715: Eagleson, fine gravelly sandy loam, dry-----	45	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer Rock fragments	1.00 0.50 0.50
Kosh-----	35	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
716: Zan-----	45	Unsuited Slope	1.00	Unsuited Slope	1.00
Belsh-----	25	Unsuited Slope	1.00	Unsuited Slope Rock fragments	1.00 0.50
Montchief-----	25	Unsuited Slope	1.00	Unsuited Slope Restrictive layer Rock fragments	1.00 0.50 0.50
718: Charters, fine gravelly sandy loam	35	Unsuited Slope	1.00	Unsuited Slope	1.00
Crumley-----	30	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Eagleson, sandy loam	20	Unsuited Slope	1.00	Unsuited Slope	1.00
720: Drybuck, dry-----	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Deerrun-----	30	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Kisky, fine gravelly sandy loam, moist--	20	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Restrictive layer Slope	1.00 1.00
721: Shirts, fine gravelly sandy loam	40	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Kosh-----	30	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
Charters, fine gravelly sandy loam, dry-----	15	Unsuited Slope	1.00	Unsuited Slope	1.00
726: Garval-----	50	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
726: Kisky, fine gravelly loamy coarse sand--	25	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
730: Hellake-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Stardust-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
731: Shirts, sandy loam, dry-----	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Charters, fine gravelly sandy loam, dry-----	25	Unsuited Slope	1.00	Unsuited Slope	1.00
Zimmer-----	25	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
733: Shirts, fine gravelly sandy loam	50	Poorly suited Slope	0.50	Poorly suited Restrictive layer Slope	0.50 0.50
Kosh-----	30	Poorly suited Slope Rock fragments	0.50 0.50	Unsuited Restrictive layer Slope	1.00 0.50
734: Shirts, sandy loam, dry-----	45	Unsuited Slope	1.00	Unsuited Slope	1.00
Kosh-----	35	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
735: Shirts, coarse sandy loam-----	50	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Zimmer-----	25	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
Charters, fine gravelly sandy loam	15	Unsuited Slope	1.00	Unsuited Slope	1.00

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
738: Tripod-----	35	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Packerjohn, ashy coarse sandy loam--	30	Unsuited Slope	1.00	Unsuited Slope	1.00
Pajo, fine gravelly ashy coarse sandy loam-----	20	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
739: Shirts, sandy loam, moist-----	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Zimmer-----	25	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
Packerjohn, ashy coarse sandy loam--	20	Unsuited Slope	1.00	Unsuited Slope	1.00
740: Charters, sandy loam	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Eagleson, fine gravelly sandy loam	35	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 0.50
741: Zan-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
742: Crumley-----	65	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Eagleson, sandy loam	20	Unsuited Slope	1.00	Unsuited Slope	1.00
743: Packerjohn, ashy coarse sandy loam--	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Shirts, sandy loam, moist-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
744: Packerjohn, ashy sandy loam, cool---	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Shirts, sandy loam, moist-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Tripod, cool-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
745: Tripod, moist-----	50	Unsuited Slope	1.00	Unsuited Slope	1.00
Packerjohn, ashy sandy loam-----	45	Unsuited Slope	1.00	Unsuited Slope	1.00
746: Packerjohn, ashy sandy loam-----	90	Poorly suited Slope	0.50	Poorly suited Slope	0.50
747: Pinney, moist-----	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Charters, fine gravelly sandy loam	25	Unsuited Slope	1.00	Unsuited Slope	1.00
Shirts, sandy loam, dry-----	15	Unsuited Slope	1.00	Unsuited Slope	1.00
748: Belsh, moist-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Zan, moist-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
749: Quartzburg-----	50	Unsuited Slope	1.00	Unsuited Slope	1.00
Charters, sandy loam	25	Unsuited Slope	1.00	Unsuited Slope	1.00
750: Garval-----	50	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
750: Kisky, fine gravelly loamy coarse sand--	20	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
Rock outcrop-----	20	Not rated		Not rated	
751: Belsh, moist-----	50	Unsuited Slope	1.00	Unsuited Slope	1.00
Zan, moist-----	40	Unsuited Slope	1.00	Unsuited Slope	1.00
753: Tripod, cool-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Packerjohn, ashy sandy loam, cool---	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Shirts, sandy loam, moist-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
754: Packerjohn, ashy sandy loam-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Shirts, sandy loam, moist-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
755: Zimmer-----	40	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
Quartzburg-----	35	Unsuited Slope	1.00	Unsuited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Tripod-----	25	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Kosh, moist-----	20	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
758: Eagleson, sandy loam	40	Unsuited Slope	1.00	Unsuited Slope	1.00
Kosh, moist-----	30	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
Charters, fine gravelly sandy loam	20	Unsuited Slope	1.00	Unsuited Slope	1.00
759: Charters, sandy loam	30	Unsuited Slope	1.00	Unsuited Slope	1.00
Shirts, sandy loam, south slope-----	30	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Kosh, moist-----	20	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
761: Charters, fine gravelly sandy loam	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Middlefork, moist---	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
762: Drybuck, dry-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Hellake-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Deerrun-----	20	Poorly suited Slope	0.50	Poorly suited Slope Restrictive layer	0.50 0.50
763: Eagleson, fine gravelly sandy loam	40	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 0.50
Kosh-----	35	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
Rock outcrop-----	15	Not rated		Not rated	

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
765: Backswitch, coarse sandy loam-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Zimmer, warm-----	20	Poorly suited Slope	0.50	Unsuited Restrictive layer Slope	1.00 0.50
Rock outcrop-----	15	Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Charters, coarse sandy loam-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Zimmer, dry-----	15	Poorly suited Slope	0.50	Unsuited Restrictive layer Slope	1.00 0.50
767: Shirts, sandy loam, dry-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Kosh-----	25	Poorly suited Slope Rock fragments	0.50 0.50	Unsuited Restrictive layer Slope	1.00 0.50
Charters, fine gravelly sandy loam, dry-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
768: Shirts, sandy loam, south slope-----	35	Unsuited Slope	1.00	Unsuited Slope Restrictive layer	1.00 0.50
Kosh, moist-----	25	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
Eagleson, fine gravelly sandy loam	15	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 0.50
770: Shirts, sandy loam, dry-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50

Table 12d.--Forestland Management (Part IV)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
770: Charters, fine gravelly sandy loam, dry-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Kosh, moist-----	20	Poorly suited Slope Rock fragments	0.50 0.50	Unsuited Restrictive layer Slope	1.00 0.50
771: Backswitch, sandy loam-----	55	Unsuited Slope	1.00	Unsuited Slope	1.00
Shirts, sandy loam, dry-----	25	Unsuited Slope	1.00	Unsuited Slope	1.00
772: Pajo, fine gravelly ashy sandy loam----	35	Unsuited Slope	1.00	Unsuited Slope Rock fragments	1.00 0.50
Packerjohn, ashy sandy loam, dry----	25	Unsuited Slope	1.00	Unsuited Slope	1.00
Kosh, moist-----	20	Unsuited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00

Table 12e.--Forestland Management (Part V)

(Only the soils that are forested are included in this table. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
400: Ralsen-----	35	Moderate Texture/surface depth/rock fragments	0.50	High Wetness	1.00
Foxlane-----	30	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
Pay-----	20	High Texture/surface depth/rock fragments	1.00	High Wetness	1.00
401: Staircase-----	85	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
402: Crossbow-----	60	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
Foxlane-----	20	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
404: Riverpoint-----	55	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Hellake-----	25	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
405: Hellake-----	65	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
Staircase-----	15	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
406: Hellake-----	75	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
407: Hellake-----	75	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
408: Stardust-----	75	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
409: Stardust-----	75	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
410: Stardust-----	65	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
Riverpoint, very stony surface-----	20	Low Texture/rock fragments	0.10	Moderate Available water	0.50
411: Huston, very stony surface-----	45	High Texture/slope/ rock fragments	1.00	High Available water	1.00
Zeb, gravelly sandy loam-----	35	Low Texture/slope/ rock fragments	0.10	Low	
412: Huston, very stony surface-----	50	High Texture/slope/ rock fragments	1.00	High Available water	1.00
Stardust-----	30	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
413: Cloudyway-----	75	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
414: Hellake-----	40	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
Middlefork-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
415: Middlefork-----	55	Moderate Texture/surface depth/rock fragments	0.50	Low	
Pinney-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
416: Pinney, moist-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Middlefork, moist---	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Zeb, gravelly sandy loam-----	20	Low Texture/slope/ rock fragments	0.10	Low	
417: Middlefork-----	60	Low Texture/surface depth/rock fragments	0.10	Low	
Zeb, fine gravelly sandy loam-----	20	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
418: Middlefork-----	55	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Zeb, fine gravelly sandy loam-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
419: Charters, fine gravelly sandy loam, dry-----	50	Low Texture/rock fragments	0.10	Low	
Zeb, fine gravelly sandy loam-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
420: Pioneervil-----	40	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Grimescreek-----	35	Low Texture/rock fragments	0.10	Moderate Available water	0.50
421: Dumps, dredge tailings-----	50	Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	High Texture/rock fragments	1.00	High Available water	1.00
422: Lithic Xerorthents, very stony surface	30	High Texture/surface depth/rock fragments	1.00	High Available water	1.00
Dumps, placer tailings-----	25	Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	High Texture/surface depth/rock fragments	1.00	High Available water	1.00

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
423: Dystric Xeropsamments, very stony surface-----	35	High Texture/surface depth/rock fragments	1.00	High Available water	1.00
Ultic Haploxeralfs--	35	High Texture/surface depth/rock fragments	1.00	High Available water	1.00
Lithic Xerorthents--	15	High Texture/surface depth/rock fragments	1.00	High Available water	1.00
424: Middlefork-----	50	Moderate Texture/surface depth/rock fragments	0.50	Low	
Charters, coarse sandy loam-----	35	High Texture/surface depth/rock fragments	1.00	Moderate Available water	0.50
425: Middlefork-----	55	Moderate Texture/surface depth/rock fragments	0.50	Low	
Brassey-----	25	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
426: Middlefork, moist---	85	Moderate Texture/surface depth/rock fragments	0.50	Low	
427: Middlefork, moist---	85	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
428: Zeb, gravelly sandy loam-----	45	Low		High Available water	1.00

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
428: Republic-----	35	Low Texture/slope/ rock fragments	0.10	Low	
429: Huston, very stony surface-----	85	Moderate Texture/rock fragments	0.50	Moderate Available water	0.50
560: Robbscreek, moist---	30	Moderate Texture/rock fragments	0.50	Low	
Hellake-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Shimo, fine gravelly loamy sand, north slope-----	20	High Texture/slope/ rock fragments	1.00	High Available water	1.00
640: Timberbutte-----	85	Low Texture/rock fragments	0.10	Low	
650: Longs-----	40	Low Texture/rock fragments	0.10	High Available water	1.00
Highvalley-----	30	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
Hoff-----	20	Low Texture/rock fragments	0.10	High Available water	1.00
651: Hess-----	35	Low Texture/surface depth/rock fragments	0.10	Low	
Lidos-----	30	Low Texture/rock fragments	0.10	Low	
Cleymor-----	25	Low Texture/surface depth/rock fragments	0.10	Low	

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
652: Hess-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
Lidos-----	30	Low Texture/rock fragments	0.10	Low	
Klicker-----	20	Low Texture/rock fragments	0.10	Low	
653: Lidos-----	45	Low Texture/slope/ rock fragments	0.10	Low	
Klicker-----	30	Low Texture/slope/ rock fragments	0.10	Low	
Hess-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
654: Shilling-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Highvalley-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Hoff-----	20	Low		High Available water	1.00
655: Shilling, moist----	40	Low Texture/rock fragments	0.10	Low	
Highvalley, moist---	35	Low Texture/rock fragments	0.10	Low	
656: Shilling, moist----	50	Low Texture/slope/ rock fragments	0.10	Low	
Highvalley, moist---	40	Low Texture/rock fragments	0.10	Low	

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
657: Pumpkin, stony surface-----	95	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
658: Cleymor-----	50	Low Texture/surface depth/rock fragments	0.10	Low	
Pumpkin, stony surface-----	30	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
660: Longs-----	60	Low Texture/slope/ rock fragments	0.10	Low	
Highvalley-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
661: Awley-----	50	Low Texture/rock fragments	0.10	Low	
Bo-----	35	Low Texture/surface depth/rock fragments	0.10	Low	
662: Awley-----	65	Low Texture/slope/ rock fragments	0.10	Low	
Bo-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
663: Cleymor-----	65	Low Texture/surface depth/rock fragments	0.10	Low	
Hoff-----	20	Low		High Available water	1.00

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
666: Pachic Argixerolls, very stony surface	40	Low Texture/rock fragments	0.10	Low	
Rubble land-----	30	Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Low		High Available water	1.00
700: Drybuck-----	50	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Whisk, moist-----	30	Low Texture/rock fragments	0.10	High Available water	1.00
701: Drybuck-----	55	Low Texture/slope/ rock fragments	0.10	Low	
Whisk, moist-----	25	Low		High Available water	1.00
702: Deerrun-----	40	Low Texture/rock fragments	0.10	High Available water	1.00
Kisky, fine gravelly sandy loam, moist--	40	Low		High Available water	1.00
Drybuck, dry-----	15	Low		High Available water	1.00
704: Drybuck-----	35	Low Texture/slope/ rock fragments	0.10	Low	
Northfork, fine gravelly sandy loam	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Whisk, moist-----	20	Low		High Available water	1.00

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
705: Northfork, sandy loam-----	60	Low Texture/rock fragments	0.10	Low	
Shirts, sandy loam, dry-----	20	Low Texture/surface depth/rock fragments	0.10	Low	
706: Northfork, fine gravelly sandy loam	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Shirts, coarse sandy loam-----	25	High Texture/slope/ surface depth	1.00	Low	
Zimmer-----	20	Low Texture/slope/ rock fragments	0.10	Moderate Available water	0.50
707: Packerjohn, ashy coarse sandy loam--	40	Moderate Texture/slope/ rock fragments	0.50	Low	
Shirts, coarse sandy loam-----	30	High Texture/slope/ surface depth	1.00	Low	
Zimmer-----	15	Low Texture/slope/ rock fragments	0.10	Moderate Available water	0.50
708: Zimmer-----	35	Low Texture/slope/ rock fragments	0.10	Moderate Available water	0.50
Northfork, fine gravelly sandy loam	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Rock outcrop-----	25	Not rated		Not rated	

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
709: Shirts, sandy loam, south slope-----	45	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
Charters, sandy loam	30	Low Texture/rock fragments	0.10	High Available water	1.00
710: Charters, fine gravelly sandy loam	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Northfork, fine gravelly sandy loam	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Shirts, coarse sandy loam-----	15	High Texture/slope/ surface depth	1.00	Low	
711: Charters, fine gravelly sandy loam, dry-----	30	Low Texture/rock fragments	0.10	High Available water	1.00
Shirts, sandy loam, dry-----	30	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
Zimmer-----	30	Low Texture/rock fragments	0.10	High Available water	1.00
712: Charters, fine gravelly sandy loam	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Shirts, coarse sandy loam-----	35	High Texture/slope/ surface depth	1.00	Low	

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
712: Zimmer-----	15	Low Texture/slope/ rock fragments	0.10	Moderate Available water	0.50
714: Shirts, sandy loam, south slope-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Eagleson, fine gravelly sandy loam	35	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Charters, sandy loam	15	Low Texture/slope/ rock fragments	0.10	Low	
715: Eagleson, fine gravelly sandy loam, dry-----	45	Low Texture/rock fragments	0.10	High Available water	1.00
Kosh-----	35	Low Texture/rock fragments	0.10	High Available water	1.00
716: Zan-----	45	High Texture/slope/ surface depth	1.00	Low	
Belsh-----	25	Moderate Texture/slope/ rock fragments	0.50	Low	
Montchief-----	25	Low Texture/rock fragments	0.10	Low	
718: Charters, fine gravelly sandy loam	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Crumley-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
718: Eagleson, sandy loam	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
720: Drybuck, dry-----	40	Low		High Available water	1.00
Deerrun-----	30	Low Texture/rock fragments	0.10	High Available water	1.00
Kisky, fine gravelly sandy loam, moist--	20	Low		High Available water	1.00
721: Shirts, fine gravelly sandy loam	40	Low		High Available water	1.00
Kosh-----	30	Low Texture/rock fragments	0.10	High Available water	1.00
Charters, fine gravelly sandy loam, dry-----	15	Low Texture/rock fragments	0.10	High Available water	1.00
726: Garval-----	50	High Texture/slope/ surface depth	1.00	High Available water	1.00
Kisky, fine gravelly loamy coarse sand--	25	High Texture/slope/ surface depth	1.00	High Available water	1.00
730: Hellake-----	40	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
Stardust-----	40	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
731: Shirts, sandy loam, dry-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	High Available water	1.00

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
731: Charters, fine gravelly sandy loam, dry-----	25	Low Texture/rock fragments	0.10	High Available water	1.00
Zimmer-----	25	Low		High Available water	1.00
733: Shirts, fine gravelly sandy loam	50	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Kosh-----	30	Low Texture/rock fragments	0.10	High Available water	1.00
734: Shirts, sandy loam, dry-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	High Available water	1.00
Kosh-----	35	Low Texture/rock fragments	0.10	High Available water	1.00
735: Shirts, coarse sandy loam-----	50	High Texture/slope/ surface depth	1.00	Low	
Zimmer-----	25	Low Texture/slope/ rock fragments	0.10	Moderate Available water	0.50
Charters, fine gravelly sandy loam	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
738: Tripod-----	35	Moderate Texture/slope/ rock fragments	0.50	Moderate Available water	0.50
Packerjohn, ashy coarse sandy loam--	30	Moderate Texture/slope/ rock fragments	0.50	Low	

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
738: Pajo, fine gravelly ashy coarse sandy loam-----	20	Moderate Texture/slope/ rock fragments	0.50	Moderate Available water	0.50
739: Shirts, sandy loam, moist-----	40	Low Texture/rock fragments	0.10	High Available water	1.00
Zimmer-----	25	Low		High Available water	1.00
Packerjohn, ashy coarse sandy loam--	20	High Texture/slope/ rock fragments	1.00	High Available water	1.00
740: Charters, sandy loam	40	Low		High Available water	1.00
Eagleson, fine gravelly sandy loam	35	Low Texture/rock fragments	0.10	High Available water	1.00
741: Zan-----	85	Moderate Texture/surface depth/rock fragments	0.50	Low	
742: Crumley-----	65	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Eagleson, sandy loam	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
743: Packerjohn, ashy coarse sandy loam--	50	Moderate Texture/rock fragments	0.50	High Available water	1.00
Shirts, sandy loam, moist-----	35	Low Texture/rock fragments	0.10	High Available water	1.00

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
744: Packerjohn, ashy sandy loam, cool---	60	Low Texture/rock fragments	0.10	High Available water	1.00
Shirts, sandy loam, moist-----	20	Low Texture/rock fragments	0.10	High Available water	1.00
Tripod, cool-----	15	Moderate Texture/rock fragments	0.50	High Available water	1.00
745: Tripod, moist-----	50	High Texture/slope/ surface depth	1.00	Low	
Packerjohn, ashy sandy loam-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
746: Packerjohn, ashy sandy loam-----	90	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
747: Pinney, moist-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Charters, fine gravelly sandy loam	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Shirts, sandy loam, dry-----	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
748: Belsh, moist-----	45	Moderate Texture/rock fragments	0.50	Low	
Zan, moist-----	40	Moderate Texture/rock fragments	0.50	Low	

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
749: Quartzburg-----	50	High Texture/slope/ surface depth	1.00	High Available water	1.00
Charters, sandy loam	25	Low		High Available water	1.00
750: Garval-----	50	High Texture/slope/ surface depth	1.00	High Available water	1.00
Kisky, fine gravelly loamy coarse sand--	20	High Texture/slope/ surface depth	1.00	High Available water	1.00
Rock outcrop-----	20	Not rated		Not rated	
751: Belsh, moist-----	50	Moderate Texture/slope/ rock fragments	0.50	Low	
Zan, moist-----	40	Moderate Texture/slope/ rock fragments	0.50	Low	
753: Tripod, cool-----	45	High Texture/slope/ rock fragments	1.00	High Available water	1.00
Packerjohn, ashy sandy loam, cool---	25	Low		High Available water	1.00
Shirts, sandy loam, moist-----	20	Low Texture/rock fragments	0.10	High Available water	1.00
754: Packerjohn, ashy sandy loam-----	55	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
Shirts, sandy loam, moist-----	20	Low Texture/rock fragments	0.10	High Available water	1.00
755: Zimmer-----	40	Low Texture/slope/ rock fragments	0.10	Moderate Available water	0.50

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
755: Quartzburg-----	35	High Texture/slope/ surface depth	1.00	Moderate Available water	0.50
Rock outcrop-----	20	Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Moderate Texture/slope/ rock fragments	0.50	Moderate Available water	0.50
Tripod-----	25	Moderate Texture/slope/ rock fragments	0.50	Moderate Available water	0.50
Kosh, moist-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
758: Eagleson, sandy loam	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Kosh, moist-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Charters, fine gravelly sandy loam	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
759: Charters, sandy loam	30	Low		High Available water	1.00
Shirts, sandy loam, south slope-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	High Available water	1.00
Kosh, moist-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	High Available water	1.00

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
761: Charters, fine gravelly sandy loam	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Middlefork, moist---	40	Low Texture/surface depth/rock fragments	0.10	Low	
762: Drybuck, dry-----	40	Low		High Available water	1.00
Hellake-----	30	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
Deerrun-----	20	Low Texture/rock fragments	0.10	High Available water	1.00
763: Eagleson, fine gravelly sandy loam	40	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Kosh-----	35	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Rock outcrop-----	15	Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Moderate Texture/rock fragments	0.50	High Available water	1.00
Zimmer, warm-----	20	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
Rock outcrop-----	15	Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Moderate Texture/rock fragments	0.50	High Available water	1.00

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
766: Charters, coarse sandy loam-----	15	High Texture/surface depth/rock fragments	1.00	Moderate Available water	0.50
Zimmer, dry-----	15	Moderate Texture/surface depth/rock fragments	0.50	High Available water	1.00
767: Shirts, sandy loam, dry-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	High Available water	1.00
Kosh-----	25	Low Texture/rock fragments	0.10	High Available water	1.00
Charters, fine gravelly sandy loam, dry-----	20	Low Texture/rock fragments	0.10	High Available water	1.00
768: Shirts, sandy loam, south slope-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Kosh, moist-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Eagleson, fine gravelly sandy loam	15	Low Texture/rock fragments	0.10	Moderate Available water	0.50
770: Shirts, sandy loam, dry-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Charters, fine gravelly sandy loam, dry-----	20	Low Texture/rock fragments	0.10	Low	

Table 12e.--Forestland Management (Part V)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
770: Kosh, moist-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
771: Backswitch, sandy loam-----	55	Low Texture/slope/ rock fragments	0.10	Low	
Shirts, sandy loam, dry-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
772: Pajo, fine gravelly ashy sandy loam----	35	Low Texture/rock fragments	0.10	Low	
Packerjohn, ashy sandy loam, dry----	25	Low Texture/slope/ rock fragments	0.10	Low	
Kosh, moist-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50

Table 13a.--Recreation (Part I)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Very limited Flooding Too sandy Depth to saturated zone	1.00 0.50 0.39	Somewhat limited Too sandy Depth to saturated zone	0.50 0.19	Somewhat limited Flooding Too sandy Depth to saturated zone	0.60 0.50 0.39
Cumulic Haploxerolls	40	Very limited Flooding	1.00	Not limited		Not limited	
221: Bissell-----	85	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty Slope	0.50 0.12
222: Bissell-----	85	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Slope Dusty	1.00 0.50
223: Staircase, dry-----	85	Very limited Flooding	1.00	Not limited		Somewhat limited Gravel content Slope	0.22 0.03
224: Porter-----	85	Very limited Flooding	1.00	Not limited		Somewhat limited Gravel content Slope	0.22 0.03
225: Boise-----	85	Somewhat limited Too sandy	0.12	Somewhat limited Too sandy	0.12	Somewhat limited Slope Gravel content Too sandy	0.88 0.22 0.12
226: Flofeather, very rarely flooded-----	55	Very limited Flooding	1.00	Not limited		Not limited	
Shawmount, stony surface-----	30	Very limited Flooding Dusty Gravel content	1.00 0.50 0.01	Somewhat limited Dusty Gravel content	0.50 0.01	Very limited Gravel content Dusty	1.00 0.50
227: Piercepark, loam----	85	Not limited		Not limited		Somewhat limited	
228: Piercepark, loam----	85	Not limited		Not limited		Very limited Slope	1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
229: Piercepark, coarse sandy loam-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
230: Hann-----	60	Somewhat limited Slow water movement Slope	0.43 0.01	Somewhat limited Slow water movement Slope	0.43 0.01	Very limited Slope Slow water movement	1.00 0.43
Doubledia, silty clay loam-----	15	Somewhat limited Slow water movement Slope	0.45 0.01	Somewhat limited Slow water movement Slope	0.45 0.01	Very limited Slope Slow water movement	1.00 0.45
232: Jasseek-----	85	Somewhat limited Dusty Slow water movement	0.50 0.43	Somewhat limited Dusty Slow water movement	0.50 0.43	Somewhat limited Dusty Slow water movement	0.50 0.43
233: Jasseek-----	85	Somewhat limited Dusty Slow water movement	0.50 0.43	Somewhat limited Dusty Slow water movement	0.50 0.43	Somewhat limited Slope Dusty Slow water movement	0.88 0.50 0.43
238: Adaboi-----	85	Somewhat limited Slow water movement	0.45	Somewhat limited Slow water movement	0.45	Somewhat limited Slow water movement	0.45
240: Collister-----	65	Very limited Flooding	1.00	Not limited		Not limited	
Flofeather-----	25	Very limited Flooding	1.00	Not limited		Not limited	
300: Shawmount, stony surface-----	75	Very limited Slope Dusty Gravel content	1.00 0.50 0.01	Very limited Slope Dusty Gravel content	1.00 0.50 0.01	Very limited Slope Gravel content Dusty	1.00 1.00 0.50
301: Breadloaf-----	55	Somewhat limited Slow water movement Slope	0.45 0.16	Somewhat limited Slow water movement Slope	0.45 0.16	Very limited Slope Depth to bedrock Slow water movement	1.00 0.95 0.45

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
301: Doubledia, silty clay loam-----	25	Somewhat limited Slow water movement	0.45	Somewhat limited Slow water movement	0.45	Very limited Slope Slow water movement	1.00 0.45
302: Breadloaf-----	40	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Depth to bedrock Slow water movement	1.00 0.95 0.45
Doubledia, silty clay loam-----	35	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
Hann-----	20	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43
303: Doubledia, silty clay loam-----	40	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
Hann-----	25	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43
Breadloaf-----	20	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Depth to bedrock Slow water movement	1.00 0.95 0.45
304: Breadloaf-----	30	Somewhat limited Slope Slow water movement	0.63 0.45	Somewhat limited Slope Slow water movement	0.63 0.45	Very limited Slope Depth to bedrock	1.00 0.95
Doubledia, silty clay loam-----	30	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
Hullsgulch, loam----	30	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
305: Siphonlake, south slope-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Solarview-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.22
306: Van Dusen-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Siphonlake-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
307: Adaboi-----	65	Somewhat limited Slow water movement Slope	0.45 0.16	Somewhat limited Slow water movement Slope	0.45 0.16	Very limited Slope Slow water movement	1.00 0.45
Meclo-----	20	Somewhat limited Slow water movement Slope	0.43 0.16	Somewhat limited Slow water movement Slope	0.43 0.16	Very limited Slope Slow water movement Depth to bedrock	1.00 0.43 0.35
308: Breadloaf-----	40	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Depth to bedrock Slow water movement	1.00 0.95 0.45
Crawley, silt loam--	30	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50
Doubledia, clay loam	20	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
309: Hullsgulch, sandy loam-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Solarview-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.22

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
311: Meclo-----	35	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement Depth to bedrock	1.00 0.43 0.35
Crawley, silt loam--	30	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50
Adaboi-----	20	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
328: Gacey, extremely stony surface-----	75	Very limited Large stones content Depth to cemented pan Slow water movement	1.00 1.00 0.43	Very limited Large stones content Depth to cemented pan Slow water movement	1.00 1.00 0.43	Very limited Large stones content Depth to cemented pan Slope Gravel content Slow water movement	1.00 1.00 0.88 0.65 0.43
329: Ayette-----	55	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43
Duco, stony loam, very stony surface	25	Very limited Slope Depth to bedrock Large stones content	1.00 1.00 0.47	Very limited Slope Depth to bedrock Large stones content	1.00 1.00 0.47	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.47 0.01
330: Breadloaf-----	35	Somewhat limited Slope Slow water movement	0.96 0.45	Somewhat limited Slope Slow water movement	0.96 0.45	Very limited Slope Depth to bedrock Slow water movement	1.00 0.95 0.45
Ayette, moist-----	30	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
330: Immig, rubbly surface-----	20	Very limited Large stones content Slope Slow water movement	1.00  1.00 0.43	Very limited Large stones content Slope Slow water movement	1.00  1.00 0.43	Very limited Large stones content Slope Depth to bedrock Slow water movement	1.00  1.00 0.84 0.43
331: Ayette, moist-----	50	Very limited Slope Slow water movement	1.00  0.43	Very limited Slope Slow water movement	1.00  0.43	Very limited Slope Slow water movement	1.00  0.43
Yad-----	30	Very limited Slope Slow water movement	1.00  0.45	Very limited Slope Slow water movement	1.00  0.45	Very limited Slope Slow water movement	1.00  0.45
332: Hann-----	35	Very limited Slope Slow water movement	1.00  0.43	Very limited Slope Slow water movement	1.00  0.43	Very limited Slope Slow water movement	1.00  0.43
Ayette, moist-----	30	Very limited Slope Slow water movement	1.00  0.43	Very limited Slope Slow water movement	1.00  0.43	Very limited Slope Slow water movement	1.00  0.43
Picketpin-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
333: Ayette-----	50	Very limited Slope Slow water movement	1.00  0.43	Very limited Slope Slow water movement	1.00  0.43	Very limited Slope Slow water movement	1.00  0.43
Crawley, loam-----	15	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Dusty	1.00 1.00 0.50
Hullsgulch, loam----	15	Very limited Slope Dusty	1.00  0.50	Very limited Slope Dusty	1.00  0.50	Very limited Slope Dusty	1.00  0.50
335: Gimmi, very stony surface-----	30	Very limited Slope Large stones content Slow water movement Gravel content	1.00  0.76 0.43 0.08	Very limited Slope Large stones content Slow water movement Gravel content	1.00  0.76 0.43 0.08	Very limited Slope Gravel content Large stones content Slow water movement Depth to bedrock	1.00  1.00 0.76 0.43 0.35

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
335: Ayette, moist-----	25	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43
Doubledia, silty clay loam-----	25	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
400: Ralsen-----	35	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Foxlane-----	30	Very limited Flooding Gravel content	1.00 0.08	Somewhat limited Gravel content	0.08	Very limited Gravel content	1.00
Pay-----	20	Very limited Depth to saturated zone Flooding Too sandy	1.00 1.00 0.50	Very limited Depth to saturated zone Too sandy	1.00 0.50	Very limited Depth to saturated zone Flooding Too sandy	1.00 0.60 0.50
401: Staircase-----	85	Very limited Flooding Gravel content	1.00 0.32	Somewhat limited Gravel content	0.32	Very limited Gravel content	1.00
402: Crossbow-----	60	Very limited Flooding Depth to saturated zone	1.00 0.16	Somewhat limited Depth to saturated zone	0.08	Somewhat limited Flooding Depth to saturated zone	0.60 0.16
Foxlane-----	20	Very limited Flooding Gravel content	1.00 0.08	Somewhat limited Gravel content	0.08	Very limited Gravel content Slope	1.00 0.03
403: Ralsen-----	40	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Pay-----	25	Very limited Depth to saturated zone Flooding Too sandy	1.00 1.00 0.50	Very limited Depth to saturated zone Too sandy	1.00 0.50	Very limited Depth to saturated zone Flooding Too sandy	1.00 0.60 0.50
Crossbow-----	20	Very limited Flooding Depth to saturated zone	1.00 0.16	Somewhat limited Depth to saturated zone	0.08	Somewhat limited Flooding Depth to saturated zone	0.60 0.16

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
404: Riverpoint-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Hellake-----	25	Not limited		Not limited		Somewhat limited Slope	0.88
405: Hellake-----	65	Not limited		Not limited		Not limited	
Staircase-----	15	Very limited Flooding Gravel content	1.00 0.32	Somewhat limited Gravel content	0.32	Very limited Gravel content	1.00
406: Hellake-----	75	Not limited		Not limited		Somewhat limited Slope	0.88
407: Hellake-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
408: Stardust-----	75	Somewhat limited Gravel content	0.08	Somewhat limited Gravel content	0.08	Very limited Gravel content	1.00
409: Stardust-----	75	Somewhat limited Gravel content	0.08	Somewhat limited Gravel content	0.08	Very limited Gravel content Slope	1.00 0.88
410: Stardust-----	65	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 1.00
Riverpoint, very stony surface-----	20	Very limited Slope Large stones content Gravel content	1.00 0.76 0.01	Very limited Slope Large stones content Gravel content	1.00 0.76 0.01	Very limited Slope Gravel content Large stones content	1.00 1.00 0.76
411: Huston, very stony surface-----	45	Very limited Slope Large stones content Gravel content	1.00 0.47 0.01	Very limited Slope Large stones content Gravel content	1.00 0.47 0.01	Very limited Slope Gravel content Large stones content	1.00 1.00 0.47
Zeb, gravelly sandy loam-----	35	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
412: Huston, very stony surface-----	50	Very limited Slope Large stones content Gravel content	1.00 0.47 0.01	Very limited Slope Large stones content Gravel content	1.00 0.47 0.01	Very limited Slope Gravel content Large stones content	1.00 1.00 0.47
Stardust-----	30	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 1.00
413: Cloudyway-----	75	Somewhat limited Slope Too sandy Gravel content	0.16 0.12 0.08	Somewhat limited Slope Too sandy Gravel content	0.16 0.12 0.08	Very limited Slope Gravel content Too sandy	1.00 1.00 0.12
414: Hellake-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Middlefork-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
415: Middlefork-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Pinney-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
416: Pinney, moist-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Middlefork, moist---	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zeb, gravelly sandy loam-----	20	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 1.00
417: Middlefork-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	20	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 1.00
418: Middlefork-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
418: Zeb, fine gravelly sandy loam-----	25	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 1.00
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Zeb, fine gravelly sandy loam-----	35	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 1.00
420: Pioneervil-----	40	Very limited Flooding	1.00	Not limited		Somewhat limited Gravel content	0.22
Grimescreek-----	35	Very limited Flooding Depth to saturated zone	1.00 0.16	Somewhat limited Depth to saturated zone	0.08	Somewhat limited Flooding Gravel content Depth to saturated zone	0.60 0.22 0.16
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Very limited Flooding Gravel content Too sandy Large stones content	1.00 1.00 0.88 0.76	Very limited Gravel content Too sandy Large stones content	1.00 0.88 0.76	Very limited Gravel content Too sandy Large stones content	1.00 0.88 0.76
422: Lithic Xerorthents, very stony surface	30	Very limited Gravel content Depth to bedrock Too sandy Large stones content	1.00 1.00 0.88 0.47	Very limited Gravel content Depth to bedrock Too sandy Large stones content	1.00 1.00 0.88 0.47	Very limited Gravel content Depth to bedrock Slope Too sandy Large stones content	1.00 1.00 0.88 0.88 0.47
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
422: Dystric Xeropsamments, very stony surface-----	20	Somewhat limited Too sandy Large stones content	0.88 0.04	Somewhat limited Too sandy Large stones content	0.88 0.04	Somewhat limited Depth to bedrock Slope Too sandy Large stones content	0.90 0.88 0.88 0.04
423: Dystric Xeropsamments, very stony surface-----	35	Very limited Slope Too sandy Large stones content	1.00 0.88 0.04	Very limited Slope Too sandy Large stones content	1.00 0.88 0.04	Very limited Slope Depth to bedrock Too sandy Large stones content	1.00 0.90 0.88 0.04
Ultic Haploxerafals--	35	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 1.00
Lithic Xerorthents--	15	Very limited Depth to bedrock Slope Gravel content	1.00 0.16 0.01	Very limited Depth to bedrock Slope Gravel content	1.00 0.16 0.01	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
424: Middlefork-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Charters, coarse sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
425: Middlefork-----	55	Not limited		Not limited		Somewhat limited Slope	0.88
Brassey-----	25	Somewhat limited Gravel content Slope	0.08 0.01	Somewhat limited Gravel content Slope	0.08 0.01	Very limited Gravel content Slope	1.00 1.00
426: Middlefork, moist---	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
427: Middlefork, moist---	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
428: Zeb, gravelly sandy loam-----	45	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
428: Republic-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
429: Huston, very stony surface-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00
		Gravel content	0.01	Gravel content	0.01	Large stones content	0.47
503: Cartwright, dry-----	85	Not limited		Not limited		Somewhat limited Slope	0.88
						Gravel content	0.22
504: Cartwright, dry-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
						Gravel content	0.22
505: Brownlee-----	85	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
506: Brownlee-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Robbscreek-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Gravel content	1.00
		Gravel content	0.08	Gravel content	0.08	Slope	1.00
						Depth to bedrock	0.46
Whisk-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.08	Gravel content	0.08	Depth to bedrock	1.00
507: Shoebend-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Dusty	0.50	Dusty	0.50	Depth to bedrock	0.65
						Dusty	0.50
						Gravel content	0.22
Dobson-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.08	Gravel content	0.08	Depth to bedrock	1.00
Jerusalem-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
509: Arrowrock-----	35	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.92 0.50	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.92 0.50	Very limited Gravel content Slope Depth to bedrock Too sandy	1.00 1.00 1.00 0.50
Borid-----	25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.13	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.13	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Roney, moist-----	25	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.01
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy Depth to bedrock	1.00 1.00 0.50 0.46
Cartwright-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Robbscreek, moist---	25	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.46
516: Shimo, extremely stony surface-----	35	Very limited Slope Large stones content Too sandy	1.00 1.00 0.50	Very limited Large stones content Slope Too sandy	1.00 1.00 0.50	Very limited Large stones content Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.90 0.56 0.50
Olaton, south slope	30	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Gravel content Slope	1.00 1.00
Schiller, south slope-----	25	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
525: Robbscreek-----	35	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.46
Dobson-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Brownlee-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
526: Cartwright-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Brownlee, moist----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Robbscreek, moist---	20	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.46
527: Dobson-----	50	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Roney, dry-----	35	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.46
528: Roney, dry-----	40	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.46
Dobson-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Olaton, south slope	15	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Gravel content Slope	1.00 1.00
529: Roney-----	40	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.46

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
529: Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Olaton, south slope	15	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Gravel content Slope	1.00 1.00
532: Schiller, north slope-----	55	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope	1.00 1.00
Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy Depth to bedrock	1.00 1.00 0.50 0.46
533: Olaton, north slope, dry-----	60	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Gravel content Slope	1.00 1.00
Roney, moist-----	20	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.01
534: Shimo, fine gravelly loamy sand-----	50	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Depth to bedrock Too sandy	1.00 1.00 0.84 0.50
Kisky, fine gravelly sandy loam-----	25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Schiller-----	15	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 1.00
538: Borid-----	65	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.13	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.13	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
538: Shimo, fine gravelly loamy sand-----	20	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Depth to bedrock Too sandy	1.00 1.00 0.84 0.50
541: Roney-----	55	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.46
Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
544: Arrowrock-----	40	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.92 0.50	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.92 0.50	Very limited Gravel content Slope Depth to bedrock Too sandy	1.00 1.00 1.00 0.50
Borid-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.13	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.13	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Painter-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.90
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy Depth to bedrock	1.00 1.00 0.50 0.46
Kisky, fine gravelly loamy sand-----	30	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.68 0.50	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.68 0.50	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.50
555: Brownlee-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Schiller-----	40	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
556: Kisky, fine gravelly sandy loam-----	40	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Shimo, fine gravelly loamy sand-----	30	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Depth to bedrock Too sandy	1.00 1.00 0.84 0.50
Brownlee-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
558: Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Whisk-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Roney, dry-----	25	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.46
560: Robbscreek, moist---	30	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.46
Hellake-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy	1.00 0.92 0.50	Very limited Slope Gravel content Too sandy Depth to bedrock	1.00 1.00 0.50 0.46
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.29

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
561: Kisky, fine gravelly loamy sand-----	30	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.68 0.50	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.68 0.50	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.50
Olaton, north slope, moist-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
562: Kisky, fine gravelly sandy loam-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Shimo, fine gravelly sandy loam-----	30	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.29
Roney-----	25	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.46
600: McDesh-----	50	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Depth to bedrock Slow water movement	1.00 0.90 0.43
Immig, rubbly surface-----	25	Very limited Large stones content Slope Slow water movement	1.00 1.00 0.43	Very limited Large stones content Slope Slow water movement	1.00 1.00 0.43	Very limited Large stones content Slope Depth to bedrock Slow water movement	1.00 1.00 0.84 0.43
Gwin, very stony loam, extremely stony surface-----	15	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.22
601: Hann-----	45	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
601: Gwin, very stony loam, extremely stony surface-----	25	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Depth to bedrock Slope Gravel content	1.00 1.00 1.00 1.00 0.22
Shafer-----	20	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Depth to bedrock Slow water movement	1.00 0.97 0.45
602: Hillcreek-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Depth to bedrock Gravel content Large stones content	1.00 0.97 0.86 0.47
Hann-----	20	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43
604: Shafer-----	55	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Depth to bedrock Slow water movement	1.00 0.97 0.45
Hann-----	25	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Depth to bedrock Slope Gravel content	1.00 1.00 1.00 1.00 0.22

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
605: Flybow-----	20	Very limited Depth to bedrock Gravel content Slope Dusty	1.00 1.00 1.00 0.50	Very limited Depth to bedrock Gravel content Slope Dusty	1.00 1.00 1.00 0.50	Very limited Gravel content Depth to bedrock Slope Dusty	1.00 1.00 1.00 0.50
606: Hillcreek-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Depth to bedrock Gravel content Large stones content	1.00 0.97 0.86 0.47
607: Duco, stony loam, very stony surface	35	Very limited Slope Depth to bedrock Large stones content	1.00 1.00 0.47	Very limited Slope Depth to bedrock Large stones content	1.00 1.00 0.47	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.47 0.01
Immig, very stony surface-----	35	Very limited Slope Large stones content Slow water movement	1.00 0.82 0.43	Very limited Slope Large stones content Slow water movement	1.00 0.82 0.43	Very limited Slope Depth to bedrock Large stones content Gravel content Slow water movement	1.00 0.84 0.82 0.56 0.43
Rubble land-----	15	Not rated		Not rated		Not rated	
608: Duco, very gravelly loam, stony surface	40	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.92	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.92	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Hovelton, gravelly ashy loam-----	25	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.01
McDesh, south slope	20	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement Depth to bedrock	1.00 0.43 0.03

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.90
						Large stones content	0.47
						Gravel content	0.14
Duco, stony loam, very stony surface	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Gravel content	0.01
McDesh, south slope	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
						Depth to bedrock	0.03
612: Hann-----	60	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.43	Slow water movement	0.43	Slope	1.00
		Slope	0.01	Slope	0.01	Slow water movement	0.43
Hillcreek, dry-----	25	Not limited		Not limited		Very limited	
						Slope	1.00
613: Duco, stony loam, very stony surface	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Gravel content	0.01
Searles, very stony surface-----	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Depth to bedrock	0.84
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.65
						Dusty	0.50
				Large stones content	0.47		
McDesh, south slope	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
						Depth to bedrock	0.03

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
618: McDesh, south slope	35	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement Depth to bedrock	1.00 0.43 0.03
Duco, very gravelly loam, stony surface	25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.92	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.92	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Shafer-----	20	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Depth to bedrock Slow water movement	1.00 0.97 0.45
619: McDesh-----	35	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Depth to bedrock Slow water movement	1.00 0.90 0.43
Gwin, gravelly loam, stony surface-----	25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.38	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.38	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Shafer-----	20	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Depth to bedrock Slow water movement	1.00 0.97 0.45
620: Immig, very stony surface-----	35	Very limited Slope Large stones content Slow water movement	1.00 0.82 0.43	Very limited Slope Large stones content Slow water movement	1.00 0.82 0.43	Very limited Slope Depth to bedrock Large stones content Gravel content Slow water movement	1.00 0.84 0.82 0.56 0.43
McDesh, south slope	30	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement Depth to bedrock	1.00 0.43 0.03

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited Slope Depth to bedrock Large stones content	1.00 1.00 0.47	Very limited Slope Depth to bedrock Large stones content	1.00 1.00 0.47	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.47 0.01
621: McDaniel-----	45	Very limited Slope Gravel content	1.00 1.00	Very limited Slope Gravel content	1.00 1.00	Very limited Gravel content Slope	1.00 1.00
Hovelton, gravelly ashy loam-----	40	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.01
622: Hovelton, gravelly ashy loam-----	50	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.01
Gwin, very stony loam, extremely stony surface-----	30	Very limited Slope Large stones content Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Slope Depth to bedrock Gravel content	1.00 1.00 1.00 0.22
630: Gwin, very gravelly loam-----	45	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.99	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.99	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Flybow-----	25	Very limited Slope Depth to bedrock Gravel content Dusty	1.00 1.00 1.00 0.50	Very limited Slope Depth to bedrock Gravel content Dusty	1.00 1.00 1.00 0.50	Very limited Gravel content Slope Depth to bedrock Dusty	1.00 1.00 1.00 0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
631: Flybow-----	40	Very limited Slope Depth to bedrock Gravel content Dusty	1.00 1.00 1.00 0.50	Very limited Slope Depth to bedrock Gravel content Dusty	1.00 1.00 1.00 0.50	Very limited Gravel content Slope Depth to bedrock Dusty	1.00 1.00 1.00 0.50
Rock outcrop-----	30	Not rated		Not rated		Not rated	

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
631: Rubble land-----	20	Not rated		Not rated		Not rated	
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Slope Depth to bedrock	1.00 1.00 1.00	Very limited Large stones content Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.22
McDesh, very stony loam, very stony surface-----	25	Very limited Slope Large stones content Slow water movement	1.00 0.47 0.43	Very limited Slope Large stones content Slow water movement	1.00 0.47 0.43	Very limited Slope Depth to bedrock Large stones content Slow water movement	1.00 0.90 0.47 0.43
Rock outcrop-----	25	Not rated		Not rated		Not rated	
635: Shafer, very stony surface-----	40	Very limited Slope Large stones content Slow water movement	1.00 0.92 0.45	Very limited Slope Large stones content Slow water movement	1.00 0.92 0.45	Very limited Slope Depth to bedrock Large stones content Slow water movement	1.00 0.97 0.92 0.45
Karney-----	25	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement Depth to bedrock	1.00 0.43 0.35
Yad-----	20	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
636: Hann, stony surface	30	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43	Very limited Slope Slow water movement	1.00 0.43

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
636: McDesh, very stony loam, extremely bouldery surface---	30	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones	1.00	Large stones	1.00
		Large stones content		content		content	
		Slope		Slope	1.00	Slope	1.00
Robbscreek, moist---	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.46
638: Yad-----	35	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.45	Slow water movement	0.45	Slope	1.00
		Slope	0.01	Slope	0.01	Slow water movement	0.45
Cranegulch-----	25	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.43	Slow water movement	0.43	Slope	1.00
		Slope	0.16	Slope	0.16	Slow water movement	0.43
Duco, stony loam, very stony surface	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.01	Slope	0.01	Large stones content	0.47
640: Timberbutte-----	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
641: Aradaran-----	45	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.43	Slow water movement	0.43	Slope	1.00
		Slope	0.16	Slope	0.16	Slow water movement	0.43
Yad-----	40	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.45	Slow water movement	0.45	Slope	1.00
		Slope	0.16	Slope	0.16	Slow water movement	0.45
650: Longs-----	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Highvalley-----	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	0.22
						Slope	1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
650: Hoff-----	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
651: Hess-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lidos-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Cleymor-----	25	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
652: Hess-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lidos-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Klicker-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.80 0.22
653: Lidos-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Klicker-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.80 0.22
Hess-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
654: Shilling-----	40	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Gravel content Slope	1.00 1.00
Highvalley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hoff-----	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
655: Shilling, moist-----	40	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Gravel content Slope	1.00 1.00
Highvalley, moist---	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
656: Shilling, moist-----	50	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Gravel content Slope	1.00 1.00
Highvalley, moist---	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
657: Pumpkin, stony surface-----	95	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.32
658: Cleymor-----	50	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
Pumpkin, stony surface-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.32
659: Hoff, south slope---	85	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
660: Longs-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Highvalley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
661: Awley-----	50	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 1.00
Bo-----	35	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 1.00
662: Awley-----	65	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
662: Bo-----	20	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 1.00
663: Cleymor-----	65	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
Hoff-----	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
666: Pachic Argixerolls, very stony surface	40	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Gravel content Large stones content	1.00 0.78 0.47
Rubble land-----	30	Not rated		Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Very limited Slope Large stones content	1.00 1.00	Very limited Large stones content Slope	1.00 1.00	Very limited Large stones content Slope Gravel content	1.00 1.00 0.01
700: Drybuck-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Whisk, moist-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
701: Drybuck-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Whisk, moist-----	25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
702: Deerrun-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.20

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
702: Kisky, fine gravelly sandy loam, moist--	40	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
Drybuck, dry-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
704: Drybuck-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Northfork, fine gravelly sandy loam	30	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 1.00
Whisk, moist-----	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
705: Northfork, sandy loam-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Shirts, sandy loam, dry-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
706: Northfork, fine gravelly sandy loam	40	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 1.00
Shirts, coarse sandy loam-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.54 0.22
Zimmer-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
707: Packerjohn, ashy coarse sandy loam--	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
707: Shirts, coarse sandy loam-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.54 0.22
Zimmer-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
708: Zimmer-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
Northfork, fine gravelly sandy loam	25	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 1.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.10
Charters, sandy loam	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
710: Charters, fine gravelly sandy loam	35	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Northfork, fine gravelly sandy loam	35	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 1.00
Shirts, coarse sandy loam-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.54 0.22
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
711: Shirts, sandy loam, dry-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
Zimmer-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
712: Charters, fine gravelly sandy loam	40	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Shirts, coarse sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.54 0.22
Zimmer-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
714: Shirts, sandy loam, south slope-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.10
Eagleson, fine gravelly sandy loam	35	Very limited Slope Too sandy Gravel content	1.00 0.12 0.01	Very limited Slope Too sandy Gravel content	1.00 0.12 0.01	Very limited Slope Gravel content Depth to bedrock Too sandy	1.00 1.00 0.84 0.12
Charters, sandy loam	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.71
Kosh-----	35	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
716: Zan-----	45	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Gravel content Slope	1.00 1.00
Belsh-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.56
Montchief-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.20
718: Charters, fine gravelly sandy loam	35	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Crumley-----	30	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 1.00
Eagleson, sandy loam	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.78 0.03
720: Drybuck, dry-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Deerrun-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.20
Kisky, fine gravelly sandy loam, moist--	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 1.00
721: Shirts, fine gravelly sandy loam	40	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.54
Kosh-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Charters, fine gravelly sandy loam, dry-----	15	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
726: Garval-----	50	Very limited Slope Too sandy Gravel content	1.00 0.88 0.08	Very limited Slope Too sandy Gravel content	1.00 0.88 0.08	Very limited Gravel content Slope Too sandy Depth to bedrock	1.00 1.00 0.88 0.54
Kisky, fine gravelly loamy coarse sand--	25	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.92 0.88	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.92 0.88	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.88
730: Hellake-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Stardust-----	40	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 1.00
731: Shirts, sandy loam, dry-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
Charters, fine gravelly sandy loam, dry-----	25	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Zimmer-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
733: Shirts, fine gravelly sandy loam	50	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content Depth to bedrock	1.00 1.00 0.54
Kosh-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
734: Shirts, sandy loam, dry-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
734: Kosh-----	35	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
735: Shirts, coarse sandy loam-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.54 0.22
Zimmer-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
Charters, fine gravelly sandy loam	15	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
738: Tripod-----	35	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Packerjohn, ashy coarse sandy loam--	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.71
739: Shirts, sandy loam, moist-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
Zimmer-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
Packerjohn, ashy coarse sandy loam--	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
740: Charters, sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Eagleson, fine gravelly sandy loam	35	Very limited Slope Too sandy Gravel content	1.00 0.12 0.01	Very limited Slope Too sandy Gravel content	1.00 0.12 0.01	Very limited Slope Gravel content Depth to bedrock Too sandy	1.00 1.00 0.84 0.12
741: Zan-----	85	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Gravel content Slope	1.00 1.00
742: Crumley-----	65	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 0.92	Very limited Slope Gravel content	1.00 1.00
Eagleson, sandy loam	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.78 0.03
743: Packerjohn, ashy coarse sandy loam--	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Shirts, sandy loam, moist-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
744: Packerjohn, ashy sandy loam, cool---	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Shirts, sandy loam, moist-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
Tripod, cool-----	15	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
745: Tripod, moist-----	50	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
745: Packerjohn, ashy sandy loam-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
746: Packerjohn, ashy sandy loam-----	90	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
747: Pinney, moist-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Charters, fine gravelly sandy loam	25	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Shirts, sandy loam, dry-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
748: Belsh, moist-----	45	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 1.00
Zan, moist-----	40	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
749: Quartzburg-----	50	Very limited Slope Too sandy Gravel content	1.00 0.50 0.08	Very limited Slope Too sandy Gravel content	1.00 0.50 0.08	Very limited Slope Gravel content Too sandy Depth to bedrock	1.00 1.00 0.50 0.03
Charters, sandy loam	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
750: Garval-----	50	Very limited Slope Too sandy Gravel content	1.00 0.88 0.08	Very limited Slope Too sandy Gravel content	1.00 0.88 0.08	Very limited Gravel content Slope Too sandy Depth to bedrock	1.00 1.00 0.88 0.54
Kisky, fine gravelly loamy coarse sand--	20	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.92 0.88	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 0.92 0.88	Very limited Slope Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.88
Rock outcrop-----	20	Not rated		Not rated		Not rated	

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
751: Belsh, moist-----	50	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 0.32	Very limited Slope Gravel content	1.00 1.00
Zan, moist-----	40	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
752: Josie-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Zimmer, fine gravelly sandy loam	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.32	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.32	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
753: Tripod, cool-----	45	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Packerjohn, ashy sandy loam, cool---	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Shirts, sandy loam, moist-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
754: Packerjohn, ashy sandy loam-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, moist-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
755: Zimmer-----	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
Quartzburg-----	35	Very limited Slope Too sandy Gravel content	1.00 0.50 0.08	Very limited Slope Too sandy Gravel content	1.00 0.50 0.08	Very limited Slope Gravel content Too sandy Depth to bedrock	1.00 1.00 0.50 0.03
Rock outcrop-----	20	Not rated		Not rated		Not rated	

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 0.71
Tripod-----	25	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Kosh, moist-----	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
758: Eagleson, sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.78 0.03
Kosh, moist-----	30	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Charters, fine gravelly sandy loam	20	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
759: Charters, sandy loam	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Shirts, sandy loam, south slope-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.10
Kosh, moist-----	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
761: Charters, fine gravelly sandy loam	45	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Middlefork, moist---	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
762: Drybuck, dry-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
762: Hellake-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Deerrun-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.20
763: Eagleson, fine gravelly sandy loam	40	Very limited Slope Too sandy Gravel content	1.00 0.12 0.01	Very limited Slope Too sandy Gravel content	1.00 0.12 0.01	Very limited Slope Gravel content Depth to bedrock Too sandy	1.00 1.00 0.84 0.12
Kosh-----	35	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.10
Zimmer, warm-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.22
Rock outcrop-----	15	Not rated		Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.10
Charters, coarse sandy loam-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zimmer, dry-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.78
767: Shirts, sandy loam, dry-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
767: Kosh-----	25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.68	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
768: Shirts, sandy loam, south slope-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.10
Kosh, moist-----	25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
Eagleson, fine gravelly sandy loam	15	Very limited Slope Too sandy Gravel content	1.00 0.12 0.01	Very limited Slope Too sandy Gravel content	1.00 0.12 0.01	Very limited Slope Gravel content Depth to bedrock Too sandy	1.00 1.00 0.84 0.12
770: Shirts, sandy loam, dry-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Gravel content	1.00 0.08	Very limited Slope Gravel content	1.00 0.08	Very limited Gravel content Slope	1.00 1.00
Kosh, moist-----	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
771: Backswitch, sandy loam-----	55	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Too sandy	1.00 0.12
Shirts, sandy loam, dry-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Depth to bedrock	1.00 0.22 0.01

Table 13a.--Recreation (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Slope Gravel content	1.00  0.08	Very limited Slope Gravel content	1.00  0.08	Very limited Gravel content Slope Depth to bedrock	1.00  1.00 0.01
Packerjohn, ashy sandy loam, dry----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kosh, moist-----	20	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08	Very limited Gravel content Slope Depth to bedrock	1.00 1.00 1.00
900: Pits, gravel-----	75	Not rated		Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated		Not rated	
999: Water-----	100	Not rated		Not rated		Not rated	

Table 13b.--Recreation (Part II)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Somewhat limited Too sandy	0.50	Somewhat limited Too sandy	0.50	Very limited Droughty Flooding Depth to saturated zone	1.00 0.60 0.19
Cumulic Haploxerolls	40	Not limited		Not limited		Not limited	
221: Bissell-----	85	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Not limited	
222: Bissell-----	85	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Not limited	
223: Staircase, dry-----	85	Not limited		Not limited		Not limited	
224: Porter-----	85	Not limited		Not limited		Not limited	
225: Boise-----	85	Somewhat limited Too sandy	0.12	Somewhat limited Too sandy	0.12	Somewhat limited Droughty	0.01
226: Flofeather, very rarely flooded-----	55	Not limited		Not limited		Somewhat limited Droughty	0.01
Shawmount, stony surface-----	30	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Droughty Large stones content Gravel content	0.12 0.08 0.01
227: Piercepark, loam----	85	Not limited		Not limited		Not limited	
228: Piercepark, loam----	85	Not limited		Not limited		Not limited	
229: Piercepark, coarse sandy loam-----	85	Not limited		Not limited		Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
230: Hann-----	60	Not limited		Not limited		Somewhat limited Slope	0.01
Doubledia, silty clay loam-----	15	Not limited		Not limited		Somewhat limited Slope	0.01
232: Jasseek-----	85	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Not limited	
233: Jasseek-----	85	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Not limited	
238: Adaboi-----	85	Not limited		Not limited		Not limited	
240: Collister-----	65	Not limited		Not limited		Not limited	
Flofeather-----	25	Not limited		Not limited		Not limited	
300: Shawmount, stony surface-----	75	Somewhat limited Slope Dusty	0.50 0.50	Somewhat limited Dusty	0.50	Very limited Slope Droughty Large stones content Gravel content	1.00 0.12 0.08 0.01
301: Breadloaf-----	55	Not limited		Not limited		Somewhat limited Depth to bedrock Slope Droughty	0.95 0.16 0.04
Doubledia, silty clay loam-----	25	Not limited		Not limited		Not limited	
302: Breadloaf-----	40	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Depth to bedrock Droughty	1.00 0.95 0.04
Doubledia, silty clay loam-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.78	Very limited Slope	1.00
Hann-----	20	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
303: Doubledia, silty clay loam-----	40	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Slope	1.00
Hann-----	25	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Slope	1.00
Breadloaf-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock Droughty	1.00 0.95 0.04
304: Breadloaf-----	30	Not limited		Not limited		Somewhat limited Depth to bedrock Slope Droughty	0.95 0.63 0.04
Doubledia, silty clay loam-----	30	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Slope	1.00
Hullsgulch, loam----	30	Somewhat limited Slope Dusty	0.50 0.50	Somewhat limited Dusty	0.50	Very limited Slope	1.00
305: Siphonlake, south slope-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Solarview-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
306: Van Dusen-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Siphonlake-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
307: Adaboi-----	65	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.16
Meclo-----	20	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Depth to bedrock Slope	0.35 0.16
308: Breadloaf-----	40	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock Droughty	1.00 0.95 0.04

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
308: Crawley, silt loam--	30	Very limited Slope Water erosion Dusty	1.00 1.00 0.50	Very limited Water erosion Slope Dusty	1.00 1.00 0.50	Very limited Slope Depth to bedrock Droughty	1.00 1.00 0.87
Doubledia, clay loam	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
309: Hullsgulch, sandy loam-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Solarview-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
311: Meclo-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.44	Very limited Slope Depth to bedrock	1.00 0.35
Crawley, silt loam--	30	Very limited Water erosion Slope Dusty	1.00 1.00 0.50	Very limited Water erosion Dusty Slope	1.00 0.50 0.22	Very limited Slope Depth to bedrock Droughty	1.00 1.00 0.87
Adaboi-----	20	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Slope	1.00
328: Gacey, extremely stony surface-----	75	Very limited Large stones content	1.00	Very limited Large stones content	1.00	Very limited Depth to cemented pan Droughty Large stones content	1.00 1.00 0.92
329: Ayetle-----	55	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Duco, stony loam, very stony surface	25	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
330: Breadloaf-----	35	Not limited		Not limited		Somewhat limited Slope Depth to bedrock Droughty	0.96 0.95 0.04

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
330: Ayette, moist-----	30	Not limited		Not limited		Very limited Slope	1.00
Immig, rubbly surface-----	20	Very limited Large stones content Slope	1.00 0.50	Very limited Large stones content	1.00	Very limited Large stones content Droughty Slope Depth to bedrock	1.00 1.00 1.00 0.84
331: Ayette, moist-----	50	Not limited		Not limited		Very limited Slope	1.00
Yad-----	30	Not limited		Not limited		Very limited Slope	1.00
332: Hann-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
Ayette, moist-----	30	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Picketpin-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
333: Ayette-----	50	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Crawley, loam-----	15	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Depth to bedrock Droughty	1.00 1.00 0.86
Hullsgulch, loam----	15	Very limited Slope Dusty	1.00 0.50	Somewhat limited Slope Dusty	0.78 0.50	Very limited Slope	1.00
335: Gimmi, very stony surface-----	30	Somewhat limited Large stones content Slope	0.76 0.50	Somewhat limited Large stones content	0.76	Very limited Slope Large stones content Depth to bedrock Droughty Gravel content	1.00 0.92 0.35 0.20 0.08
Ayette, moist-----	25	Not limited		Not limited		Very limited Slope	1.00
Doubledia, silty clay loam-----	25	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
400: Ralsen-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Foxlane-----	30	Not limited		Not limited		Somewhat limited Droughty Gravel content	0.77 0.08
Pay-----	20	Very limited Depth to saturated zone Too sandy	1.00 0.50	Very limited Depth to saturated zone Too sandy	1.00 0.50	Very limited Depth to saturated zone Flooding Droughty	1.00 0.60 0.35
401: Staircase-----	85	Not limited		Not limited		Somewhat limited Gravel content	0.32
402: Crossbow-----	60	Not limited		Not limited		Somewhat limited Flooding Depth to saturated zone	0.60 0.08
Foxlane-----	20	Not limited		Not limited		Somewhat limited Droughty Gravel content	0.77 0.08
403: Ralsen-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Pay-----	25	Very limited Depth to saturated zone Too sandy	1.00 0.50	Very limited Depth to saturated zone Too sandy	1.00 0.50	Very limited Depth to saturated zone Flooding Droughty	1.00 0.60 0.35
Crossbow-----	20	Not limited		Not limited		Somewhat limited Flooding Depth to saturated zone	0.60 0.08
404: Riverpoint-----	55	Not limited		Not limited		Very limited Slope Droughty	1.00 0.01
Hellake-----	25	Not limited		Not limited		Not limited	
405: Hellake-----	65	Not limited		Not limited		Not limited	
Staircase-----	15	Not limited		Not limited		Somewhat limited Gravel content	0.32

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
406: Hellake-----	75	Not limited		Not limited		Not limited	
407: Hellake-----	75	Not limited		Not limited		Very limited Slope	1.00
408: Stardust-----	75	Not limited		Not limited		Somewhat limited Gravel content	0.08
409: Stardust-----	75	Not limited		Not limited		Somewhat limited Gravel content	0.08
410: Stardust-----	65	Not limited		Not limited		Very limited Slope Gravel content	1.00 0.08
Riverpoint, very stony surface-----	20	Somewhat limited Large stones content	0.76	Somewhat limited Large stones content	0.76	Very limited Slope Large stones content Gravel content	1.00 0.08 0.01
411: Huston, very stony surface-----	45	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Droughty Large stones content Gravel content	1.00 0.42 0.08 0.01
Zeb, gravelly sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content	1.00 0.81 0.01
412: Huston, very stony surface-----	50	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Droughty Large stones content Gravel content	1.00 0.42 0.08 0.01
Stardust-----	30	Not limited		Not limited		Very limited Slope Gravel content	1.00 0.08
413: Cloudyway-----	75	Somewhat limited Too sandy	0.12	Somewhat limited Too sandy	0.12	Somewhat limited Slope Gravel content	0.16 0.08

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
414: Hellake-----	40	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
Middlefork-----	40	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
415: Middlefork-----	55	Not limited		Not limited		Very limited Slope	1.00
Pinney-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
416: Pinney, moist-----	35	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Middlefork, moist---	30	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Zeb, gravelly sandy loam-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Droughty Gravel content	1.00 0.81 0.01
417: Middlefork-----	60	Not limited		Not limited		Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	20	Not limited		Not limited		Very limited Slope Droughty Gravel content	1.00 0.28 0.08
418: Middlefork-----	55	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	25	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Droughty Gravel content	1.00 0.28 0.08
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Gravel content	1.00 0.08
Zeb, fine gravelly sandy loam-----	35	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Droughty Gravel content	1.00 0.28 0.08

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
420: Pioneervil-----	40	Not limited		Not limited		Not limited	
Grimescreek-----	35	Not limited		Not limited		Somewhat limited Flooding Depth to saturated zone	0.60 0.08
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Somewhat limited Too sandy Large stones content	0.88 0.76	Somewhat limited Too sandy Large stones content	0.88 0.76	Very limited Droughty Gravel content	1.00 1.00
422: Lithic Xerorthents, very stony surface	30	Somewhat limited Too sandy Large stones content	0.88 0.47	Somewhat limited Too sandy Large stones content	0.88 0.47	Very limited Droughty Gravel content Depth to bedrock	1.00 1.00 1.00
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Somewhat limited Too sandy Large stones content	0.88 0.04	Somewhat limited Too sandy Large stones content	0.88 0.04	Very limited Droughty Depth to bedrock	1.00 0.90
423: Dystric Xeropsamments, very stony surface-----	35	Somewhat limited Too sandy Large stones content	0.88 0.04	Somewhat limited Too sandy Large stones content	0.88 0.04	Very limited Droughty Slope Depth to bedrock	1.00 1.00 0.90
Ultic Haploxeralfs--	35	Somewhat limited Slope	0.50	Not limited		Very limited Slope Gravel content	1.00 0.08
Lithic Xerorthents--	15	Not limited		Not limited		Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 0.16 0.01
424: Middlefork-----	50	Not limited		Not limited		Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
424: Charters, coarse sandy loam-----	35	Not limited		Not limited		Very limited Slope	1.00
425: Middlefork-----	55	Not limited		Not limited		Not limited	
Brassey-----	25	Not limited		Not limited		Somewhat limited Gravel content Slope	0.08 0.01
426: Middlefork, moist---	85	Not limited		Not limited		Very limited Slope	1.00
427: Middlefork, moist---	85	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
428: Zeb, gravelly sandy loam-----	45	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Droughty Gravel content	1.00 0.81 0.01
Republic-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
429: Huston, very stony surface-----	85	Somewhat limited Large stones content	0.47	Somewhat limited Large stones content	0.47	Very limited Slope Droughty Large stones content Gravel content	1.00 0.42 0.08 0.01
503: Cartwright, dry-----	85	Not limited		Not limited		Not limited	
504: Cartwright, dry-----	85	Not limited		Not limited		Very limited Slope	1.00
505: Brownlee-----	85	Not limited		Not limited		Somewhat limited Slope	0.01
506: Brownlee-----	45	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
Robbscreek-----	20	Somewhat limited Slope	0.50	Not limited		Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.23 0.08

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
506: Whisk-----	15	Somewhat limited Slope	0.50	Not limited		Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.08
507: Shoebend-----	35	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Depth to bedrock	1.00 0.65
Dobson-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Jerusalem-----	20	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope	1.00
509: Arrowrock-----	35	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Depth to bedrock Slope Droughty Gravel content	1.00 1.00 1.00 0.92
Borid-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content Large stones content	1.00 1.00 1.00 0.13 0.08
Rock outcrop-----	25	Not rated		Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Roney, moist-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.09 0.08 0.01
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.46

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
513: Cartwright-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Robbscreek, moist---	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.10 0.01
516: Shimo, extremely stony surface-----	35	Very limited Large stones content Slope Too sandy	1.00 1.00 0.50	Very limited Large stones content Slope Too sandy	1.00 1.00 0.50	Very limited Slope Droughty Large stones content Depth to bedrock	1.00 1.00 1.00 0.90
Olaton, south slope	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.34
Schiller, south slope-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.68 0.45
525: Robbscreek-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.23 0.08
Dobson-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Brownlee-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
526: Cartwright-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Brownlee, moist-----	30	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Robbscreek, moist---	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.10 0.01

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
527: Dobson-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Roney, dry-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.74 0.46 0.32
528: Roney, dry-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.74 0.46 0.32
Dobson-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Olaton, south slope	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.34
529: Roney-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.69 0.46 0.08
Kisky, fine gravelly sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Olaton, south slope	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.34
532: Schiller, north slope-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.68 0.39

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
532: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.46
533: Olaton, north slope, dry-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content	1.00 0.11 0.01
Roney, moist-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.11 0.08 0.01
534: Shimo, fine gravelly loamy sand-----	50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.84
Kisky, fine gravelly sandy loam-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Schiller-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.91
538: Borid-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content Large stones content	1.00 1.00 1.00 0.13 0.08
Shimo, fine gravelly loamy sand-----	20	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.84

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
541: Roney-----	55	Somewhat limited Slope	0.50	Not limited		Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.69 0.46 0.08
Kisky, fine gravelly sandy loam-----	35	Somewhat limited Slope	0.50	Not limited		Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.68
544: Arrowrock-----	40	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Depth to bedrock Slope Droughty Gravel content	1.00 1.00 1.00 0.92
Borid-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content Large stones content	1.00 1.00 1.00 0.13 0.08
Painter-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 0.90
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.46
Kisky, fine gravelly loamy sand-----	30	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
555: Brownlee-----	50	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope	1.00
Schiller-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.91

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
556: Kisky, fine gravelly sandy loam-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Shimo, fine gravelly loamy sand-----	30	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.84
Brownlee-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
558: Kisky, fine gravelly sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Whisk-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Roney, dry-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.74 0.46 0.32
560: Robbscreek, moist---	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.10 0.01
Hellake-----	25	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope	1.00
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.46

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.29 0.08
Kisky, fine gravelly loamy sand-----	30	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Olaton, north slope, moist-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
562: Kisky, fine gravelly sandy loam-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Shimo, fine gravelly sandy loam-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.29
Roney-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.69 0.46 0.08
600: McDesh-----	50	Not limited		Not limited		Very limited Slope Depth to bedrock	1.00 0.90
Immig, rubbly surface-----	25	Very limited Large stones content	1.00	Very limited Large stones content	1.00	Very limited Large stones content Droughty Slope Depth to bedrock	1.00 1.00 1.00 0.84

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
600: Gwin, very stony loam, extremely stony surface-----	15	Very limited Large stones content	1.00	Very limited Large stones content	1.00	Very limited Droughty Large stones content Depth to bedrock Slope	1.00 1.00 1.00 1.00
601: Hann-----	45	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Slope	1.00
Gwin, very stony loam, extremely stony surface-----	25	Very limited Large stones content	1.00	Very limited Large stones content	1.00	Very limited Droughty Large stones content Depth to bedrock Slope	1.00 1.00 1.00 1.00
Shafer-----	20	Not limited		Not limited		Very limited Slope Depth to bedrock Droughty	1.00 0.97 0.01
602: Hillcreek-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content Depth to bedrock Droughty	1.00 0.99 0.97 0.82
Hann-----	20	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 0.78	Very limited Slope	1.00
604: Shafer-----	55	Somewhat limited Slope	0.50	Not limited		Very limited Slope Depth to bedrock Droughty	1.00 0.97 0.01
Hann-----	25	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited Large stones content	1.00	Very limited Large stones content	1.00	Very limited Droughty Large stones content Depth to bedrock Slope	1.00 1.00 1.00 1.00
Flybow-----	20	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Depth to bedrock Droughty Gravel content Slope	1.00 1.00 1.00 1.00
606: Hillcreek-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content Depth to bedrock Droughty	1.00 0.99 0.97 0.82
607: Duco, stony loam, very stony surface	35	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
Immig, very stony surface-----	35	Very limited Slope Large stones content	1.00 0.82	Very limited Slope Large stones content	1.00 0.82	Very limited Slope Large stones content Droughty Depth to bedrock	1.00 1.00 1.00 0.84
Rubble land-----	15	Not rated		Not rated		Not rated	
608: Duco, very gravelly loam, stony surface	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty Gravel content Large stones content	1.00 1.00 1.00 0.92 0.08

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
608: Hovelton, gravelly ashy loam-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Large stones content Depth to bedrock Gravel content	1.00 0.33 0.32 0.01 0.01
McDesh, south slope	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock	1.00 0.03
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content Droughty Depth to bedrock	1.00 0.99 0.99 0.90
Duco, stony loam, very stony surface	20	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
McDesh, south slope	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock	1.00 0.03
612: Hann-----	60	Not limited		Not limited		Somewhat limited Slope	0.01
Hillcreek, dry-----	25	Not limited		Not limited		Not limited	
613: Duco, stony loam, very stony surface	40	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
Searles, very stony surface-----	25	Very limited Slope Dusty Large stones content	1.00 0.50 0.47	Very limited Slope Dusty Large stones content	1.00 0.50 0.47	Very limited Slope Large stones content Droughty Depth to bedrock	1.00 0.92 0.87 0.84

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
613: McDesh, south slope	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock	1.00 0.03
618: McDesh, south slope	35	Not limited		Not limited		Very limited Slope Depth to bedrock	1.00 0.03
Duco, very gravelly loam, stony surface	25	Somewhat limited Slope	0.50	Not limited		Very limited Depth to bedrock Droughty Slope Gravel content Large stones content	1.00 1.00 1.00 0.92 0.08
Shafer-----	20	Not limited		Not limited		Very limited Slope Depth to bedrock Droughty	1.00 0.97 0.01
619: McDesh-----	35	Not limited		Not limited		Very limited Slope Depth to bedrock	1.00 0.90
Gwin, gravelly loam, stony surface-----	25	Somewhat limited Slope	0.50	Not limited		Very limited Depth to bedrock Droughty Slope Gravel content Large stones content	1.00 1.00 1.00 0.38 0.08
Shafer-----	20	Not limited		Not limited		Very limited Slope Depth to bedrock Droughty	1.00 0.97 0.01
620: Immig, very stony surface-----	35	Very limited Slope Large stones content	1.00 0.82	Very limited Slope Large stones content	1.00 0.82	Very limited Slope Large stones content Droughty Depth to bedrock	1.00 1.00 1.00 0.84
McDesh, south slope	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.03

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
621: McDaniel-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 1.00 0.16
Hovelton, gravelly ashy loam-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Large stones content Depth to bedrock Gravel content	1.00 0.33 0.32 0.01 0.01
622: Hovelton, gravelly ashy loam-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Large stones content Depth to bedrock Gravel content	1.00 0.33 0.32 0.01 0.01
Gwin, very stony loam, extremely stony surface-----	30	Very limited Large stones content Slope	1.00 1.00	Very limited Large stones content	1.00	Very limited Slope Droughty Large stones content Depth to bedrock	1.00 1.00 1.00 1.00
630: Gwin, very gravelly loam-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content Large stones content	1.00 1.00 1.00 0.99 0.08
Flybow-----	25	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Depth to bedrock Slope Droughty Gravel content	1.00 1.00 1.00 1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
631: Flybow-----	40	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Depth to bedrock Slope Droughty Gravel content	1.00 1.00 1.00 1.00
Rock outcrop-----	30	Not rated		Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated		Not rated	
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited Large stones content	1.00	Very limited Large stones content	1.00	Very limited Droughty Large stones content Depth to bedrock Slope	1.00 1.00 1.00 1.00
McDesh, very stony loam, very stony surface-----	25	Somewhat limited Large stones content	0.47	Somewhat limited Large stones content	0.47	Very limited Large stones content Slope Depth to bedrock Droughty	1.00 1.00 0.90 0.33
Rock outcrop-----	25	Not rated		Not rated		Not rated	
635: Shafer, very stony surface-----	40	Somewhat limited Large stones content Slope	0.92 0.50	Somewhat limited Large stones content	0.92	Very limited Large stones content Slope Depth to bedrock Droughty	1.00 1.00 0.97 0.38
Karney-----	25	Somewhat limited Slope	0.50	Not limited		Very limited Slope Depth to bedrock Large stones content	1.00 0.35 0.08
Yad-----	20	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
636: Hann, stony surface	30	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Large stones content	1.00 0.68

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
636: McDesh, very stony loam, extremely bouldery surface---	30	Very limited Large stones content Slope	1.00  1.00	Very limited Large stones content Slope	1.00  0.78	Very limited Slope Large stones content Depth to bedrock	1.00  1.00  0.01
Robbscreek, moist---	25	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.10 0.01
638: Yad-----	35	Not limited		Not limited		Somewhat limited Slope	0.01
Cranegulch-----	25	Not limited		Not limited		Somewhat limited Slope	0.16
Duco, stony loam, very stony surface	25	Somewhat limited Large stones content	0.47	Somewhat limited Large stones content	0.47	Very limited Droughty Depth to bedrock Large stones content Slope	1.00 1.00 0.92 0.01
640: Timberbutte-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 1.00
641: Aradaran-----	45	Not limited		Not limited		Somewhat limited Slope	0.16
Yad-----	40	Not limited		Not limited		Somewhat limited Slope	0.16
650: Longs-----	40	Very limited Slope	1.00	Not limited		Very limited Slope	1.00
Highvalley-----	30	Very limited Slope	1.00	Not limited		Very limited Slope	1.00
Hoff-----	20	Very limited Slope	1.00	Not limited		Very limited Slope Depth to bedrock Droughty Gravel content	1.00 1.00 1.00 0.68
651: Hess-----	35	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
651: Lidos-----	30	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
Cleymor-----	25	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Slope	1.00
652: Hess-----	40	Very limited Slope	1.00	Not limited		Very limited Slope	1.00
Lidos-----	30	Very limited Slope	1.00	Not limited		Very limited Slope	1.00
Klicker-----	20	Very limited Slope	1.00	Not limited		Very limited Slope Depth to bedrock Droughty	1.00 0.80 0.03
653: Lidos-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Klicker-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.80 0.03
Hess-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
654: Shilling-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.92
Highvalley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hoff-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 1.00 1.00 0.68
655: Shilling, moist----	40	Very limited Slope	1.00	Not limited		Very limited Slope Gravel content	1.00 0.32
Highvalley, moist---	35	Very limited Slope	1.00	Not limited		Very limited Slope	1.00
656: Shilling, moist----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.32

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
656: Highvalley, moist---	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
657: Pumpkin, stony surface-----	95	Not limited		Not limited		Very limited Slope Large stones content Droughty	1.00 0.68 0.05
658: Cleymor-----	50	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Slope	1.00
Pumpkin, stony surface-----	30	Not limited		Not limited		Very limited Slope Large stones content Droughty	1.00 0.68 0.05
659: Hoff, south slope---	85	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.68
660: Longs-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Highvalley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
661: Awley-----	50	Very limited Slope	1.00	Not limited		Very limited Slope Gravel content	1.00 0.01
Bo-----	35	Very limited Slope	1.00	Not limited		Very limited Slope Gravel content	1.00 0.01
662: Awley-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.01
Bo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.01
663: Cleymor-----	65	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
663: Hoff-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 1.00 1.00 0.68
666: Pachic Argixerolls, very stony surface	40	Very limited Slope Large stones content	1.00 0.47	Very limited Slope Large stones content	1.00 0.47	Very limited Slope	1.00
Rubble land-----	30	Not rated		Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Very limited Large stones content Slope	1.00 1.00	Very limited Large stones content Slope	1.00 1.00	Very limited Slope Large stones content Droughty	1.00 0.92 0.64
700: Drybuck-----	50	Not limited		Not limited		Very limited Slope	1.00
Whisk, moist-----	30	Not limited		Not limited		Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.08
701: Drybuck-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Whisk, moist-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
702: Deerrun-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.20 0.01
Kisky, fine gravelly sandy loam, moist--	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Drybuck, dry-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
704: Drybuck-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Northfork, fine gravelly sandy loam	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.03
Whisk, moist-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
705: Northfork, sandy loam-----	60	Very limited Slope	1.00	Not limited		Very limited Slope Droughty	1.00 0.02
Shirts, sandy loam, dry-----	20	Very limited Slope	1.00	Not limited		Very limited Slope Depth to bedrock	1.00 0.01
706: Northfork, fine gravelly sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.03
Shirts, coarse sandy loam-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
Zimmer-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
707: Packerjohn, ashy coarse sandy loam--	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, coarse sandy loam-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
Zimmer-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
708: Zimmer-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
Northfork, fine gravelly sandy loam	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.03
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Slope	1.00	Not limited		Very limited Slope Depth to bedrock Droughty	1.00 0.10 0.02
Charters, sandy loam	30	Very limited Slope	1.00	Not limited		Very limited Slope	1.00
710: Charters, fine gravelly sandy loam	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Northfork, fine gravelly sandy loam	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.03
Shirts, coarse sandy loam-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Slope	1.00	Not limited		Very limited Slope Gravel content	1.00 0.08
Shirts, sandy loam, dry-----	30	Very limited Slope	1.00	Not limited		Very limited Slope Depth to bedrock	1.00 0.01
Zimmer-----	30	Very limited Slope	1.00	Not limited		Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
712: Charters, fine gravelly sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Shirts, coarse sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
Zimmer-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
714: Shirts, sandy loam, south slope-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.10 0.02
Eagleson, fine gravelly sandy loam	35	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.84 0.01
Charters, sandy loam	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.99 0.71 0.68
Kosh-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
716: Zan-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content	1.00 0.19 0.01

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
716: Belsh-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Large stones content	1.00 0.64 0.08
Montchief-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 0.83 0.20
718: Charters, fine gravelly sandy loam	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Crumley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.84
Eagleson, sandy loam	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 0.23 0.03
720: Drybuck, dry-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Deerrun-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.20 0.01
Kisky, fine gravelly sandy loam, moist--	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
721: Shirts, fine gravelly sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.54 0.08 0.08
Kosh-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
721: Charters, fine gravelly sandy loam, dry-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.08
726: Garval-----	50	Very limited Slope Too sandy	1.00 0.88	Very limited Slope Too sandy	1.00 0.88	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.99 0.54 0.08
Kisky, fine gravelly loamy coarse sand--	25	Very limited Slope Too sandy	1.00 0.88	Very limited Slope Too sandy	1.00 0.88	Very limited Slope Droughty Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.92 0.50
730: Hellake-----	40	Not limited		Not limited		Very limited Slope	1.00
Stardust-----	40	Not limited		Not limited		Very limited Slope Gravel content	1.00 0.08
731: Shirts, sandy loam, dry-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.01
Charters, fine gravelly sandy loam, dry-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.08
Zimmer-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
733: Shirts, fine gravelly sandy loam	50	Not limited		Not limited		Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.54 0.08 0.08
Kosh-----	30	Not limited		Not limited		Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.68

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
734: Shirts, sandy loam, dry-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.01
Kosh-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
735: Shirts, coarse sandy loam-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
Zimmer-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
Charters, fine gravelly sandy loam	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
738: Tripod-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content	1.00 0.83 0.08
Packerjohn, ashy coarse sandy loam--	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.71 0.68
739: Shirts, sandy loam, moist-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.01
Zimmer-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
739: Packerjohn, ashy coarse sandy loam--	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
740: Charters, sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Eagleson, fine gravelly sandy loam	35	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.84 0.01
741: Zan-----	85	Somewhat limited Slope	0.50	Not limited		Very limited Slope Droughty Gravel content	1.00 0.19 0.01
742: Crumley-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.84
Eagleson, sandy loam	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 0.23 0.03
743: Packerjohn, ashy coarse sandy loam--	50	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
Shirts, sandy loam, moist-----	35	Somewhat limited Slope	0.50	Not limited		Very limited Slope Depth to bedrock	1.00 0.01
744: Packerjohn, ashy sandy loam, cool---	60	Somewhat limited Slope	0.50	Not limited		Very limited Slope Droughty	1.00 0.05
Shirts, sandy loam, moist-----	20	Somewhat limited Slope	0.50	Not limited		Very limited Slope Depth to bedrock	1.00 0.01
Tripod, cool-----	15	Somewhat limited Slope	0.50	Not limited		Very limited Slope Droughty Gravel content	1.00 0.15 0.08

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
745: Tripod, moist-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content	1.00 0.77 0.08
Packerjohn, ashy sandy loam-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
746: Packerjohn, ashy sandy loam-----	90	Very limited Slope	1.00	Not limited		Very limited Slope	1.00
747: Pinney, moist-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Charters, fine gravelly sandy loam	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Shirts, sandy loam, dry-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.01
748: Belsh, moist-----	45	Somewhat limited Slope	0.50	Not limited		Very limited Slope Gravel content Droughty	1.00 0.32 0.07
Zan, moist-----	40	Somewhat limited Slope	0.50	Not limited		Very limited Slope Gravel content	1.00 0.08
749: Quartzburg-----	50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.99 0.08 0.03
Charters, sandy loam	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
750: Garval-----	50	Very limited Slope Too sandy	1.00 0.88	Very limited Slope Too sandy	1.00 0.88	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.99 0.54 0.08

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
750: Kisky, fine gravelly loamy coarse sand--	20	Very limited Slope Too sandy	1.00 0.88	Very limited Slope Too sandy	1.00 0.88	Very limited Slope Droughty Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.92 0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
751: Belsh, moist-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.07
Zan, moist-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.08
752: Josie-----	70	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope	1.00
Zimmer, fine gravelly sandy loam	20	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.32
753: Tripod, cool-----	45	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Droughty Gravel content	1.00 0.15 0.08
Packerjohn, ashy sandy loam, cool---	25	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Droughty	1.00 0.05
Shirts, sandy loam, moist-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Depth to bedrock	1.00 0.01
754: Packerjohn, ashy sandy loam-----	55	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
Shirts, sandy loam, moist-----	20	Somewhat limited Slope	0.50	Not limited		Very limited Slope Depth to bedrock	1.00 0.01

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
755: Zimmer-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
Quartzburg-----	35	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Too sandy	1.00 0.50	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.99 0.08 0.03
Rock outcrop-----	20	Not rated		Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.71 0.68
Tripod-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content	1.00 0.83 0.08
Kosh, moist-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
758: Eagleson, sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock	1.00 0.23 0.03
Kosh, moist-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Charters, fine gravelly sandy loam	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
759: Charters, sandy loam	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
759: Shirts, sandy loam, south slope-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.10 0.02
Kosh, moist-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
761: Charters, fine gravelly sandy loam	45	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Middlefork, moist---	40	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
762: Drybuck, dry-----	40	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope	1.00
Hellake-----	30	Somewhat limited Slope	0.50	Not limited		Very limited Slope	1.00
Deerrun-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Depth to bedrock Droughty	1.00 0.20 0.01
763: Eagleson, fine gravelly sandy loam	40	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.84 0.01
Kosh-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Somewhat limited Slope	0.50	Not limited		Very limited Slope Depth to bedrock	1.00 0.10

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
765: Zimmer, warm-----	20	Somewhat limited Slope	0.50	Not limited		Very limited Droughty Depth to bedrock Slope	1.00 1.00 1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Very limited Slope	1.00	Not limited		Very limited Slope Depth to bedrock	1.00 0.10
Charters, coarse sandy loam-----	15	Not limited		Not limited		Very limited Slope	1.00
Zimmer, dry-----	15	Very limited Slope	1.00	Not limited		Very limited Droughty Depth to bedrock Slope	1.00 1.00 1.00
767: Shirts, sandy loam, dry-----	45	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock	1.00 0.01
Kosh-----	25	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Gravel content	1.00 0.08
768: Shirts, sandy loam, south slope-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.10 0.02
Kosh, moist-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Eagleson, fine gravelly sandy loam	15	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.84 0.01

Table 13b.--Recreation (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
770: Shirts, sandy loam, dry-----	50	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Depth to bedrock	1.00 0.01
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Gravel content	1.00 0.08
Kosh, moist-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
771: Backswitch, sandy loam-----	55	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Too sandy	1.00 0.12	Very limited Slope Droughty	1.00 0.01
Shirts, sandy loam, dry-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.01
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.81 0.08 0.01
Packerjohn, ashy sandy loam, dry----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kosh, moist-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
900: Pits, gravel-----	75	Not rated		Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated		Not rated	
999: Water-----	100	Not rated		Not rated		Not rated	

Table 14a.--Building Site Development (Part I)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Very limited Flooding Depth to saturated zone	1.00 0.39	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.39
Cumulic Haploxerolls	40	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.28	Very limited Flooding	1.00
221: Bissell-----	85	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
222: Bissell-----	85	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Slope Shrink-swell	0.50 0.50
223: Staircase, dry-----	85	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.43	Very limited Flooding	1.00
224: Porter-----	85	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.28	Very limited Flooding	1.00
225: Boise-----	85	Not limited		Not limited		Somewhat limited Slope	0.12
226: Flofeather, very rarely flooded-----	55	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
Shawmount, stony surface-----	30	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
227: Piercepark, loam----	85	Not limited		Not limited		Not limited	
228: Piercepark, loam----	85	Not limited		Not limited		Somewhat limited Slope	0.50

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
229: Piercepark, coarse sandy loam-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
230: Hann-----	60	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
Doubledia, silty clay loam-----	15	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 1.00
232: Jasseek-----	85	Very limited Shrink-swell	1.00	Not limited		Very limited Shrink-swell	1.00
233: Jasseek-----	85	Very limited Shrink-swell	1.00	Not limited		Very limited Shrink-swell Slope	1.00 0.12
238: Adaboi-----	85	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00
240: Collister-----	65	Very limited Flooding	1.00	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 0.50 0.28	Very limited Flooding	1.00
Flofeather-----	25	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
300: Shawmount, stony surface-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
301: Breadloaf-----	55	Very limited Shrink-swell Slope	1.00 0.16	Very limited Shrink-swell Depth to soft bedrock Slope	1.00 0.95 0.16	Very limited Shrink-swell Slope	1.00 1.00
Doubledia, silty clay loam-----	25	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell Slope	1.00 0.50

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
302: Breadloaf-----	40	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell Depth to soft bedrock	1.00 1.00 0.95	Very limited Slope Shrink-swell	1.00 1.00
Doubledia, silty clay loam-----	35	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Hann-----	20	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
303: Doubledia, silty clay loam-----	40	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Hann-----	25	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Breadloaf-----	20	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell Depth to soft bedrock	1.00 1.00 0.95	Very limited Slope Shrink-swell	1.00 1.00
304: Breadloaf-----	30	Very limited Shrink-swell Slope	1.00 0.63	Very limited Shrink-swell Depth to soft bedrock Slope	1.00 0.95 0.63	Very limited Shrink-swell Slope	1.00 1.00
Doubledia, silty clay loam-----	30	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00
Hullsgulch, loam---	30	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
305: Siphonlake, south slope-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Solarview-----	25	Very limited Slope Depth to soft bedrock	1.00 0.50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
306: Van Dusen-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Siphonlake-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
307: Adaboi-----	65	Very limited Shrink-swell Slope	1.00 0.16	Very limited Shrink-swell Slope	1.00 0.16	Very limited Shrink-swell Slope	1.00 1.00
Meclo-----	20	Very limited Shrink-swell Slope	1.00 0.16	Very limited Shrink-swell Slope Depth to soft bedrock Slope	1.00 0.35 0.16	Very limited Shrink-swell Slope	1.00 1.00
308: Breadloaf-----	40	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell Depth to soft bedrock	1.00 1.00 0.95	Very limited Slope Shrink-swell	1.00 1.00
Crawley, silt loam--	30	Very limited Slope Shrink-swell Depth to soft bedrock	1.00 0.50 0.50	Very limited Slope Depth to soft bedrock Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to soft bedrock Shrink-swell	1.00 1.00 0.50
Doubledia, clay loam	20	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
309: Hullsgulch, sandy loam-----	65	Very limited Slope Shrink-swell	1.00 0.01	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.01
Solarview-----	25	Very limited Slope Depth to soft bedrock	1.00 0.50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00
311: Meclo-----	35	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell Depth to soft bedrock	1.00 1.00 0.35	Very limited Slope Shrink-swell	1.00 1.00
Crawley, silt loam--	30	Very limited Slope Shrink-swell Depth to soft bedrock	1.00 0.50 0.50	Very limited Slope Depth to soft bedrock Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to soft bedrock Shrink-swell	1.00 1.00 0.50

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
311: Adaboi-----	20	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
328: Gacey, extremely stony surface-----	75	Very limited Shrink-swell Depth to thin cemented pan Large stones content	1.00 0.50 0.09	Very limited Shrink-swell Depth to thin cemented pan Large stones content	1.00 1.00 0.09	Very limited Depth to thin cemented pan Shrink-swell Slope Large stones content	1.00 1.00 1.00 0.12 0.09
329: Ayette-----	55	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Duco, stony loam, very stony surface	25	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50
330: Breadloaf-----	35	Very limited Shrink-swell Slope	1.00 0.96	Very limited Shrink-swell Slope Depth to soft bedrock	1.00 0.96 0.95	Very limited Shrink-swell Slope	1.00 1.00
Ayette, moist-----	30	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Immig, rubbly surface-----	20	Very limited Shrink-swell Slope Large stones content Depth to hard bedrock	1.00 1.00 1.00 0.84	Very limited Shrink-swell Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Shrink-swell Slope Large stones content Depth to hard bedrock	1.00 1.00 1.00 0.84
331: Ayette, moist-----	50	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Yad-----	30	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
332: Hann-----	35	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Ayette, moist-----	30	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Picketpin-----	20	Very limited Slope Shrink-swell	1.00 0.22	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.22
333: Ayette-----	50	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Crawley, loam-----	15	Very limited Slope Depth to soft bedrock Shrink-swell	1.00 0.50 0.22	Very limited Slope Depth to soft bedrock Shrink-swell	1.00 1.00 0.22	Very limited Slope Depth to soft bedrock Shrink-swell	1.00 1.00 0.22
Hullsgulch, loam----	15	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
335: Gimmi, very stony surface-----	30	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell Depth to soft bedrock	1.00 0.50 0.35	Very limited Slope Shrink-swell	1.00 0.50
Ayette, moist-----	25	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Doubledia, silty clay loam-----	25	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00
400: Ralsen-----	35	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Foxlane-----	30	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.43	Very limited Flooding	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
400: Pay-----	20	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
401: Staircase-----	85	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.43	Very limited Flooding	1.00
402: Crossbow-----	60	Very limited Flooding Depth to saturated zone	1.00 0.16	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.16
Foxlane-----	20	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.43	Very limited Flooding	1.00
403: Ralsen-----	40	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Pay-----	25	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Crossbow-----	20	Very limited Flooding Depth to saturated zone	1.00 0.16	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.16
404: Riverpoint-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hellake-----	25	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
405: Hellake-----	65	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Staircase-----	15	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.43	Very limited Flooding	1.00
406: Hellake-----	75	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
407: Hellake-----	75	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
408: Stardust-----	75	Not limited		Not limited		Not limited	
409: Stardust-----	75	Not limited		Not limited		Somewhat limited Slope	0.12
410: Stardust-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Riverpoint, very stony surface-----	20	Very limited Slope Large stones content	1.00 0.08	Very limited Slope Large stones content	1.00 0.08	Very limited Slope Large stones content	1.00 0.08
411: Huston, very stony surface-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zeb, gravelly sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
412: Huston, very stony surface-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Stardust-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
413: Cloudyway-----	75	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
414: Hellake-----	40	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Middlefork-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
415: Middlefork-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Pinney-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
416: Pinney, moist-----	35	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.73	Very limited Slope	1.00
Middlefork, moist---	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zeb, gravelly sandy loam-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
417: Middlefork-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
418: Middlefork-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
420: Pioneervil-----	40	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.43	Very limited Flooding	1.00
Grimescreek-----	35	Very limited Flooding Depth to saturated zone	1.00 0.16	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.16
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
421: Oxyaquic Xerorthents, very stony surface-----	25	Very limited Flooding Large stones content	1.00 1.00	Very limited Flooding Large stones content Depth to saturated zone	1.00 1.00 0.87	Very limited Flooding Large stones content	1.00 1.00
422: Lithic Xerorthents, very stony surface	30	Very limited Depth to hard bedrock Large stones content	1.00 1.00	Very limited Depth to hard bedrock Large stones content	1.00 1.00	Very limited Depth to hard bedrock Large stones content Slope	1.00 1.00 0.12
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Not limited		Somewhat limited Depth to soft bedrock Depth to hard bedrock	0.90 0.42	Somewhat limited Slope	0.12
423: Dystric Xeropsamments, very stony surface-----	35	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock Depth to hard bedrock	1.00 0.90 0.42	Very limited Slope	1.00
Ultic Haploxeralfs--	35	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50
Lithic Xerorthents--	15	Very limited Depth to hard bedrock Slope	1.00 0.16	Very limited Depth to hard bedrock Slope	1.00 0.16	Very limited Slope Depth to hard bedrock	1.00 1.00
424: Middlefork-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Charters, coarse sandy loam-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
425: Middlefork-----	55	Not limited		Not limited		Somewhat limited Slope	0.12
Brassey-----	25	Somewhat limited Shrink-swell Slope	0.01 0.01	Somewhat limited Slope	0.01	Very limited Slope Shrink-swell	1.00 0.01
426: Middlefork, moist---	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
427: Middlefork, moist---	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
428: Zeb, gravelly sandy loam-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Republic-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
429: Huston, very stony surface-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
503: Cartwright, dry----	85	Somewhat limited Shrink-swell	0.01	Not limited		Somewhat limited Slope Shrink-swell	0.12 0.01
504: Cartwright, dry----	85	Very limited Slope Shrink-swell	1.00 0.01	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.01
505: Brownlee-----	85	Somewhat limited Slope	0.01	Somewhat limited Depth to hard bedrock Slope	0.42 0.01	Very limited Slope	1.00
506: Brownlee-----	45	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.42	Very limited Slope	1.00
Robbscreek-----	20	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.46 0.01	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.46 0.01

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
506: Whisk-----	15	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
507: Shoebend-----	35	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 0.50 0.15	Very limited Slope Depth to hard bedrock Depth to soft bedrock Shrink-swell	1.00 1.00 0.64 0.50	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 0.50 0.15
Dobson-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Jerusalem-----	20	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50
509: Arrowrock-----	35	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 1.00 1.00
Borid-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Roney, moist-----	25	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
513: Cartwright-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Robbscreek, moist---	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
		Shrink-swell	0.01			Shrink-swell	0.01
516: Shimo, extremely stony surface-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Depth to hard bedrock	0.90	Depth to hard bedrock	1.00	Depth to hard bedrock	0.90
		Large stones content	0.27	Large stones content	0.27	Large stones content	0.27
Olaton, south slope	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Schiller, south slope-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
525: Robbscreek-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
		Shrink-swell	0.01			Shrink-swell	0.01
Dobson-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
Brownlee-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
				Depth to hard bedrock	0.42		
526: Cartwright-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Brownlee, moist-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Shrink-swell	0.01			Shrink-swell	0.01
Robbscreek, moist---	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
		Shrink-swell	0.01			Shrink-swell	0.01

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
527: Dobson-----	50	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Roney, dry-----	35	Very limited Slope Depth to hard bedrock	1.00 0.46	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.46
528: Roney, dry-----	40	Very limited Slope Depth to hard bedrock	1.00 0.46	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.46
Dobson-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Olaton, south slope	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
529: Roney-----	40	Very limited Slope Depth to hard bedrock	1.00 0.46	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.46
Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Olaton, south slope	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
532: Schiller, north slope-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01
533: Olaton, north slope, dry-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
533: Roney, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
534: Shimo, fine gravelly loamy sand-----	50	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.84
Kisky, fine gravelly sandy loam-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Schiller-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
538: Borid-----	65	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Shimo, fine gravelly loamy sand-----	20	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.84
541: Roney-----	55	Very limited Slope Depth to hard bedrock	1.00 0.46	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.46
Kisky, fine gravelly sandy loam-----	35	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
544: Arrowrock-----	40	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 1.00 1.00
Borid-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
544: Painter-----	20	Very limited Slope Depth to hard bedrock	1.00 0.06	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 1.00 0.90	Very limited Slope Depth to hard bedrock	1.00 0.06
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01
Kisky, fine gravelly loamy sand-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
555: Brownlee-----	50	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.42	Very limited Slope	1.00
Schiller-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
556: Kisky, fine gravelly sandy loam-----	40	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Shimo, fine gravelly loamy sand-----	30	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.84
Brownlee-----	20	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.42	Very limited Slope	1.00
558: Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
558: Whisk-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Roney, dry-----	25	Very limited Slope Depth to hard bedrock	1.00 0.46	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.46
560: Robbscreek, moist---	30	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.46 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.46 0.01
Hellake-----	25	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited Slope Depth to hard bedrock	1.00 0.29	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.29
Kisky, fine gravelly loamy sand-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Olaton, north slope, moist-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
562: Kisky, fine gravelly sandy loam-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
562: Shimo, fine gravelly sandy loam-----	30	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.99 0.29	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.99	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.99 0.29
Roney-----	25	Very limited Slope Depth to hard bedrock	1.00 0.46	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.46
600: McDesh-----	50	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.90	Very limited Shrink-swell Depth to hard bedrock Slope	1.00 1.00 1.00	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.90
Immig, rubbly surface-----	25	Very limited Shrink-swell Slope Large stones content Depth to hard bedrock	1.00 1.00 1.00 0.84	Very limited Shrink-swell Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Shrink-swell Slope Large stones content Depth to hard bedrock	1.00 1.00 1.00 0.84
Gwin, very stony loam, extremely stony surface-----	15	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50
601: Hann-----	45	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Gwin, very stony loam, extremely stony surface-----	25	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
601: Shafer-----	20	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.84	Very limited Shrink-swell Depth to hard bedrock Slope Depth to soft bedrock	1.00 1.00 1.00 0.97	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.84
602: Hillcreek-----	35	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 0.97 0.50 0.46	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 1.00 0.50 0.46	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 0.97 0.50 0.46
Hann-----	20	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
604: Shafer-----	55	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.84	Very limited Shrink-swell Depth to hard bedrock Slope Depth to soft bedrock	1.00 1.00 1.00 0.97	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.84
Hann-----	25	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50
Flybow-----	20	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
606: Hillcreek-----	50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 0.97 0.50 0.46	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 1.00 0.50 0.46	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 0.97 0.50 0.46
607: Duco, stony loam, very stony surface	35	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50
Immig, very stony surface-----	35	Very limited Slope Shrink-swell Depth to hard bedrock Large stones content	1.00 1.00 0.84 0.34	Very limited Slope Shrink-swell Depth to hard bedrock Large stones content	1.00 1.00 1.00 0.34	Very limited Slope Shrink-swell Depth to hard bedrock Large stones content	1.00 1.00 0.84 0.34
Rubble land-----	15	Not rated		Not rated		Not rated	
608: Duco, very gravelly loam, stony surface	40	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50
Hovelton, gravelly ashy loam-----	25	Very limited Slope Large stones content Shrink-swell Depth to hard bedrock	1.00 0.92 0.50 0.01	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 0.92 0.50	Very limited Slope Large stones content Shrink-swell Depth to hard bedrock	1.00 0.92 0.50 0.01
McDesh, south slope	20	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.03	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 1.00	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.03

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	1.00	Depth to hard bedrock	1.00	Large stones content	1.00
		Depth to hard bedrock	0.90	Large stones content	1.00	Depth to hard bedrock	0.90
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Duco, stony loam, very stony surface	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
McDesh, south slope	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.03	Depth to hard bedrock	1.00	Depth to hard bedrock	0.03
612: Hann-----	60	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.01	Slope	0.01	Shrink-swell	0.50
Hillcreek, dry-----	25	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	0.50
						Shrink-swell	0.50
613: Duco, stony loam, very stony surface	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Searles, very stony surface-----	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.84	Depth to hard bedrock	1.00	Depth to hard bedrock	0.84
McDesh, south slope	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Depth to hard bedrock	0.03	Depth to hard bedrock	1.00	Depth to hard bedrock	0.03

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
618: McDesh, south slope	35	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.03	Very limited Shrink-swell Depth to hard bedrock Slope	1.00 1.00 1.00	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.03
Duco, very gravelly loam, stony surface	25	Very limited Depth to hard bedrock Slope Shrink-swell	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50
Shafer-----	20	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.84	Very limited Shrink-swell Depth to hard bedrock Slope Depth to soft bedrock	1.00 1.00 1.00 0.97	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.84
619: McDesh-----	35	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.90	Very limited Shrink-swell Depth to hard bedrock Slope	1.00 1.00 1.00	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.90
Gwin, gravelly loam, stony surface-----	25	Very limited Depth to hard bedrock Slope Shrink-swell	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50
Shafer-----	20	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.84	Very limited Shrink-swell Depth to hard bedrock Slope Depth to soft bedrock	1.00 1.00 1.00 0.97	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.84
620: Immig, very stony surface-----	35	Very limited Slope Shrink-swell Depth to hard bedrock Large stones content	1.00 1.00 0.84 0.34	Very limited Slope Shrink-swell Depth to hard bedrock Large stones content	1.00 1.00 1.00 0.34	Very limited Slope Shrink-swell Depth to hard bedrock Large stones content	1.00 1.00 0.84 0.34
McDesh, south slope	30	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.03	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 1.00	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.03

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50
621: McDaniel-----	45	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00
Hovelton, gravelly ashy loam-----	40	Very limited Slope Large stones content Shrink-swell Depth to hard bedrock	1.00 0.92 0.50 0.01	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 0.92 0.50	Very limited Slope Large stones content Shrink-swell Depth to hard bedrock	1.00 0.92 0.50 0.01
622: Hovelton, gravelly ashy loam-----	50	Very limited Slope Large stones content Shrink-swell Depth to hard bedrock	1.00 0.92 0.50 0.01	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 0.92 0.50	Very limited Slope Large stones content Shrink-swell Depth to hard bedrock	1.00 0.92 0.50 0.01
Gwin, very stony loam, extremely stony surface-----	30	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Large stones content Shrink-swell	1.00 1.00 1.00 0.50
630: Gwin, very gravelly loam-----	45	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50
Flybow-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
631: Flybow-----	40	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Rock outcrop-----	30	Not rated		Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated		Not rated	
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50
McDesh, very stony loam, very stony surface-----	25	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.90	Very limited Shrink-swell Depth to hard bedrock Slope	1.00 1.00 1.00	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.90
Rock outcrop-----	25	Not rated		Not rated		Not rated	
635: Shafer, very stony surface-----	40	Very limited Shrink-swell Slope Depth to hard bedrock	1.00 1.00 0.97	Very limited Depth to hard bedrock Shrink-swell Slope	1.00 1.00 1.00	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.97
Karney-----	25	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope Depth to soft bedrock Depth to hard bedrock	1.00 1.00 0.35 0.08	Very limited Slope Shrink-swell	1.00 1.00
Yad-----	20	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
636: Hann, stony surface	30	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
636: McDesh, very stony loam, extremely bouldery surface---	30	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.01	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 1.00	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 1.00 0.01
Robbscreek, moist---	25	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.46 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.46 0.01
638: Yad-----	35	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
Cranegulch-----	25	Very limited Shrink-swell Slope	1.00 0.16	Very limited Shrink-swell Slope	1.00 0.16	Very limited Shrink-swell Slope	1.00 1.00
Duco, stony loam, very stony surface	25	Very limited Depth to hard bedrock Large stones content Shrink-swell Slope	1.00 1.00 0.50 0.01	Very limited Depth to hard bedrock Large stones content Shrink-swell Slope	1.00 1.00 0.50 0.01	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell	1.00 1.00 1.00 0.50
640: Timberbutte-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
641: Aradaran-----	45	Very limited Shrink-swell Slope	1.00 0.16	Very limited Shrink-swell Slope	1.00 0.16	Very limited Shrink-swell Slope	1.00 1.00
Yad-----	40	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.50 0.16	Very limited Slope Shrink-swell	1.00 0.50
650: Longs-----	40	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope	1.00
Highvalley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
650: Hoff-----	20	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 1.00 0.50 0.01	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 1.00 0.50 0.01	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 1.00 0.50 0.01
651: Hess-----	35	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.88 0.50	Very limited Slope Shrink-swell	1.00 0.50
Lidos-----	30	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Cleymor-----	25	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00
652: Hess-----	40	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.88 0.50	Very limited Slope Shrink-swell	1.00 0.50
Lidos-----	30	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Klicker-----	20	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.79 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.79 0.50
653: Lidos-----	45	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Klicker-----	30	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.79 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.79 0.50
Hess-----	20	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	1.00 0.88 0.50	Very limited Slope Shrink-swell	1.00 0.50

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
654: Shilling-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Highvalley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hoff-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
655: Shilling, moist----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Highvalley, moist---	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
656: Shilling, moist----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Highvalley, moist---	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
657: Pumpkin, stony surface-----	95	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
658: Cleymor-----	50	Very limited Shrink-swell Slope	1.00	Very limited Shrink-swell Slope	1.00	Very limited Shrink-swell Slope	1.00
Pumpkin, stony surface-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
659: Hoff, south slope---	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
660: Longs-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
				Depth to hard bedrock	0.54		
Highvalley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
661: Awley-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Bo-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
662: Awley-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Bo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
663: Cleymor-----	65	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Hoff-----	20	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 1.00 0.50 0.01	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 1.00 0.50 0.01	Very limited Slope Depth to hard bedrock Shrink-swell Large stones content	1.00 1.00 0.50 0.01
666: Pachic Argixerolls, very stony surface	40	Very limited Slope Shrink-swell	1.00 0.01	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.01
Rubble land-----	30	Not rated		Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Very limited Slope Large stones content	1.00 0.86	Very limited Slope Large stones content	1.00 0.86	Very limited Slope Large stones content	1.00 0.86
700: Drybuck-----	50	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.18	Very limited Slope	1.00
Whisk, moist-----	30	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
701: Drybuck-----	55	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.18	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
701: Whisk, moist-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
702: Deerrun-----	40	Very limited Slope Depth to hard bedrock	1.00 0.20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.20
Kisky, fine gravelly sandy loam, moist--	40	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Drybuck, dry-----	15	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.02	Very limited Slope	1.00
704: Drybuck-----	35	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.18	Very limited Slope	1.00
Northfork, fine gravelly sandy loam	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Whisk, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
705: Northfork, sandy loam-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, dry-----	20	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
706: Northfork, fine gravelly sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, coarse sandy loam-----	25	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
706: Zimmer-----	20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
707: Packerjohn, ashy coarse sandy loam--	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, coarse sandy loam-----	30	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54
Zimmer-----	15	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
708: Zimmer-----	35	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Northfork, fine gravelly sandy loam	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Slope Depth to hard bedrock	1.00 0.10	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.10
Charters, sandy loam	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
710: Charters, fine gravelly sandy loam	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Northfork, fine gravelly sandy loam	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, coarse sandy loam-----	15	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, dry-----	30	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
Zimmer-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
712: Charters, fine gravelly sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, coarse sandy loam-----	35	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54
Zimmer-----	15	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
714: Shirts, sandy loam, south slope-----	40	Very limited Slope Depth to hard bedrock	1.00 0.10	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.10
Eagleson, fine gravelly sandy loam	35	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.84
Charters, sandy loam	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.84 0.71	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.84	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.84 0.71

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
715: Kosh-----	35	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
716: Zan-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Belsh-----	25	Very limited Slope Large stones content	1.00 0.92	Very limited Slope Large stones content	1.00 0.92	Very limited Slope Large stones content	1.00 0.92
Montchief-----	25	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.20 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.20 0.01
718: Charters, fine gravelly sandy loam	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Crumley-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Eagleson, sandy loam	20	Very limited Slope Depth to hard bedrock	1.00 0.03	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.03
720: Drybuck, dry-----	40	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.02	Very limited Slope	1.00
Deerrun-----	30	Very limited Slope Depth to hard bedrock	1.00 0.20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.20
Kisky, fine gravelly sandy loam, moist--	20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
721: Shirts, fine gravelly sandy loam	40	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
721: Kosh-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Charters, fine gravelly sandy loam, dry-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
726: Garval-----	50	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54
Kisky, fine gravelly loamy coarse sand--	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
730: Hellake-----	40	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Stardust-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
731: Shirts, sandy loam, dry-----	40	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
Charters, fine gravelly sandy loam, dry-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zimmer-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
733: Shirts, fine gravelly sandy loam	50	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54
Kosh-----	30	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
734: Shirts, sandy loam, dry-----	45	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
Kosh-----	35	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
735: Shirts, coarse sandy loam-----	50	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54
Zimmer-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Charters, fine gravelly sandy loam	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
738: Tripod-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Packerjohn, ashy coarse sandy loam--	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Slope Depth to hard bedrock	1.00 0.71	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.71
739: Shirts, sandy loam, moist-----	40	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
Zimmer-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Packerjohn, ashy coarse sandy loam--	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
740: Charters, sandy loam	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Eagleson, fine gravelly sandy loam	35	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.84
741: Zan-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
742: Crumley-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Eagleson, sandy loam	20	Very limited Slope Depth to hard bedrock	1.00 0.03	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.03
743: Packerjohn, ashy coarse sandy loam--	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, moist-----	35	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
744: Packerjohn, ashy sandy loam, cool---	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
Tripod, cool-----	15	Very limited Slope Large stones content	1.00 0.01	Very limited Slope Large stones content	1.00 0.01	Very limited Slope Large stones content	1.00 0.01
745: Tripod, moist-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Packerjohn, ashy sandy loam-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
746: Packerjohn, ashy sandy loam-----	90	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
747: Pinney, moist-----	40	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.73	Very limited Slope	1.00
Charters, fine gravelly sandy loam	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, dry-----	15	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
748: Belsh, moist-----	45	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07
Zan, moist-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
749: Quartzburg-----	50	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 0.96 0.03	Very limited Slope	1.00
Charters, sandy loam	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
750: Garval-----	50	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.54
Kisky, fine gravelly loamy coarse sand--	20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
751: Belsh, moist-----	50	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
751: Zan, moist-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
752: Josie-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zimmer, fine gravelly sandy loam	20	Very limited Depth to hard bedrock	1.00	Very limited Depth to hard bedrock	1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
753: Tripod, cool-----	45	Very limited Slope Large stones content	1.00 0.01	Very limited Slope Large stones content	1.00 0.01	Very limited Slope Large stones content	1.00 0.01
Packerjohn, ashy sandy loam, cool---	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
754: Packerjohn, ashy sandy loam-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
755: Zimmer-----	40	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Quartzburg-----	35	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 0.96 0.03	Very limited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Slope Depth to hard bedrock	1.00 0.71	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.71
Tripod-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kosh, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
758: Eagleson, sandy loam	40	Very limited Slope Depth to hard bedrock	1.00 0.03	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.03
Kosh, moist-----	30	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Charters, fine gravelly sandy loam	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
759: Charters, sandy loam	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Shirts, sandy loam, south slope-----	30	Very limited Slope Depth to hard bedrock	1.00 0.10	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.10
Kosh, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
761: Charters, fine gravelly sandy loam	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Middlefork, moist---	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
762: Drybuck, dry-----	40	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.02	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
762: Hellake-----	30	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Deerrun-----	20	Very limited Slope Depth to hard bedrock	1.00 0.20	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.20
763: Eagleson, fine gravelly sandy loam	40	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.84
Kosh-----	35	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Depth to hard bedrock Slope Depth to soft bedrock	1.00 1.00 0.10	Very limited Slope Depth to hard bedrock	1.00 0.01
Zimmer, warm-----	20	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Depth to hard bedrock Slope Depth to soft bedrock	1.00 1.00 0.10	Very limited Slope Depth to hard bedrock	1.00 0.01
Charters, coarse sandy loam-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Zimmer, dry-----	15	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
767: Shirts, sandy loam, dry-----	45	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
Kosh-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
768: Shirts, sandy loam, south slope-----	35	Very limited Slope Depth to hard bedrock	1.00 0.10	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.10
Kosh, moist-----	25	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Eagleson, fine gravelly sandy loam	15	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.84
770: Shirts, sandy loam, dry-----	50	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kosh, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
771: Backswitch, sandy loam-----	55	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock	1.00 0.42	Very limited Slope	1.00

Table 14a.--Building Site Development (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
771: Shirts, sandy loam, dry-----	25	Very limited Slope Depth to hard bedrock	1.00 0.01	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.01
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.28 0.01	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.28	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.28 0.01
Packerjohn, ashy sandy loam, dry----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kosh, moist-----	20	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
900: Pits, gravel-----	75	Not rated		Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated		Not rated	
999: Water-----	100	Not rated		Not rated		Not rated	

Table 14b.--Building Site Development (Part II)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Very limited Flooding Depth to saturated zone	1.00 0.19	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 1.00 0.60	Very limited Droughty Flooding Depth to saturated zone	1.00 0.60 0.19
Cumulic Haploxerolls	40	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.28	Not limited	
221: Bissell-----	85	Very limited Low strength Shrink-swell Frost action	1.00 0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
222: Bissell-----	85	Very limited Low strength Shrink-swell Frost action	1.00 0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
223: Staircase, dry-----	85	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.43	Not limited	
224: Porter-----	85	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.28	Not limited	
225: Boise-----	85	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.01
226: Flofeather, very rarely flooded----	55	Somewhat limited Frost action Flooding	0.50 0.20	Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.01
Shawmount, stony surface-----	30	Somewhat limited Frost action Flooding	0.50 0.20	Very limited Cutbanks cave	1.00	Somewhat limited Droughty Large stones content Gravel content	0.12 0.08 0.01

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
227: Piercepark, loam----	85	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Not limited	
228: Piercepark, loam----	85	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Not limited	
229: Piercepark, coarse sandy loam-----	85	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
230: Hann-----	60	Very limited Low strength Shrink-swell Frost action Slope	1.00 0.50 0.50 0.01	Somewhat limited Too clayey Cutbanks cave Slope	0.12 0.10 0.01	Somewhat limited Slope	0.01
Doubledia, silty clay loam-----	15	Very limited Low strength Shrink-swell Frost action Slope	1.00 1.00 0.50 0.01	Very limited Cutbanks cave Too clayey Slope	1.00 0.50 0.01	Somewhat limited Slope	0.01
232: Jasseek-----	85	Very limited Low strength Shrink-swell Frost action	1.00 1.00 0.50	Very limited Cutbanks cave Too clayey	1.00 0.02	Not limited	
233: Jasseek-----	85	Very limited Low strength Shrink-swell Frost action	1.00 1.00 0.50	Very limited Cutbanks cave Too clayey	1.00 0.02	Not limited	
238: Adaboi-----	85	Very limited Frost action Low strength Shrink-swell	1.00 1.00 1.00	Somewhat limited Too clayey Cutbanks cave	0.88 0.10	Not limited	
240: Collister-----	65	Somewhat limited Low strength Frost action Flooding	0.78 0.50 0.40	Somewhat limited Depth to saturated zone Cutbanks cave	0.28 0.10	Not limited	
Flofeather-----	25	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave	1.00	Not limited	

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
300: Shawmount, stony surface-----	75	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty Large stones content Gravel content	1.00 0.12 0.08 0.01
301: Breadloaf-----	55	Very limited Low strength Shrink-swell Frost action Slope	1.00 1.00 0.50 0.16	Very limited Cutbanks cave Depth to soft bedrock Slope Too clayey	1.00 0.95 0.16 0.12	Somewhat limited Depth to bedrock Slope Droughty	0.95 0.16 0.04
Doubledia, silty clay loam-----	25	Very limited Low strength Shrink-swell Frost action	1.00 1.00 0.50	Very limited Cutbanks cave Too clayey	1.00 0.50	Not limited	
302: Breadloaf-----	40	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Depth to soft bedrock Too clayey	1.00 1.00 0.95 0.12	Very limited Slope Depth to bedrock Droughty	1.00 0.95 0.04
Doubledia, silty clay loam-----	35	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.50	Very limited Slope	1.00
Hann-----	20	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00
303: Doubledia, silty clay loam-----	40	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.50	Very limited Slope	1.00
Hann-----	25	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
303: Breadloaf-----	20	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Depth to soft bedrock Too clayey	1.00 1.00 0.95 0.12	Very limited Slope Depth to bedrock Droughty	1.00 0.95 0.04
304: Breadloaf-----	30	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 0.63 0.50	Very limited Cutbanks cave Depth to soft bedrock Slope Too clayey	1.00 0.95 0.63 0.12	Somewhat limited Depth to bedrock Slope Droughty	0.95 0.63 0.04
Doubledia, silty clay loam-----	30	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 1.00 0.50	Very limited Cutbanks cave Slope Too clayey	1.00 1.00 0.50	Very limited Slope	1.00
Hullsgulch, loam----	30	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
305: Siphonlake, south slope-----	60	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Solarview-----	25	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
306: Van Dusen-----	45	Very limited Slope Frost action Low strength	1.00 0.50 0.22	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Siphonlake-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
307: Adaboi-----	65	Very limited Low strength Shrink-swell Frost action Slope	1.00 1.00 0.50 0.16	Somewhat limited Too clayey Slope Cutbanks cave	0.88 0.16 0.10	Somewhat limited Slope	0.16

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
307: Meclo-----	20	Very limited Shrink-swell Low strength Frost action Slope	1.00 1.00 0.50 0.16	Somewhat limited Depth to soft bedrock Slope Cutbanks cave	0.35 0.16 0.10	Somewhat limited Depth to bedrock Slope	0.35 0.16
308: Breadloaf-----	40	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Depth to soft bedrock Too clayey	1.00 1.00 0.95 0.12	Very limited Slope Depth to bedrock Droughty	1.00 0.95 0.04
Crawley, silt loam--	30	Very limited Slope Depth to soft bedrock Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Depth to bedrock Droughty	1.00 1.00 0.87
Doubledia, clay loam	20	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.98	Very limited Slope	1.00
309: Hullsgulch, sandy loam-----	65	Very limited Slope Frost action Shrink-swell	1.00 0.50 0.01	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Solarview-----	25	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
311: Meclo-----	35	Very limited Slope Shrink-swell Low strength Frost action	1.00 1.00 1.00 0.50	Very limited Slope Depth to soft bedrock Cutbanks cave	1.00 0.35 0.10	Very limited Slope Depth to bedrock	1.00 0.35
Crawley, silt loam--	30	Very limited Slope Depth to soft bedrock Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Depth to bedrock Droughty	1.00 1.00 0.87

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
311: Adaboi-----	20	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.88 0.10	Very limited Slope	1.00
328: Gacey, extremely stony surface-----	75	Very limited Depth to thin cemented pan Shrink-swell Low strength Large stones content	1.00 1.00 1.00 0.09	Very limited Depth to thin cemented pan Cutbanks cave Large stones content	1.00 0.10 0.09	Very limited Depth to cemented pan Droughty Large stones content	1.00 1.00 0.92
329: Ayette-----	55	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 0.10 0.02	Very limited Slope	1.00
Duco, stony loam, very stony surface	25	Very limited Depth to hard bedrock Slope Large stones content Low strength Shrink-swell	1.00 1.00 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
330: Breadloaf-----	35	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 1.00 0.96	Very limited Cutbanks cave Slope Depth to soft bedrock Too clayey	1.00 0.96 0.95 0.12	Somewhat limited Slope Depth to bedrock Droughty	0.96 0.95 0.04
Ayette, moist-----	30	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 0.10 0.02	Very limited Slope	1.00
Immig, rubbly surface-----	20	Very limited Shrink-swell Large stones content Slope Low strength Depth to hard bedrock	1.00 1.00 1.00 1.00 0.84	Very limited Depth to hard bedrock Large stones content Slope Too clayey Cutbanks cave	1.00 1.00 1.00 1.00 0.24 0.10	Very limited Large stones content Droughty Slope Depth to bedrock	1.00 1.00 1.00 0.84

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
331: Ayette, moist-----	50	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 0.10 0.02	Very limited Slope	1.00
Yad-----	30	Very limited Frost action Low strength Slope Shrink-swell	1.00 1.00 1.00 0.50	Very limited Cutbanks cave Slope Too clayey	1.00 1.00 0.50	Very limited Slope	1.00
332: Hann-----	35	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00
Ayette, moist-----	30	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 0.10 0.02	Very limited Slope	1.00
Picketpin-----	20	Very limited Slope Frost action Shrink-swell Low strength	1.00 0.50 0.22 0.22	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
333: Ayette-----	50	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 0.10 0.02	Very limited Slope	1.00
Crawley, loam-----	15	Very limited Slope Depth to soft bedrock Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.22	Very limited Depth to soft bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Depth to bedrock Droughty	1.00 1.00 0.86
Hullsgulch, loam----	15	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
335: Gimmi, very stony surface-----	30	Very limited Low strength Slope Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope Depth to soft bedrock	1.00 1.00 0.35	Very limited Slope Large stones content Depth to bedrock Droughty Gravel content	1.00 0.92 0.35 0.20 0.08
Ayette, moist-----	25	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 0.10 0.02	Very limited Slope	1.00
Doubledia, silty clay loam-----	25	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 1.00 1.00	Very limited Cutbanks cave Slope Too clayey	1.00 1.00 0.50	Very limited Slope	1.00
400: Ralsen-----	35	Very limited Depth to saturated zone Flooding Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
Foxlane-----	30	Somewhat limited Flooding	0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.43	Somewhat limited Droughty Gravel content	0.77 0.08
Pay-----	20	Very limited Depth to saturated zone Flooding Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding Droughty	1.00 0.60 0.35
401: Staircase-----	85	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.43	Somewhat limited Gravel content	0.32
402: Crossbow-----	60	Very limited Flooding Frost action Depth to saturated zone	1.00 0.50 0.08	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Somewhat limited Flooding Depth to saturated zone	0.60 0.08
Foxlane-----	20	Somewhat limited Flooding	0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.43	Somewhat limited Droughty Gravel content	0.77 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
403: Ralsen-----	40	Very limited Depth to saturated zone Flooding Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
Pay-----	25	Very limited Depth to saturated zone Flooding Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding Droughty	1.00 0.60 0.35
Crossbow-----	20	Very limited Flooding Frost action Depth to saturated zone	1.00 0.50 0.08	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.60	Somewhat limited Flooding Depth to saturated zone	0.60 0.08
404: Riverpoint-----	55	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.01
Hellake-----	25	Somewhat limited Low strength Shrink-swell Frost action	0.78 0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
405: Hellake-----	65	Somewhat limited Low strength Shrink-swell Frost action	0.78 0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
Staircase-----	15	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.43	Somewhat limited Gravel content	0.32
406: Hellake-----	75	Somewhat limited Low strength Shrink-swell Frost action	0.78 0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
407: Hellake-----	75	Very limited Slope Low strength Shrink-swell Frost action	1.00 0.78 0.50 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
408: Stardust-----	75	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Somewhat limited Gravel content	0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
409: Stardust-----	75	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Somewhat limited Gravel content	0.08
410: Stardust-----	65	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
Riverpoint, very stony surface-----	20	Very limited Slope Frost action Large stones content	1.00 0.50 0.08	Very limited Cutbanks cave Slope Large stones content	1.00 1.00 0.08	Very limited Slope Large stones content Gravel content	1.00 0.08 0.01
411: Huston, very stony surface-----	45	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Large stones content Gravel content	1.00 0.42 0.08 0.01
Zeb, gravelly sandy loam-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.81 0.01
412: Huston, very stony surface-----	50	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Large stones content Gravel content	1.00 0.42 0.08 0.01
Stardust-----	30	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
413: Cloudyway-----	75	Somewhat limited Frost action Slope	0.50 0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope Gravel content	0.16 0.08
414: Hellake-----	40	Very limited Slope Low strength Shrink-swell Frost action	1.00 0.78 0.50 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Middlefork-----	40	Very limited Slope Low strength Frost action	1.00 0.78 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
415: Middlefork-----	55	Very limited Slope Low strength Frost action	1.00 0.78 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Pinney-----	20	Very limited Slope Low strength Frost action	1.00 0.78 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
416: Pinney, moist-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Middlefork, moist---	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Zeb, gravelly sandy loam-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.81 0.01
417: Middlefork-----	60	Very limited Slope Low strength Frost action	1.00 0.78 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.28 0.08
418: Middlefork-----	55	Very limited Slope Low strength Frost action	1.00 0.78 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.28 0.08
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
419: Zeb, fine gravelly sandy loam-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.28 0.08
420: Pioneervil-----	40	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.43	Not limited	
Grimescreek-----	35	Very limited Flooding Frost action Depth to saturated zone	1.00 0.50 0.08	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 1.00 0.60	Somewhat limited Flooding Depth to saturated zone	0.60 0.08
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Very limited Large stones content Flooding	1.00 0.40	Very limited Cutbanks cave Large stones content Depth to saturated zone	1.00 1.00 0.87	Very limited Droughty Gravel content	1.00 1.00
422: Lithic Xerorthents, very stony surface	30	Very limited Depth to hard bedrock Large stones content	1.00 1.00	Very limited Depth to hard bedrock Large stones content	1.00 1.00	Very limited Droughty Gravel content Depth to bedrock	1.00 1.00 1.00
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Not limited		Very limited Cutbanks cave Depth to soft bedrock Depth to hard bedrock	1.00 0.90 0.42	Very limited Droughty Depth to bedrock	1.00 0.90

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
423: Dystric Xeropsamments, very stony surface-----	35	Very limited Slope	1.00	Very limited Cutbanks cave Slope Depth to soft bedrock Depth to hard bedrock	1.00 1.00 0.90 0.42	Very limited Droughty Slope Depth to bedrock	1.00 1.00 0.90
Ultic Haploxeraalfs--	35	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
Lithic Xerorthents--	15	Very limited Depth to hard bedrock Slope	1.00 0.16	Very limited Depth to hard bedrock Slope	1.00 0.16	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 0.16 0.01
424: Middlefork-----	50	Very limited Slope Low strength Frost action	1.00 0.78 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Charters, coarse sandy loam-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
425: Middlefork-----	55	Somewhat limited Low strength Frost action	0.78 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
Brassey-----	25	Somewhat limited Frost action Shrink-swell Slope	0.50 0.01 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Gravel content Slope	0.08 0.01
426: Middlefork, moist---	85	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
427: Middlefork, moist---	85	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
428: Zeb, gravelly sandy loam-----	45	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.81 0.01

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
428: Republic-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
429: Huston, very stony surface-----	85	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Large stones content Gravel content	1.00 0.42 0.08 0.01
503: Cartwright, dry-----	85	Somewhat limited Frost action Shrink-swell	0.50 0.01	Very limited Cutbanks cave	1.00	Not limited	
504: Cartwright, dry-----	85	Very limited Slope Frost action Shrink-swell	1.00 0.50 0.01	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
505: Brownlee-----	85	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Depth to hard bedrock Slope	1.00 0.42 0.01	Somewhat limited Slope	0.01
506: Brownlee-----	45	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope Depth to hard bedrock	1.00 1.00 0.42	Very limited Slope	1.00
Robbscreek-----	20	Very limited Slope Frost action Depth to hard bedrock Shrink-swell	1.00 0.50 0.46 0.01	Very limited Depth to hard bedrock Cutbanks cave Slope	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.23 0.08
Whisk-----	15	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.08
507: Shoebend-----	35	Very limited Slope Shrink-swell Frost action Depth to hard bedrock	1.00 0.50 0.50 0.15	Very limited Depth to hard bedrock Slope Depth to soft bedrock Cutbanks cave	1.00 1.00 1.00 0.64 0.10	Very limited Slope Depth to bedrock	1.00 0.65

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
507: Dobson-----	30	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Jerusalem-----	20	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
509: Arrowrock-----	35	Very limited Depth to hard bedrock Slope Depth to soft bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Slope Droughty Gravel content	1.00 1.00 1.00 0.92
Borid-----	25	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content Large stones content	1.00 1.00 1.00 0.13 0.08
Rock outcrop-----	25	Not rated		Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Roney, moist-----	25	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.09 0.08 0.01
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 1.00 0.01	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.46
Cartwright-----	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
513: Robbscreek, moist---	25	Very limited Slope Frost action Depth to hard bedrock Shrink-swell	1.00 0.50 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.10 0.01
516: Shimo, extremely stony surface-----	35	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.90 0.27	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 1.00 1.00 0.27	Very limited Slope Droughty Large stones content Depth to bedrock	1.00 1.00 1.00 0.90
Olaton, south slope	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.34
Schiller, south slope-----	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.68 0.45
525: Robbscreek-----	35	Very limited Slope Frost action Depth to hard bedrock Shrink-swell	1.00 0.50 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.23 0.08
Dobson-----	30	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Brownlee-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 1.00 0.42	Very limited Slope	1.00
526: Cartwright-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Brownlee, moist-----	30	Very limited Slope Frost action Shrink-swell	1.00 0.50 0.01	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
526: Robbscreek, moist---	20	Very limited Slope Frost action Depth to hard bedrock Shrink-swell	1.00 0.50 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.10 0.01
527: Dobson-----	50	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Roney, dry-----	35	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.46	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.74 0.46 0.32
528: Roney, dry-----	40	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.46	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.74 0.46 0.32
Dobson-----	30	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Olaton, south slope	15	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.34
529: Roney-----	40	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.46	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.69 0.46 0.08
Kisky, fine gravelly sandy loam-----	35	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Olaton, south slope	15	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.34

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
532: Schiller, north slope-----	55	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.68 0.39
Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 1.00 0.01	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.46
533: Olaton, north slope, dry-----	60	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.11 0.01
Roney, moist-----	20	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.11 0.08 0.01
534: Shimo, fine gravelly loamy sand-----	50	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.84
Kisky, fine gravelly sandy loam-----	25	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Schiller-----	15	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.91
538: Borid-----	65	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content Large stones content	1.00 1.00 1.00 0.13 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
538: Shimo, fine gravelly loamy sand-----	20	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.84
541: Roney-----	55	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.46	Very limited Depth to hard bedrock Cutbanks cave Slope	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.69 0.46 0.08
Kisky, fine gravelly sandy loam-----	35	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.68
544: Arrowrock-----	40	Very limited Depth to hard bedrock Slope Depth to soft bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Droughty Gravel content	1.00 1.00 1.00 0.92
Borid-----	30	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content Large stones content	1.00 1.00 1.00 0.13 0.08
Painter-----	20	Very limited Slope Depth to hard bedrock	1.00 0.06	Very limited Depth to hard bedrock Slope Cutbanks cave Depth to soft bedrock	1.00 1.00 1.00 1.00 0.90	Very limited Slope Droughty Depth to bedrock	1.00 1.00 0.90
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 1.00 1.00 0.01	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.46

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
551: Kisky, fine gravelly loamy sand-----	30	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
555: Brownlee-----	50	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope Depth to hard bedrock	1.00 1.00 0.42	Very limited Slope	1.00
Schiller-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.91
556: Kisky, fine gravelly sandy loam-----	40	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Shimo, fine gravelly loamy sand-----	30	Very limited Slope Depth to hard bedrock	1.00 0.84	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.84
Brownlee-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 1.00 0.42	Very limited Slope	1.00
558: Kisky, fine gravelly sandy loam-----	35	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Whisk-----	30	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Roney, dry-----	25	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.46	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.74 0.46 0.32

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
560: Robbscreek, moist---	30	Very limited Slope Frost action Depth to hard bedrock Shrink-swell	1.00 0.50 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.10 0.01
Hellake-----	25	Very limited Slope Low strength Shrink-swell Frost action	1.00 0.78 0.50 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 1.00 0.01	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.46
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited Slope Depth to hard bedrock	1.00 0.29	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.29 0.08
Kisky, fine gravelly loamy sand-----	30	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Olaton, north slope, moist-----	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
562: Kisky, fine gravelly sandy loam-----	30	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
562: Shimo, fine gravelly sandy loam-----	30	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.99 0.29	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 1.00 1.00 0.99	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 1.00 0.92 0.29
Roney-----	25	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.46	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.69 0.46 0.08
600: McDesh-----	50	Very limited Low strength Shrink-swell Slope Depth to hard bedrock Frost action	1.00 1.00 1.00 0.90 0.50	Very limited Depth to hard bedrock Slope Too clayey Cutbanks cave	1.00 1.00 1.00 0.12 0.10	Very limited Slope Depth to bedrock	1.00 0.90
Immig, rubbly surface-----	25	Very limited Shrink-swell Large stones content Slope Low strength Depth to hard bedrock	1.00 1.00 1.00 1.00 0.84	Very limited Depth to hard bedrock Large stones content Slope Too clayey Cutbanks cave	1.00 1.00 1.00 1.00 0.24 0.10	Very limited Large stones content Droughty Slope Depth to bedrock	1.00 1.00 1.00 0.84
Gwin, very stony loam, extremely stony surface-----	15	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Large stones content Slope Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Droughty Large stones content Depth to bedrock Slope	1.00 1.00 1.00 1.00
601: Hann-----	45	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
601: Gwin, very stony loam, extremely stony surface-----	25	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Large stones content Slope Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Droughty Large stones content Depth to bedrock Slope	1.00 1.00 1.00 1.00
Shafer-----	20	Very limited Frost action Low strength Shrink-swell Slope Depth to hard bedrock	1.00 1.00 1.00 1.00 0.84	Very limited Depth to hard bedrock Cutbanks cave Slope Depth to soft bedrock	1.00 1.00 1.00 1.00 0.97	Very limited Slope Depth to bedrock Droughty	1.00 0.97 0.01
602: Hillcreek-----	35	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited Slope Depth to hard bedrock Shrink-swell Frost action Large stones content	1.00 0.97 0.50 0.50 0.46	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.46 0.10	Very limited Slope Large stones content Depth to bedrock Droughty	1.00 0.99 0.97 0.82
Hann-----	20	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00
604: Shafer-----	55	Very limited Frost action Low strength Shrink-swell Slope Depth to hard bedrock	1.00 1.00 1.00 1.00 0.84	Very limited Depth to hard bedrock Cutbanks cave Slope Depth to soft bedrock	1.00 1.00 1.00 1.00 0.97	Very limited Slope Depth to bedrock Droughty	1.00 0.97 0.01
Hann-----	25	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Large stones content Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Droughty Large stones content Depth to bedrock Slope	1.00 1.00 1.00 1.00
Flybow-----	20	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Droughty Gravel content Slope	1.00 1.00 1.00 1.00
606: Hillcreek-----	50	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited Slope Depth to hard bedrock Shrink-swell Frost action Large stones content	1.00 0.97 0.50 0.50 0.46	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 0.46 0.10	Very limited Slope Large stones content Depth to bedrock Droughty	1.00 0.99 0.97 0.82
607: Duco, stony loam, very stony surface-	35	Very limited Depth to hard bedrock Slope Large stones content Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
Immig, very stony surface-----	35	Very limited Slope Shrink-swell Depth to hard bedrock Frost action Large stones content	1.00 1.00 0.84 0.50 0.34	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content Too clayey	1.00 1.00 1.00 0.34 0.12	Very limited Slope Large stones content Droughty Depth to bedrock	1.00 1.00 1.00 0.84
Rubble land-----	15	Not rated		Not rated		Not rated	

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
608: Duco, very gravelly loam, stony surface	40	Very limited Depth to hard bedrock Slope Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Depth to bedrock Droughty Gravel content Large stones content	1.00 1.00 1.00 0.92 0.08
Hovelton, gravelly ashy loam-----	25	Very limited Slope Large stones content Shrink-swell Frost action Depth to hard bedrock	1.00 0.92 0.50 0.50 0.01	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.92 0.10	Very limited Slope Droughty Large stones content Depth to bedrock Gravel content	1.00 0.33 0.32 0.01 0.01
McDesh, south slope	20	Very limited Slope Low strength Shrink-swell Frost action Depth to hard bedrock	1.00 1.00 1.00 0.50 0.03	Very limited Depth to hard bedrock Slope Too clayey Cutbanks cave	1.00 1.00 1.00 0.12 0.10	Very limited Slope Depth to bedrock	1.00 0.03
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited Slope Large stones content Depth to hard bedrock Shrink-swell Frost action	1.00 1.00 0.90 0.50 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Slope Large stones content Droughty Depth to bedrock	1.00 0.99 0.99 0.90
Duco, stony loam, very stony surface	20	Very limited Depth to hard bedrock Slope Large stones content Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
McDesh, south slope	20	Very limited Slope Low strength Shrink-swell Frost action Depth to hard bedrock	1.00 1.00 1.00 0.50 0.03	Very limited Depth to hard bedrock Slope Too clayey Cutbanks cave	1.00 1.00 1.00 0.12 0.10	Very limited Slope Depth to bedrock	1.00 0.03

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
612: Hann-----	60	Very limited Low strength Shrink-swell Frost action Slope	1.00 0.50 0.50 0.01	Somewhat limited Too clayey Cutbanks cave Slope	0.12 0.10 0.01	Somewhat limited Slope	0.01
Hillcreek, dry-----	25	Very limited Low strength Shrink-swell Frost action	1.00 0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
613: Duco, stony loam, very stony surface	40	Very limited Depth to hard bedrock Slope Large stones content Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Large stones content	1.00 1.00 1.00 0.92
Searles, very stony surface-----	25	Very limited Slope Depth to hard bedrock Frost action	1.00 0.84 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Large stones content Droughty Depth to bedrock	1.00 0.92 0.87 0.84
McDesh, south slope	20	Very limited Slope Low strength Shrink-swell Frost action Depth to hard bedrock	1.00 1.00 1.00 0.50 0.03	Very limited Depth to hard bedrock Slope Too clayey Cutbanks cave	1.00 1.00 1.00 0.12 0.10	Very limited Slope Depth to bedrock	1.00 0.03
618: McDesh, south slope	35	Very limited Low strength Shrink-swell Slope Frost action Depth to hard bedrock	1.00 1.00 1.00 0.50 0.03	Very limited Depth to hard bedrock Slope Too clayey Cutbanks cave	1.00 1.00 1.00 0.12 0.10	Very limited Slope Depth to bedrock	1.00 0.03
Duco, very gravelly loam, stony surface	25	Very limited Depth to hard bedrock Slope Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Depth to bedrock Droughty Slope Gravel content Large stones content	1.00 1.00 1.00 0.92 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
618: Shafer-----	20	Very limited Frost action Low strength Shrink-swell Slope Depth to hard bedrock	1.00 1.00 1.00 1.00 0.84	Very limited Depth to hard bedrock Cutbanks cave Slope Depth to soft bedrock	1.00 1.00 1.00 1.00 0.97	Very limited Slope Depth to bedrock Droughty	1.00 0.97 0.01
619: McDesh-----	35	Very limited Low strength Shrink-swell Slope Depth to hard bedrock Frost action	1.00 1.00 1.00 0.90 0.50	Very limited Depth to hard bedrock Slope Too clayey Cutbanks cave	1.00 1.00 1.00 0.12 0.10	Very limited Slope Depth to bedrock	1.00 0.90
Gwin, gravelly loam, stony surface-----	25	Very limited Depth to hard bedrock Slope Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Depth to bedrock Droughty Slope Gravel content Large stones content	1.00 1.00 1.00 0.38 0.08
Shafer-----	20	Very limited Low strength Shrink-swell Slope Depth to hard bedrock Frost action	1.00 1.00 1.00 1.00 0.84 0.50	Very limited Depth to hard bedrock Cutbanks cave Slope Depth to soft bedrock	1.00 1.00 1.00 1.00 0.97	Very limited Slope Depth to bedrock Droughty	1.00 0.97 0.01
620: Immig, very stony surface-----	35	Very limited Slope Shrink-swell Depth to hard bedrock Frost action Large stones content	1.00 1.00 0.84 0.50 0.34	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content Too clayey	1.00 1.00 1.00 1.00 0.34 0.12	Very limited Slope Large stones content Droughty Depth to bedrock	1.00 1.00 1.00 1.00 0.84
McDesh, south slope	30	Very limited Slope Low strength Shrink-swell Frost action Depth to hard bedrock	1.00 1.00 1.00 1.00 0.50 0.03	Very limited Depth to hard bedrock Slope Too clayey Cutbanks cave	1.00 1.00 1.00 0.12 0.10	Very limited Slope Depth to bedrock	1.00 0.03

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited Depth to hard bedrock Slope Large stones content Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Large stones content	1.00 1.00 1.00 0.92
621: McDaniel-----	45	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 1.00 0.16
Hovelton, gravelly ashy loam-----	40	Very limited Slope Large stones content Shrink-swell Frost action Depth to hard bedrock	1.00 0.92 0.50 0.50 0.01	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.92 0.10	Very limited Slope Droughty Large stones content Depth to bedrock Gravel content	1.00 0.33 0.32 0.01 0.01
622: Hovelton, gravelly ashy loam-----	50	Very limited Slope Large stones content Shrink-swell Frost action Depth to hard bedrock	1.00 0.92 0.50 0.50 0.01	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.92 0.10	Very limited Slope Droughty Large stones content Depth to bedrock Gravel content	1.00 0.33 0.32 0.01 0.01
Gwin, very stony loam, extremely stony surface-----	30	Very limited Depth to hard bedrock Slope Large stones content Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Slope Droughty Large stones content Depth to bedrock	1.00 1.00 1.00 1.00
630: Gwin, very gravelly loam-----	45	Very limited Depth to hard bedrock Slope Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content Large stones content	1.00 1.00 1.00 0.99 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
630: Flybow-----	25	Very limited Depth to hard bedrock Slope Frost action	1.00  1.00 0.50	Very limited Depth to hard bedrock Slope	1.00  1.00	Very limited Depth to bedrock Slope Droughty Gravel content	1.00 1.00 1.00 1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
631: Flybow-----	40	Very limited Depth to hard bedrock Slope Frost action	1.00  1.00 0.50	Very limited Depth to hard bedrock Slope	1.00  1.00	Very limited Depth to bedrock Slope Droughty Gravel content	1.00 1.00 1.00 1.00
Rock outcrop-----	30	Not rated		Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated		Not rated	
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited Depth to hard bedrock Large stones content Slope Shrink-swell Frost action	1.00  1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Large stones content Slope Cutbanks cave	1.00  1.00 1.00 0.10	Very limited Droughty Large stones content Depth to bedrock Slope	1.00 1.00 1.00 1.00
McDesh, very stony loam, very stony surface-----	25	Very limited Low strength Shrink-swell Slope Depth to hard bedrock Frost action	1.00 1.00 1.00 0.90 0.50	Very limited Depth to hard bedrock Cutbanks cave Slope Too clayey	1.00 1.00 1.00 0.50	Very limited Large stones content Slope Depth to bedrock Droughty	1.00  1.00 0.90 0.33
Rock outcrop-----	25	Not rated		Not rated		Not rated	
635: Shafer, very stony surface-----	40	Very limited Low strength Shrink-swell Slope Depth to hard bedrock Frost action	1.00 1.00 1.00 0.97 0.50	Very limited Depth to hard bedrock Cutbanks cave Slope	1.00 1.00 1.00	Very limited Large stones content Slope Depth to bedrock Droughty	1.00  1.00 0.97 0.38

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
635: Karney-----	25	Very limited Shrink-swell Low strength Slope Frost action	1.00 1.00 1.00 0.50	Very limited Slope Depth to soft bedrock Cutbanks cave Depth to hard bedrock Too clayey	1.00 0.35 0.10 0.08 0.02	Very limited Slope Depth to bedrock Large stones content	1.00 0.35 0.08
Yad-----	20	Very limited Low strength Slope Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope Too clayey	1.00 1.00 0.50	Very limited Slope	1.00
636: Hann, stony surface	30	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.88 0.10	Very limited Slope Large stones content	1.00 0.68
McDesh, very stony loam, extremely bouldery surface---	30	Very limited Slope Low strength Shrink-swell Frost action Depth to hard bedrock	1.00 1.00 1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Too clayey Cutbanks cave	1.00 1.00 1.00 0.88 0.10	Very limited Slope Large stones content Depth to bedrock	1.00 1.00 0.01
Robbscreek, moist---	25	Very limited Slope Frost action Depth to hard bedrock Shrink-swell	1.00 0.50 0.46 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.46 0.10 0.01
638: Yad-----	35	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.01	Very limited Cutbanks cave Too clayey Slope	1.00 0.50 0.01	Somewhat limited Slope	0.01
Cranegulch-----	25	Very limited Low strength Shrink-swell Frost action Slope	1.00 1.00 0.50 0.16	Somewhat limited Slope Too clayey Cutbanks cave	0.16 0.12 0.10	Somewhat limited Slope	0.16

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
638: Duco, stony loam, very stony surface	25	Very limited Depth to hard bedrock Large stones content Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50 0.50	Very limited Depth to hard bedrock Large stones content Cutbanks cave Slope	1.00 1.00 0.10 0.01	Very limited Droughty Depth to bedrock Large stones content Slope	1.00 1.00 0.92 0.01
640: Timberbutte-----	85	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 1.00
641: Aradaran-----	45	Very limited Low strength Shrink-swell Frost action Slope	1.00 1.00 0.50 0.16	Very limited Cutbanks cave Too clayey Slope	1.00 0.50 0.16	Somewhat limited Slope	0.16
Yad-----	40	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.16	Very limited Cutbanks cave Too clayey Slope	1.00 0.50 0.16	Somewhat limited Slope	0.16
650: Longs-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 1.00 0.54	Very limited Slope	1.00
Highvalley-----	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Hoff-----	20	Very limited Depth to hard bedrock Slope Shrink-swell Frost action Large stones content	1.00 1.00 0.50 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 0.10 0.01	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 1.00 1.00 0.68
651: Hess-----	35	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Depth to hard bedrock Cutbanks cave	1.00 0.88 0.10	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
651: Lidos-----	30	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Cutbanks cave Slope Too clayey	1.00 1.00 0.12	Very limited Slope	1.00
Cleymor-----	25	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00
652: Hess-----	40	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Depth to hard bedrock Cutbanks cave	1.00 0.88 0.10	Very limited Slope	1.00
Lidos-----	30	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.12	Very limited Slope	1.00
Klicker-----	20	Very limited Slope Depth to hard bedrock Shrink-swell Frost action	1.00 0.79 0.50 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.80 0.03
653: Lidos-----	45	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave Too clayey	1.00 1.00 0.12	Very limited Slope	1.00
Klicker-----	30	Very limited Slope Depth to hard bedrock Shrink-swell Frost action	1.00 0.79 0.50 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.80 0.03
Hess-----	20	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Slope Depth to hard bedrock Cutbanks cave	1.00 0.88 0.10	Very limited Slope	1.00
654: Shilling-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.92
Highvalley-----	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
654: Hoff-----	20	Very limited Depth to hard bedrock Slope Shrink-swell Frost action Large stones content	1.00  1.00 0.50 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00  1.00 0.10 0.01	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 1.00 1.00 0.68
655: Shilling, moist----	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.32
Highvalley, moist---	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
656: Shilling, moist----	50	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.32
Highvalley, moist---	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
657: Pumpkin, stony surface-----	95	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Large stones content Droughty	1.00 0.68 0.05
658: Cleymor-----	50	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00
Pumpkin, stony surface-----	30	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Large stones content Droughty	1.00 0.68 0.05
659: Hoff, south slope---	85	Very limited Depth to hard bedrock Slope Shrink-swell Frost action	1.00  1.00 0.50 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00  1.00 0.10	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.68

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
660: Longs-----	60	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 1.00 0.54	Very limited Slope	1.00
Highvalley-----	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
661: Awley-----	50	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.01
Bo-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope Gravel content	1.00 0.01
662: Awley-----	65	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.01
Bo-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope Gravel content	1.00 0.01
663: Cleymor-----	65	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00
Hoff-----	20	Very limited Depth to hard bedrock Slope Shrink-swell Frost action Large stones content	1.00 1.00 0.50 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 0.10 0.01	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 1.00 1.00 0.68
666: Pachic Argixerolls, very stony surface	40	Very limited Slope Frost action Shrink-swell	1.00 0.50 0.01	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Rubble land-----	30	Not rated		Not rated		Not rated	

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
666: Typic Haploxerolls, extremely stony surface-----	15	Very limited Slope Large stones content Frost action	1.00 0.86 0.50	Very limited Slope Large stones content Cutbanks cave	1.00 0.86 0.10	Very limited Slope Large stones content Droughty	1.00 0.92 0.64
700: Drybuck-----	50	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope Depth to hard bedrock	1.00 1.00 0.18	Very limited Slope	1.00
Whisk, moist-----	30	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.08
701: Drybuck-----	55	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 1.00 0.18	Very limited Slope	1.00
Whisk, moist-----	25	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
702: Deerrun-----	40	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.20	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.20 0.01
Kisky, fine gravelly sandy loam, moist--	40	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Drybuck, dry-----	15	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 0.10 0.02	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
704: Drybuck-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 1.00 0.18	Very limited Slope	1.00
Northfork, fine gravelly sandy loam	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.03
Whisk, moist-----	20	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
705: Northfork, sandy loam-----	60	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty	1.00 0.02
Shirts, sandy loam, dry-----	20	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
706: Northfork, fine gravelly sandy loam	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.03
Shirts, coarse sandy loam-----	25	Very limited Slope Depth to hard bedrock Frost action	1.00 0.54 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
Zimmer-----	20	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
707: Packerjohn, ashy coarse sandy loam--	40	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
707: Shirts, coarse sandy loam-----	30	Very limited Slope Depth to hard bedrock Frost action	1.00 0.54 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
Zimmer-----	15	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
708: Zimmer-----	35	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
Northfork, fine gravelly sandy loam	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.03
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.10	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.10 0.02
Charters, sandy loam	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
710: Charters, fine gravelly sandy loam	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Northfork, fine gravelly sandy loam	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.32 0.03
Shirts, coarse sandy loam-----	15	Very limited Slope Depth to hard bedrock Frost action	1.00 0.54 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
Shirts, sandy loam, dry-----	30	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
Zimmer-----	30	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
712: Charters, fine gravelly sandy loam	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Shirts, coarse sandy loam-----	35	Very limited Slope Depth to hard bedrock Frost action	1.00 0.54 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
Zimmer-----	15	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
714: Shirts, sandy loam, south slope-----	40	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.10	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.10 0.02
Eagleson, fine gravelly sandy loam	35	Very limited Slope Depth to hard bedrock Frost action	1.00 0.84 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.84 0.01
Charters, sandy loam	15	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited Slope Large stones content Depth to hard bedrock Frost action	1.00 0.84 0.71 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.84 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.99 0.71 0.68
Kosh-----	35	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
716: Zan-----	45	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.19 0.01
Belsh-----	25	Very limited Slope Large stones content	1.00 0.92	Very limited Slope Cutbanks cave Large stones content	1.00 1.00 0.92	Very limited Slope Droughty Large stones content	1.00 0.64 0.08
Montchief-----	25	Very limited Slope Depth to hard bedrock Large stones content	1.00 0.20 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 1.00 1.00 0.01	Very limited Slope Droughty Depth to bedrock	1.00 0.83 0.20
718: Charters, fine gravelly sandy loam	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Crumley-----	30	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.84
Eagleson, sandy loam	20	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.03	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 0.23 0.03

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
720: Drybuck, dry-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 0.10 0.02	Very limited Slope	1.00
Deerrun-----	30	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.20	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.20 0.01
Kisky, fine gravelly sandy loam, moist--	20	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
721: Shirts, fine gravelly sandy loam	40	Very limited Slope Depth to hard bedrock Frost action	1.00 0.54 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.54 0.08 0.08
Kosh-----	30	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Charters, fine gravelly sandy loam, dry-----	15	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
726: Garval-----	50	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.99 0.54 0.08
Kisky, fine gravelly loamy coarse sand--	25	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.92 0.50

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
730: Hellake-----	40	Very limited Slope Low strength Shrink-swell Frost action	1.00 0.78 0.50 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Stardust-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
731: Shirts, sandy loam, dry-----	40	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
Charters, fine gravelly sandy loam, dry-----	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
Zimmer-----	25	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
733: Shirts, fine gravelly sandy loam	50	Very limited Slope Depth to hard bedrock Frost action	1.00 0.54 0.50	Very limited Depth to hard bedrock Cutbanks cave Slope	1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty Gravel content	1.00 0.54 0.08 0.08
Kosh-----	30	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.68
734: Shirts, sandy loam, dry-----	45	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
Kosh-----	35	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
735: Shirts, coarse sandy loam-----	50	Very limited Slope Depth to hard bedrock Frost action	1.00 0.54 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.54 0.29
Zimmer-----	25	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
Charters, fine gravelly sandy loam	15	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
738: Tripod-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.83 0.08
Packerjohn, ashy coarse sandy loam--	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Slope Depth to hard bedrock	1.00 0.71	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.71 0.68
739: Shirts, sandy loam, moist-----	40	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
Zimmer-----	25	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
Packerjohn, ashy coarse sandy loam--	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
740: Charters, sandy loam	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Eagleson, fine gravelly sandy loam	35	Very limited Slope Depth to hard bedrock Frost action	1.00 0.84 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.84 0.01
741: Zan-----	85	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.19 0.01
742: Crumley-----	65	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.92 0.84
Eagleson, sandy loam	20	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.03	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 0.23 0.03
743: Packerjohn, ashy coarse sandy loam--	50	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Shirts, sandy loam, moist-----	35	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Cutbanks cave Slope	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
744: Packerjohn, ashy sandy loam, cool---	60	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.05
Shirts, sandy loam, moist-----	20	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Cutbanks cave Slope	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
744: Tripod, cool-----	15	Very limited Slope Large stones content	1.00 0.01	Very limited Cutbanks cave Slope Large stones content	1.00 1.00 0.01	Very limited Slope Droughty Gravel content	1.00 0.15 0.08
745: Tripod, moist-----	50	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.77 0.08
Packerjohn, ashy sandy loam-----	45	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
746: Packerjohn, ashy sandy loam-----	90	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
747: Pinney, moist-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Charters, fine gravelly sandy loam	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Shirts, sandy loam, dry-----	15	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
748: Belsh, moist-----	45	Very limited Slope Large stones content	1.00 0.07	Very limited Cutbanks cave Slope Large stones content	1.00 1.00 0.07	Very limited Slope Gravel content Droughty	1.00 0.32 0.07
Zan, moist-----	40	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Gravel content	1.00 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
749: Quartzburg-----	50	Very limited Slope	1.00	Very limited Slope Cutbanks cave Depth to hard bedrock Depth to soft bedrock	1.00 1.00 0.96 0.03	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.99 0.08 0.03
Charters, sandy loam	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
750: Garval-----	50	Very limited Slope Depth to hard bedrock	1.00 0.54	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 0.99 0.54 0.08
Kisky, fine gravelly loamy coarse sand--	20	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.92 0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
751: Belsh, moist-----	50	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Cutbanks cave Large stones content	1.00 1.00 0.07	Very limited Slope Gravel content Droughty	1.00 0.32 0.07
Zan, moist-----	40	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
752: Josie-----	70	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Zimmer, fine gravelly sandy loam	20	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Droughty Depth to bedrock Slope Gravel content	1.00 1.00 1.00 0.32
753: Tripod, cool-----	45	Very limited Slope Large stones content	1.00 0.01	Very limited Slope Cutbanks cave Large stones content	1.00 1.00 0.01	Very limited Slope Droughty Gravel content	1.00 0.15 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
753: Packerjohn, ashy sandy loam, cool---	25	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty	1.00 0.05
Shirts, sandy loam, moist-----	20	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
754: Packerjohn, ashy sandy loam-----	55	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Shirts, sandy loam, moist-----	20	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Cutbanks cave Slope	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
755: Zimmer-----	40	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 1.00 1.00
Quartzburg-----	35	Very limited Slope	1.00	Very limited Slope Cutbanks cave Depth to hard bedrock Depth to soft bedrock	1.00 1.00 0.96 0.03	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.99 0.08 0.03
Rock outcrop-----	20	Not rated		Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Slope Depth to hard bedrock	1.00 0.71	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.71 0.68
Tripod-----	25	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 0.83 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
756: Kosh, moist-----	20	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
758: Eagleson, sandy loam	40	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.03	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock	1.00 0.23 0.03
Kosh, moist-----	30	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
Charters, fine gravelly sandy loam	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
759: Charters, sandy loam	30	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
Shirts, sandy loam, south slope-----	30	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.10	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.10 0.02
Kosh, moist-----	20	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
761: Charters, fine gravelly sandy loam	45	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Gravel content Droughty	1.00 0.08 0.01
Middlefork, moist---	40	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
762: Drybuck, dry-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 0.10 0.02	Very limited Slope	1.00
Hellake-----	30	Very limited Slope Low strength Shrink-swell Frost action	1.00 0.78 0.50 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Deerrun-----	20	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.20	Very limited Depth to hard bedrock Cutbanks cave Slope	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.20 0.01
763: Eagleson, fine gravelly sandy loam	40	Very limited Slope Depth to hard bedrock Frost action	1.00 0.84 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.84 0.01
Kosh-----	35	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Cutbanks cave Slope Depth to soft bedrock	1.00 1.00 1.00 1.00 0.10	Very limited Slope Depth to bedrock	1.00 0.10
Zimmer, warm-----	20	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Droughty Depth to bedrock Slope	1.00 1.00 1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
766: Backswitch, coarse sandy loam-----	55	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Cutbanks cave Slope Depth to soft bedrock	1.00 1.00 1.00 1.00 0.10	Very limited Slope Depth to bedrock	1.00 0.10
Charters, coarse sandy loam-----	15	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Zimmer, dry-----	15	Very limited Depth to hard bedrock Slope Frost action	1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Droughty Depth to bedrock Slope	1.00 1.00 1.00
767: Shirts, sandy loam, dry-----	45	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
Kosh-----	25	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.68
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00 1.00	Very limited Slope Gravel content	1.00 0.08
768: Shirts, sandy loam, south slope-----	35	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.10	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.10 0.02
Kosh, moist-----	25	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
768: Eagleson, fine gravelly sandy loam	15	Very limited Slope Depth to hard bedrock Frost action	1.00 0.84 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 0.84 0.01
770: Shirts, sandy loam, dry-----	50	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
Kosh, moist-----	20	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
771: Backswitch, sandy loam-----	55	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave Depth to hard bedrock	1.00 1.00 0.42	Very limited Slope Droughty	1.00 0.01
Shirts, sandy loam, dry-----	25	Very limited Slope Frost action Depth to hard bedrock	1.00 0.50 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 0.01
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.28 0.01	Very limited Depth to hard bedrock Slope Cutbanks cave Large stones content	1.00 1.00 1.00 1.00 0.28	Very limited Slope Droughty Gravel content Depth to bedrock	1.00 0.81 0.08 0.01
Packerjohn, ashy sandy loam, dry----	25	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00

Table 14b.--Building Site Development (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
772: Kosh, moist-----	20	Very limited Depth to hard bedrock Slope	1.00  1.00	Very limited Depth to hard bedrock Slope Cutbanks cave	1.00  1.00 0.10	Very limited Slope Droughty Depth to bedrock Gravel content	1.00 1.00 1.00 0.08
900: Pits, gravel-----	75	Not rated		Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated		Not rated	
999: Water-----	100	Not rated		Not rated		Not rated	

Table 15.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Very limited Flooding Depth to saturated zone Seepage, bottom layer Filtering capacity	1.00 1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Too sandy Seepage Gravel content Depth to saturated zone	1.00 1.00 0.96 0.86
Cumulic Haploxerolls	40	Very limited Seepage, bottom layer Depth to saturated zone Flooding	1.00 0.73 0.40	Very limited Seepage Flooding Depth to saturated zone	1.00 0.40 0.06	Somewhat limited Seepage	0.26
221: Bissell-----	85	Very limited Slow water movement	1.00	Very limited Seepage Slope	1.00 0.08	Very limited Seepage	1.00
222: Bissell-----	85	Very limited Slow water movement	1.00	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00
223: Staircase, dry-----	85	Very limited Seepage, bottom layer Depth to saturated zone Flooding	1.00 0.92 0.40	Very limited Seepage Flooding Depth to saturated zone Slope	1.00 0.40 0.32 0.02	Very limited Seepage Too sandy	1.00 0.50
224: Porter-----	85	Very limited Seepage, bottom layer Depth to saturated zone Flooding	1.00 0.73 0.40	Very limited Seepage Flooding Depth to saturated zone Slope	1.00 0.40 0.06 0.02	Very limited Seepage Too sandy	1.00 0.50
225: Boise-----	85	Very limited Seepage, bottom layer	1.00	Very limited Seepage Slope	1.00 0.68	Very limited Seepage Gravel content Too sandy	1.00 0.80 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
226: Flofeather, very rarely flooded-----	55	Very limited Seepage, bottom layer Flooding	1.00 0.20	Very limited Seepage Flooding	1.00 0.20	Very limited Seepage Too sandy	1.00 0.50
Shawmount, stony surface-----	30	Somewhat limited Slow water movement Flooding	0.75 0.20	Very limited Seepage Flooding	1.00 0.20	Very limited Seepage Large stones content Gravel content	1.00 0.45 0.11
227: Piercepark, loam----	85	Somewhat limited Slow water movement	0.75	Very limited Seepage Slope	1.00 0.08	Not limited	
228: Piercepark, loam----	85	Somewhat limited Slow water movement	0.75	Very limited Seepage Slope	1.00 0.92	Not limited	
229: Piercepark, coarse sandy loam-----	85	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope	1.00
230: Hann-----	60	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope	1.00	Somewhat limited Too clayey Slope	0.50 0.01
Doubledia, silty clay loam-----	15	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 0.01	Very limited Slope Depth to soft bedrock	1.00 0.99	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 0.99 0.01
232: Jasseek-----	85	Very limited Slow water movement	1.00	Very limited Seepage	1.00	Very limited Seepage Too sandy	1.00 0.50
233: Jasseek-----	85	Very limited Slow water movement	1.00	Very limited Seepage Slope	1.00 0.68	Very limited Seepage Too sandy	1.00 0.50
238: Adaboi-----	85	Very limited Slow water movement	1.00	Not limited		Very limited Too clayey Hard to compact	1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
240: Collister-----	65	Somewhat limited Slow water movement Depth to saturated zone Flooding	0.75 0.73 0.40	Very limited Seepage Flooding Depth to saturated zone	1.00 0.40 0.06	Not limited	
Flofeather-----	25	Very limited Seepage, bottom layer Flooding	1.00 0.40	Very limited Seepage Flooding	1.00 0.40	Somewhat limited Seepage	0.26
300: Shawmount, stony surface-----	75	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Seepage Slope Large stones content Gravel content	1.00 1.00 0.45 0.11
301: Breadloaf-----	55	Very limited Depth to bedrock Slope	1.00 0.16	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 0.16
Doubledia, silty clay loam-----	25	Very limited Slow water movement Depth to bedrock	1.00 1.00	Somewhat limited Depth to soft bedrock Slope	0.99 0.92	Very limited Too clayey Hard to compact Depth to bedrock	1.00 1.00 0.99
302: Breadloaf-----	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 1.00
Doubledia, silty clay loam-----	35	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 0.99	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 0.99
Hann-----	20	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
303: Doubledia, silty clay loam-----	40	Very limited Slow water movement Slope Depth to bedrock	1.00  1.00 1.00	Very limited Slope Depth to soft bedrock	1.00  0.99	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00  1.00 1.00 0.99
Hann-----	25	Very limited Slow water movement Slope	1.00  1.00	Very limited Slope	1.00	Very limited Slope Too clayey	1.00  0.50
Breadloaf-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 1.00
304: Breadloaf-----	30	Very limited Depth to bedrock Slope	1.00 0.63	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 0.63
Doubledia, silty clay loam-----	30	Very limited Slow water movement Slope Depth to bedrock	1.00  1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 0.99	Very limited Too clayey Hard to compact Slope Depth to bedrock	1.00 1.00 1.00 0.99
Hullsgulch, loam----	30	Very limited Slope Slow water movement	1.00 0.75	Very limited Seepage Slope	1.00 1.00	Very limited Slope	1.00
305: Siphonlake, south slope-----	60	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 0.47	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.05	Very limited Slope Seepage Depth to bedrock	1.00 0.26 0.05
Solarview-----	25	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Too sandy Seepage	1.00 1.00 1.00 1.00
306: Van Dusen-----	45	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
306: Siphonlake-----	35	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 0.89	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.71	Very limited Slope Depth to bedrock Seepage	1.00 0.71 0.26
307: Adaboi-----	65	Very limited Slow water movement Slope	1.00 0.16	Very limited Slope	1.00	Very limited Too clayey Hard to compact Slope	1.00 1.00 0.16
Meclo-----	20	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 0.16	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to bedrock Hard to compact Too clayey Slope	1.00 1.00 0.50 0.16
308: Breadloaf-----	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 1.00
Crawley, silt loam--	30	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope	1.00 1.00
Doubledia, clay loam	20	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 0.52	Very limited Slope Depth to soft bedrock	1.00 0.08	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 0.08
309: Hullsgulch, sandy loam-----	65	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Solarview-----	25	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Too sandy Seepage	1.00 1.00 1.00 1.00
311: Meclo-----	35	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Slope Depth to bedrock Hard to compact Too clayey	1.00 1.00 1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
311: Crawley, silt loam--	30	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope	1.00 1.00
Adaboi-----	20	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey Hard to compact	1.00 1.00 1.00
328: Gacey, extremely stony surface-----	75	Very limited Depth to cemented pan Seepage, bottom layer Large stones content	1.00 1.00 0.09	Very limited Depth to cemented pan Seepage Slope Large stones content	1.00 1.00 0.68 0.08	Very limited Depth to cemented pan Too clayey Large stones content	1.00 1.00 0.09
329: Ayette-----	55	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 0.98	Very limited Slope Depth to soft bedrock	1.00 0.93	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 0.94
Duco, stony loam, very stony surface	25	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones Too clayey	1.00 1.00 1.00 0.50
330: Breadloaf-----	35	Very limited Depth to bedrock Slope	1.00 0.96	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 0.96
Ayette, moist-----	30	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 0.52	Very limited Slope Depth to soft bedrock	1.00 0.08	Very limited Hard to compact Slope Too clayey Depth to bedrock	1.00 1.00 0.50 0.08
Immig, rubbly surface-----	20	Very limited Slow water movement Depth to bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope Large stones	1.00 1.00 1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
331: Ayette, moist-----	50	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 0.52	Very limited Slope Depth to soft bedrock	1.00 0.08	Very limited Hard to compact Slope Too clayey Depth to bedrock	1.00 1.00 0.50 0.08
Yad-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
332: Hann-----	35	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
Ayette, moist-----	30	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 0.52	Very limited Slope Depth to soft bedrock	1.00 0.08	Very limited Slope Hard to compact Too clayey Depth to bedrock	1.00 1.00 0.50 0.08
Picketpin-----	20	Very limited Slope Seepage, bottom layer Slow water movement	1.00 1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.01
333: Ayette-----	50	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 0.98	Very limited Slope Depth to soft bedrock	1.00 0.93	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 0.94
Crawley, loam-----	15	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope	1.00 1.00
Hullsgulch, loam----	15	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope	1.00
335: Gimmi, very stony surface-----	30	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Large stones content	1.00 1.00 0.01	Very limited Depth to bedrock Slope Too clayey	1.00 1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
335: Ayette, moist-----	25	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 0.52	Very limited Slope Depth to soft bedrock	1.00 0.08	Very limited Hard to compact Slope Too clayey Depth to bedrock	1.00 1.00 0.50 0.08
Doubledia, silty clay loam-----	25	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 0.99	Very limited Too clayey Hard to compact Slope Depth to bedrock	1.00 1.00 1.00 0.99
400: Ralsen-----	35	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00 0.26
Foxlane-----	30	Very limited Filtering capacity Seepage, bottom layer Depth to saturated zone Flooding	1.00 1.00 0.92 0.40	Very limited Seepage Flooding Depth to saturated zone	1.00 0.40 0.32	Very limited Too sandy Seepage Gravel content	1.00 1.00 0.98
Pay-----	20	Very limited Flooding Depth to saturated zone Seepage, bottom layer Filtering capacity	1.00 1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Gravel content	1.00 1.00 1.00 1.00 0.02
401: Staircase-----	85	Very limited Seepage, bottom layer Depth to saturated zone Flooding	1.00 0.92 0.40	Very limited Seepage Flooding Depth to saturated zone	1.00 0.40 0.32	Very limited Seepage Gravel content Too sandy	1.00 0.59 0.50
402: Crossbow-----	60	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.76

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
402: Foxlane-----	20	Very limited Filtering capacity Seepage, bottom layer Depth to saturated zone Flooding	1.00  1.00 0.92 0.40	Very limited Seepage Flooding Depth to saturated zone Slope	1.00 0.40 0.32 0.02	Very limited Too sandy Seepage Gravel content	1.00 1.00 0.98
403: Ralsen-----	40	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00 0.26
Pay-----	25	Very limited Flooding Depth to saturated zone Seepage, bottom layer Filtering capacity	1.00 1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Gravel content	1.00 1.00 1.00 1.00 0.02
Crossbow-----	20	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.76
404: Riverpoint-----	55	Very limited Seepage, bottom layer Slope	1.00 1.00	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Slope Gravel content Too sandy	1.00 1.00 1.00 0.50
Hellake-----	25	Very limited Seepage, bottom layer Slow water movement	1.00 1.00	Very limited Seepage Slope	1.00 0.68	Somewhat limited Too clayey Gravel content	0.50 0.01
405: Hellake-----	65	Very limited Seepage, bottom layer Slow water movement	1.00 1.00	Very limited Seepage	1.00	Somewhat limited Too clayey Gravel content	0.50 0.01
Staircase-----	15	Very limited Seepage, bottom layer Depth to saturated zone Flooding	1.00 0.92 0.40	Very limited Seepage Flooding Depth to saturated zone	1.00 0.40 0.32	Very limited Seepage Gravel content Too sandy	1.00 0.59 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
406: Hellake-----	75	Very limited Seepage, bottom layer Slow water movement	1.00  1.00	Very limited Seepage Slope	1.00 0.68	Somewhat limited Too clayey Gravel content	0.50 0.01
407: Hellake-----	75	Very limited Seepage, bottom layer Slow water movement Slope	1.00  1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 0.50 0.01
408: Stardust-----	75	Very limited Seepage, bottom layer Slow water movement	1.00  0.75	Very limited Seepage	1.00	Somewhat limited Gravel content	0.11
409: Stardust-----	75	Very limited Seepage, bottom layer Slow water movement	1.00  0.75	Very limited Seepage Slope	1.00 0.68	Somewhat limited Gravel content	0.11
410: Stardust-----	65	Very limited Slope Seepage, bottom layer Slow water movement	1.00 1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content	1.00 0.11
Riverpoint, very stony surface-----	20	Very limited Slow water movement Slope Seepage, bottom layer Large stones content	1.00  1.00 1.00 0.08	Very limited Slope Seepage	1.00 1.00	Very limited Slope Large stones content Seepage Gravel content	1.00 0.68 0.26 0.01
411: Huston, very stony surface-----	45	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.13

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
411: Zeb, gravelly sandy loam-----	35	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.50
412: Huston, very stony surface-----	50	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.13
Stardust-----	30	Very limited Slope Seepage, bottom layer Slow water movement	1.00 1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content	1.00 0.11
413: Cloudyway-----	75	Very limited Seepage, bottom layer Slope	1.00 0.16	Very limited Seepage Slope	1.00 1.00	Somewhat limited Gravel content Seepage Slope	0.61 0.26 0.16
414: Hellake-----	40	Very limited Seepage, bottom layer Slow water movement Slope	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 0.50 0.01
Middlefork-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
415: Middlefork-----	55	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Pinney-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope Too clayey	1.00 0.50
416: Pinney, moist-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope Too clayey	1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
416: Middlefork, moist---	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Zeb, gravelly sandy loam-----	20	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.50
417: Middlefork-----	60	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	20	Very limited Seepage, bottom layer Slope Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Seepage Slope Gravel content	1.00 1.00 1.00
418: Middlefork-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Zeb, fine gravelly sandy loam-----	25	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 1.00 1.00
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.08
Zeb, fine gravelly sandy loam-----	35	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
420: Pioneervil-----	40	Very limited Seepage, bottom layer Depth to saturated zone Flooding	1.00  0.92 0.40	Very limited Seepage Flooding Depth to saturated zone	1.00 0.40 0.32	Very limited Too sandy Seepage	1.00 0.26
Grimescreek-----	35	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Somewhat limited Depth to saturated zone Seepage	0.76 0.26
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Very limited Depth to saturated zone Filtering capacity Seepage, bottom layer Large stones content Flooding	1.00 1.00 1.00 1.00 0.40	Very limited Seepage Depth to saturated zone Large stones content Flooding	1.00 1.00 1.00 0.40	Very limited Seepage Large stones Depth to saturated zone	1.00 1.00 0.01
422: Lithic Xerorthents, very stony surface	30	Very limited Depth to bedrock Seepage, bottom layer Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Large stones content Slope	1.00 0.94 0.68	Very limited Depth to bedrock Seepage Large stones Too sandy	1.00 1.00 1.00 0.50
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Very limited Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00	Very limited Depth to soft bedrock Seepage Slope Depth to hard bedrock	1.00 1.00 0.68 0.42	Very limited Too sandy Seepage Depth to bedrock	1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
423: Dystric Xeropsamments, very stony surface-----	35	Very limited Seepage, bottom layer Depth to bedrock Slope Filtering capacity	1.00 1.00 1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage Depth to hard bedrock	1.00 1.00 1.00 1.00 0.42	Very limited Too sandy Seepage Slope Depth to bedrock	1.00 1.00 1.00 1.00
Ultic Haploxeraalfs--	35	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content	1.00 0.08
Lithic Xerorthents--	15	Very limited Depth to bedrock Seepage, bottom layer Slope	1.00 1.00 0.16	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Seepage Gravel content Too sandy Slope	1.00 1.00 1.00 0.50 0.16
424: Middlefork-----	50	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Charters, coarse sandy loam-----	35	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 0.26
425: Middlefork-----	55	Very limited Slow water movement	1.00	Somewhat limited Slope Seepage	0.68 0.25	Not limited	
Brassey-----	25	Very limited Seepage, bottom layer Slow water movement Slope	1.00 0.75 0.01	Very limited Seepage Slope	1.00 1.00	Very limited Gravel content Slope	1.00 0.01
426: Middlefork, moist---	85	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
427: Middlefork, moist---	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
428: Zeb, gravelly sandy loam-----	45	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.50
Republic-----	35	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
429: Huston, very stony surface-----	85	Very limited Seepage, bottom layer Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.13
503: Cartwright, dry----	85	Somewhat limited Slow water movement	0.75	Somewhat limited Slope Seepage	0.68 0.25	Somewhat limited Gravel content	0.34
504: Cartwright, dry----	85	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope Gravel content	1.00 0.34
505: Brownlee-----	85	Very limited Slow water movement Seepage, bottom layer Depth to bedrock Slope	1.00 1.00 0.94 0.01	Very limited Seepage Slope Depth to soft bedrock Depth to hard bedrock	1.00 1.00 0.84 0.42	Somewhat limited Depth to bedrock Seepage Slope	0.84 0.26 0.01
506: Brownlee-----	45	Very limited Slow water movement Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 0.94	Very limited Slope Seepage Depth to soft bedrock Depth to hard bedrock	1.00 1.00 0.84 0.42	Very limited Slope Depth to bedrock Seepage	1.00 0.84 0.26
Robbscreek-----	20	Very limited Depth to bedrock Slope Slow water movement	1.00 1.00 0.75	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Gravel content	1.00 1.00 0.08

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
506: Whisk-----	15	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.26 0.08
507: Shoebend-----	35	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope Seepage	1.00 1.00 1.00 1.00 0.25	Very limited Slope Depth to bedrock	1.00 1.00
Dobson-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Too sandy Seepage Gravel content	1.00 1.00 0.50 0.26 0.03
Jerusalem-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
509: Arrowrock-----	35	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.58 0.50
Borid-----	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Gravel content Seepage	1.00 1.00 1.00 0.26
Rock outcrop-----	25	Not rated		Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 0.26
Roney, moist-----	25	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.07

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity Large stones content	1.00 1.00 1.00 1.00 0.01	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Gravel content	1.00 1.00 1.00 0.50 0.03
Cartwright-----	25	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Robbscreek, moist---	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.75	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 0.25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.04
516: Shimo, extremely stony surface-----	35	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity Large stones content	1.00 1.00 1.00 1.00 0.27	Very limited Depth to hard bedrock Slope Seepage Large stones content	1.00 1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Large stones content	1.00 1.00 1.00 0.50 0.27
Olaton, south slope	30	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.92 0.26
Schiller, south slope-----	25	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Large stones content Gravel content	1.00 0.26 0.01 0.01
525: Robbscreek-----	35	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.75	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.08

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
525: Dobson-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Too sandy Seepage Gravel content	1.00 1.00 0.50 0.26 0.03
Brownlee-----	20	Very limited Slope Slow water movement Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 0.94	Very limited Slope Seepage Depth to soft bedrock Depth to hard bedrock	1.00 1.00 0.84 0.42	Very limited Slope Depth to bedrock Seepage	1.00 0.84 0.26
526: Cartwright-----	35	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Brownlee, moist----	30	Very limited Slope Slow water movement Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 0.91	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.77	Very limited Slope Depth to bedrock	1.00 0.77
Robbscreek, moist---	20	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.75	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 0.25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.04
527: Dobson-----	50	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Too sandy Seepage Gravel content	1.00 1.00 0.50 0.26 0.03
Roney, dry-----	35	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.01
528: Roney, dry-----	40	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.01

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
528: Dobson-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Seepage Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Too sandy Seepage Gravel content	1.00 1.00 0.50 0.26 0.03
Olaton, south slope	15	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.92 0.26
529: Roney-----	40	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.07
Kisky, fine gravelly sandy loam-----	35	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Olaton, south slope	15	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.92 0.26
532: Schiller, north slope-----	55	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.54 0.26
Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity Large stones content	1.00 1.00 1.00 1.00 0.01	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Gravel content	1.00 1.00 1.00 0.50 0.03
533: Olaton, north slope, dry-----	60	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too sandy Seepage Gravel content	1.00 0.50 0.26 0.17

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
533: Roney, moist-----	20	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.07
534: Shimo, fine gravelly loamy sand-----	50	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Gravel content	1.00 1.00 1.00 0.50 0.41
Kisky, fine gravelly sandy loam-----	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Schiller-----	15	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Large stones content Seepage Gravel content	1.00 0.80 0.26 0.01
538: Borid-----	65	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Gravel content Seepage	1.00 1.00 1.00 0.26
Shimo, fine gravelly loamy sand-----	20	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Gravel content	1.00 1.00 1.00 0.50 0.41
541: Roney-----	55	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.26 0.07

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
541: Kisky, fine gravelly sandy loam-----	35	Very limited Depth to bedrock Seepage, bottom layer Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Seepage Gravel content Slope Too sandy	1.00 1.00 1.00 1.00 0.50
544: Arrowrock-----	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.58 0.50
Borid-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Gravel content Seepage	1.00 1.00 1.00 0.26
Painter-----	20	Very limited Depth to bedrock Slope Filtering capacity	1.00 1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Too sandy	1.00 1.00 1.00 0.50
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity Large stones content	1.00 1.00 1.00 1.00 0.01	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Gravel content	1.00 1.00 1.00 0.50 0.03
Kisky, fine gravelly loamy sand-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
555: Brownlee-----	50	Very limited Slow water movement Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 0.94	Very limited Slope Seepage Depth to soft bedrock Depth to hard bedrock	1.00 1.00 0.84 0.42	Very limited Slope Depth to bedrock Seepage	1.00 0.84 0.26

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
555: Schiller-----	40	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Large stones content Seepage Gravel content	1.00 0.80 0.26 0.01
556: Kisky, fine gravelly sandy loam-----	40	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Shimo, fine gravelly loamy sand-----	30	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Gravel content	1.00 1.00 1.00 0.50 0.41
Brownlee-----	20	Very limited Slope Slow water movement Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 0.94	Very limited Slope Seepage Depth to soft bedrock Depth to hard bedrock	1.00 1.00 0.84 0.42	Very limited Slope Depth to bedrock Seepage	1.00 0.84 0.26
558: Kisky, fine gravelly sandy loam-----	35	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Whisk-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.26 0.08
Roney, dry-----	25	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.01

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
560: Robbscreek, moist---	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.75	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 0.25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.04
Hellake-----	25	Very limited Slope Seepage, bottom layer Slow water movement	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 0.50 0.01
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity Large stones content	1.00 1.00 1.00 1.00 0.01	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Gravel content	1.00 1.00 1.00 0.50 0.03
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.92 0.50
Kisky, fine gravelly loamy sand-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Olaton, north slope, moist-----	25	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 0.26
562: Kisky, fine gravelly sandy loam-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
562: Shimo, fine gravelly sandy loam-----	30	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity Large stones content	1.00 1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage Large stones content	1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Large stones content Too sandy	1.00 1.00 1.00 1.00 0.50
Roney-----	25	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.07
600: McDesh-----	50	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 1.00
Immig, rubbly surface-----	25	Very limited Slow water movement Depth to bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope Large stones	1.00 1.00 1.00 1.00 1.00
Gwin, very stony loam, extremely stony surface-----	15	Very limited Depth to bedrock Large stones content Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to bedrock Large stones Slope Too clayey	1.00 1.00 1.00 0.50
601: Hann-----	45	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
Gwin, very stony loam, extremely stony surface-----	25	Very limited Depth to bedrock Large stones content Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to bedrock Large stones Slope Too clayey	1.00 1.00 1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
601: Shafer-----	20	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Too clayey Hard to compact Slope	1.00 1.00 1.00 1.00
602: Hillcreek-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited Slope Depth to bedrock Large stones content	1.00 1.00 0.46	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Too clayey Large stones content	1.00 1.00 0.50 0.46
Hann-----	20	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
604: Shafer-----	55	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Too clayey Hard to compact Slope	1.00 1.00 1.00 1.00
Hann-----	25	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited Depth to bedrock Large stones content Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Large stones Slope Too clayey	1.00 1.00 1.00 0.50
Flybow-----	20	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Gravel content Slope	1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
606: Hillcreek-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited Slope Depth to bedrock Large stones content	1.00 1.00 0.46	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Slope Depth to bedrock Too clayey Large stones content	1.00 1.00 0.50 0.46
607: Duco, stony loam, very stony surface	35	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones Too clayey	1.00 1.00 1.00 0.50
Immig, very stony surface-----	35	Very limited Slow water movement Slope Depth to bedrock Large stones content	1.00 1.00 1.00 0.34	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Slope Too clayey Depth to bedrock Large stones content Gravel content	1.00 1.00 1.00 0.34 0.20
Rubble land-----	15	Not rated		Not rated		Not rated	
608: Duco, very gravelly loam, stony surface	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 0.25	Very limited Depth to bedrock Slope Gravel content Too clayey	1.00 1.00 1.00 0.50
Hovelton, gravelly ashy loam-----	25	Very limited Slope Slow water movement Depth to bedrock Large stones content	1.00 1.00 1.00 0.92	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 1.00 0.25	Very limited Slope Depth to bedrock Large stones content Too clayey	1.00 1.00 0.92 0.50
McDesh, south slope	20	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited Slope Slow water movement Depth to bedrock Large stones content	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Large stones	1.00 1.00 1.00
Duco, stony loam, very stony surface	20	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones Too clayey	1.00 1.00 1.00 0.50
McDesh, south slope	20	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 1.00
612: Hann-----	60	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope	1.00	Somewhat limited Too clayey Slope	0.50 0.01
Hillcreek, dry-----	25	Very limited Slow water movement	1.00	Somewhat limited Slope Seepage	0.92 0.25	Not limited	
613: Duco, stony loam, very stony surface	40	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones Too clayey	1.00 1.00 1.00 0.50
Searles, very stony surface-----	25	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.93
McDesh, south slope	20	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
618: McDesh, south slope	35	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 1.00
Duco, very gravelly loam, stony surface	25	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 0.25	Very limited Depth to bedrock Gravel content Slope Too clayey	1.00 1.00 1.00 0.50
Shafer-----	20	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Too clayey Hard to compact Slope	1.00 1.00 1.00 1.00
619: McDesh-----	35	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 1.00
Gwin, gravelly loam, stony surface-----	25	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Gravel content Too clayey	1.00 1.00 0.77 0.50
Shafer-----	20	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Too clayey Hard to compact Slope	1.00 1.00 1.00 1.00
620: Immig, very stony surface-----	35	Very limited Slow water movement Slope Depth to bedrock Large stones content	1.00 1.00 1.00 0.34	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Slope Too clayey Depth to bedrock Large stones content Gravel content	1.00 1.00 1.00 0.34 0.20
McDesh, south slope	30	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones Too clayey	1.00 1.00 1.00 0.50
621: McDaniel-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope Gravel content Too clayey	1.00 1.00 0.50
Hovelton, gravelly ashy loam-----	40	Very limited Slope Slow water movement Depth to bedrock Large stones content	1.00 1.00 1.00 0.92	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 1.00 0.25	Very limited Slope Depth to bedrock Large stones content Too clayey	1.00 1.00 0.92 0.50
622: Hovelton, gravelly ashy loam-----	50	Very limited Slope Slow water movement Depth to bedrock Large stones content	1.00 1.00 1.00 0.92	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 1.00 0.25	Very limited Slope Depth to bedrock Large stones content Too clayey	1.00 1.00 0.92 0.50
Gwin, very stony loam, extremely stony surface-----	30	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones Too clayey	1.00 1.00 1.00 0.50
630: Gwin, very gravelly loam-----	45	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Gravel content Too clayey	1.00 1.00 1.00 0.50
Flybow-----	25	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Gravel content	1.00 1.00 1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
631: Flybow-----	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Gravel content	1.00 1.00 1.00
Rock outcrop-----	30	Not rated		Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated		Not rated	
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited Depth to bedrock Large stones content Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to bedrock Large stones Slope Too clayey	1.00 1.00 1.00 0.50
McDesh, very stony loam, very stony surface-----	25	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 1.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
635: Shafer, very stony surface-----	40	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 1.00
Karney-----	25	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Depth to hard bedrock	1.00 1.00 0.08	Very limited Too clayey Hard to compact Depth to bedrock Slope	1.00 1.00 1.00 1.00
Yad-----	20	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
636: Hann, stony surface	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Large stones content	1.00 0.01	Very limited Slope Too clayey Hard to compact	1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
636: McDesh, very stony loam, extremely bouldery surface---	30	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00 1.00	Very limited Slope Too clayey Hard to compact Depth to bedrock	1.00 1.00 1.00 1.00
Robbscreek, moist---	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.75	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 0.25	Very limited Slope Depth to bedrock Gravel content	1.00 1.00 0.04
638: Yad-----	35	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope	1.00	Somewhat limited Too clayey Slope	0.50 0.01
Cranegulch-----	25	Very limited Slow water movement Slope	1.00 0.16	Very limited Slope	1.00	Somewhat limited Too clayey Slope	0.50 0.16
Duco, stony loam, very stony surface	25	Very limited Depth to bedrock Large stones content Slope	1.00 1.00 0.01	Very limited Depth to hard bedrock Large stones content Slope	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Large stones Too clayey Slope	1.00 1.00 0.50 0.01
640: Timberbutte-----	85	Very limited Slope Seepage, bottom layer Slow water movement	1.00 1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 1.00 0.26
641: Aradaran-----	45	Very limited Slow water movement Slope	1.00 0.16	Very limited Slope Seepage	1.00 0.25	Very limited Hard to compact Too clayey Slope	1.00 1.00 0.16
Yad-----	40	Very limited Slow water movement Slope	1.00 0.16	Very limited Slope	1.00	Somewhat limited Too clayey Slope	0.50 0.16
650: Longs-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 0.83 0.75	Very limited Slope Depth to hard bedrock Seepage	1.00 0.54 0.25	Very limited Slope Depth to bedrock Gravel content	1.00 0.54 0.30

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
650: Highvalley-----	30	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Hoff-----	20	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 0.01	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 0.31	Very limited Depth to bedrock Slope Too clayey Gravel content Large stones content	1.00 1.00 0.50 0.29 0.01
651: Hess-----	35	Very limited Slow water movement Slope Depth to bedrock	1.00 1.00 0.96	Very limited Slope Depth to hard bedrock Seepage	1.00 0.88 0.25	Very limited Slope Depth to bedrock Too clayey	1.00 0.88 0.50
Lidos-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Seepage Slope	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 0.50 0.19
Cleymor-----	25	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too clayey Hard to compact Slope	1.00 1.00 1.00
652: Hess-----	40	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 0.96	Very limited Slope Depth to hard bedrock Seepage	1.00 0.88 0.25	Very limited Slope Depth to bedrock Too clayey	1.00 0.88 0.50
Lidos-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 0.50 0.19
Klicker-----	20	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00 1.00	Very limited Slope Depth to bedrock Too clayey Gravel content	1.00 1.00 0.50 0.44
653: Lidos-----	45	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 0.50 0.19
Klicker-----	30	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00 1.00	Very limited Slope Depth to bedrock Too clayey Gravel content	1.00 1.00 0.50 0.44

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
653: Hess-----	20	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 0.96	Very limited Slope Depth to hard bedrock Seepage	1.00 0.88 0.25	Very limited Slope Depth to bedrock Too clayey	1.00 0.88 0.50
654: Shilling-----	40	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope Gravel content	1.00 1.00
Highvalley-----	30	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
Hoff-----	20	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 0.01	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 0.31	Very limited Depth to bedrock Slope Too clayey Gravel content Large stones content	1.00 1.00 0.50 0.29 0.01
655: Shilling, moist----	40	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope Gravel content	1.00 1.00
Highvalley, moist---	35	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
656: Shilling, moist----	50	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope Gravel content	1.00 1.00
Highvalley, moist---	40	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
657: Pumpkin, stony surface-----	95	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.91 0.26
658: Cleymor-----	50	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too clayey Hard to compact Slope	1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
658: Pumpkin, stony surface-----	30	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.91 0.26
659: Hoff, south slope---	85	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope Gravel content Too clayey	1.00 1.00 1.00 0.50
660: Longs-----	60	Very limited Slope Depth to bedrock Slow water movement	1.00 0.83 0.75	Very limited Slope Depth to hard bedrock Seepage	1.00 0.54 0.25	Very limited Slope Depth to bedrock Gravel content	1.00 0.54 0.30
Highvalley-----	30	Very limited Slope Slow water movement	1.00 0.75	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00
661: Awley-----	50	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 1.00 0.26
Bo-----	35	Very limited Slope Seepage, bottom layer Slow water movement	1.00 1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope	1.00
662: Awley-----	65	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 1.00 0.26
Bo-----	20	Very limited Slope Seepage, bottom layer Slow water movement	1.00 1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope	1.00
663: Cleymor-----	65	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too clayey Hard to compact	1.00 1.00 1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
663: Hoff-----	20	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 0.01	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 0.31	Very limited Depth to bedrock Slope Too clayey Gravel content Large stones content	1.00 1.00 0.50 0.29 0.01
666: Pachic Argixerolls, very stony surface	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope Too clayey Large stones content	1.00 0.50 0.09
Rubble land-----	30	Not rated		Not rated		Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Very limited Slope Seepage, bottom layer Large stones content	1.00 1.00 0.86	Very limited Slope Seepage Large stones content	1.00 1.00 0.34	Very limited Slope Seepage Large stones	1.00 1.00 1.00
700: Drybuck-----	50	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 0.63	Very limited Slope Seepage Depth to hard bedrock	1.00 1.00 0.18	Very limited Slope Seepage Depth to bedrock	1.00 0.26 0.18
Whisk, moist-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Gravel content Seepage	1.00 1.00 0.53 0.26
701: Drybuck-----	55	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 0.63	Very limited Slope Seepage Depth to hard bedrock	1.00 1.00 0.18	Very limited Slope Seepage Depth to bedrock	1.00 0.26 0.18
Whisk, moist-----	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Gravel content Seepage	1.00 1.00 0.53 0.26
702: Deerrun-----	40	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
702: Kisky, fine gravelly sandy loam, moist--	40	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.96 0.50
Drybuck, dry-----	15	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 0.41	Very limited Slope Seepage Depth to hard bedrock	1.00 1.00 0.02	Very limited Slope Seepage Depth to bedrock	1.00 0.26 0.02
704: Drybuck-----	35	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 0.63	Very limited Slope Seepage Depth to hard bedrock	1.00 1.00 0.18	Very limited Slope Seepage Depth to bedrock	1.00 0.26 0.18
Northfork, fine gravelly sandy loam	30	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.85 0.26
Whisk, moist-----	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Gravel content Seepage	1.00 1.00 0.53 0.26
705: Northfork, sandy loam-----	60	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.27 0.26
Shirts, sandy loam, dry-----	20	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
706: Northfork, fine gravelly sandy loam	40	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.85 0.26

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
706: Shirts, coarse sandy loam-----	25	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Zimmer-----	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
707: Packerjohn, ashy coarse sandy loam--	40	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy Gravel content	1.00 1.00 0.50 0.35
Shirts, coarse sandy loam-----	30	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Zimmer-----	15	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
708: Zimmer-----	35	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
Northfork, fine gravelly sandy loam	25	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.85 0.26
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.05

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
709: Charters, sandy loam	30	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.02
710: Charters, fine gravelly sandy loam	35	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.25
Northfork, fine gravelly sandy loam	35	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage	1.00 0.85 0.26
Shirts, coarse sandy loam-----	15	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.08
Shirts, sandy loam, dry-----	30	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Zimmer-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
712: Charters, fine gravelly sandy loam	40	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.25
Shirts, coarse sandy loam-----	35	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
712: Zimmer-----	15	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
714: Shirts, sandy loam, south slope-----	40	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.05
Eagleson, fine gravelly sandy loam	35	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Charters, sandy loam	15	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.02
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited Slope Depth to bedrock Seepage, bottom layer Large stones content	1.00 1.00 1.00 0.84	Very limited Depth to hard bedrock Slope Seepage Large stones content	1.00 1.00 1.00 1.00 0.66	Very limited Slope Depth to bedrock Large stones content Seepage	1.00 1.00 0.84 0.26
Kosh-----	35	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
716: Zan-----	45	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy Gravel content	1.00 1.00 0.50 0.44

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
716: Belsh-----	25	Very limited Filtering capacity Slope Seepage, bottom layer Large stones content	1.00 1.00 1.00 0.92	Very limited Slope Seepage Large stones content	1.00 1.00 0.02	Very limited Slope Too sandy Seepage Gravel content Large stones content	1.00 1.00 1.00 0.07 0.07
Montchief-----	25	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity Large stones content	1.00 1.00 1.00 1.00 0.01	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Gravel content	1.00 1.00 1.00 0.50 0.03
718: Charters, fine gravelly sandy loam	35	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.25
Crumley-----	30	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.50
Eagleson, sandy loam	20	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.05
720: Drybuck, dry-----	40	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 0.41	Very limited Slope Seepage Depth to hard bedrock	1.00 1.00 0.02	Very limited Slope Seepage Depth to bedrock	1.00 0.26 0.02
Deerrun-----	30	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Kisky, fine gravelly sandy loam, moist--	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.96 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
721: Shirts, fine gravelly sandy loam	40	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.16
Kosh-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Charters, fine gravelly sandy loam, dry-----	15	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.08
726: Garval-----	50	Very limited Filtering capacity Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Too sandy Seepage Depth to bedrock Gravel content	1.00 1.00 1.00 1.00 0.68
Kisky, fine gravelly loamy coarse sand--	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
730: Hellake-----	40	Very limited Seepage, bottom layer Slow water movement Slope	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 0.50 0.01
Stardust-----	40	Very limited Slope Seepage, bottom layer Slow water movement	1.00 1.00 0.75	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content	1.00 0.11

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
731: Shirts, sandy loam, dry-----	40	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Charters, fine gravelly sandy loam, dry-----	25	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.08
Zimmer-----	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
733: Shirts, fine gravelly sandy loam	50	Very limited Seepage, bottom layer Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.26 0.16
Kosh-----	30	Very limited Depth to bedrock Seepage, bottom layer Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Seepage Gravel content Slope Too sandy	1.00 1.00 1.00 1.00 0.50
734: Shirts, sandy loam, dry-----	45	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Kosh-----	35	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
735: Shirts, coarse sandy loam-----	50	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
735: Zimmer-----	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
Charters, fine gravelly sandy loam	15	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.25
738: Tripod-----	35	Very limited Filtering capacity Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too sandy Seepage Gravel content	1.00 1.00 1.00 0.48
Packerjohn, ashy coarse sandy loam--	30	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy Gravel content	1.00 1.00 0.50 0.35
Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Filtering capacity Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Too sandy Seepage Depth to bedrock Gravel content	1.00 1.00 1.00 1.00 0.47
739: Shirts, sandy loam, moist-----	40	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Zimmer-----	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
Packerjohn, ashy coarse sandy loam--	20	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy Gravel content	1.00 1.00 0.50 0.35

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
740: Charters, sandy loam	40	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.02
Eagleson, fine gravelly sandy loam	35	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
741: Zan-----	85	Very limited Seepage, bottom layer Filtering capacity Slope	1.00 1.00 1.00	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Slope Too sandy Gravel content	1.00 1.00 0.50 0.44
742: Crumley-----	65	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 0.50
Eagleson, sandy loam	20	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.03
743: Packerjohn, ashy coarse sandy loam--	50	Very limited Seepage, bottom layer Slope Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Seepage Slope Too sandy Gravel content	1.00 1.00 0.50 0.35
Shirts, sandy loam, moist-----	35	Very limited Seepage, bottom layer Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
744: Packerjohn, ashy sandy loam, cool---	60	Very limited Seepage, bottom layer Filtering capacity Slope	1.00  1.00  1.00	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Slope Too sandy	1.00 1.00 0.50
Shirts, sandy loam, moist-----	20	Very limited Seepage, bottom layer Depth to bedrock Slope	1.00  1.00 1.00	Very limited Depth to hard bedrock Seepage Slope	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
Tripod, cool-----	15	Very limited Filtering capacity Seepage, bottom layer Slope Large stones content	1.00  1.00 1.00 0.01	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Slope Too sandy Large stones content	1.00 1.00 0.50 0.43
745: Tripod, moist-----	50	Very limited Filtering capacity Slope Seepage, bottom layer	1.00  1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too sandy Seepage Gravel content	1.00 1.00 1.00 1.00
Packerjohn, ashy sandy loam-----	45	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy	1.00 1.00 0.50
746: Packerjohn, ashy sandy loam-----	90	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy	1.00 1.00 0.50
747: Pinney, moist-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope Too clayey	1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
747: Charters, fine gravelly sandy loam	25	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.25
Shirts, sandy loam, dry-----	15	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
748: Belsh, moist-----	45	Very limited Seepage, bottom layer Slope Filtering capacity Large stones content	1.00 1.00 1.00 0.07	Very limited Slope Seepage	1.00 1.00	Very limited Seepage Slope Too sandy Gravel content Large stones content	1.00 1.00 0.50 0.30 0.03
Zan, moist-----	40	Very limited Seepage, bottom layer Slope Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Seepage Slope Gravel content Too sandy	1.00 1.00 0.70 0.50
749: Quartzburg-----	50	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage Depth to hard bedrock	1.00 1.00 1.00 0.96	Very limited Slope Seepage Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.94 0.50
Charters, sandy loam	25	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.02
750: Garval-----	50	Very limited Filtering capacity Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Too sandy Seepage Depth to bedrock Gravel content	1.00 1.00 1.00 1.00 0.68

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
750: Kisky, fine gravelly loamy coarse sand--	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
751: Belsh, moist-----	50	Very limited Slope Seepage, bottom layer Filtering capacity Large stones content	1.00 1.00 1.00 0.07	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy Gravel content Large stones content	1.00 1.00 0.50 0.30 0.03
Zan, moist-----	40	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content Too sandy	1.00 1.00 0.70 0.50
752: Josie-----	70	Very limited Seepage, bottom layer Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 0.26
Zimmer, fine gravelly sandy loam	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Too sandy Gravel content Seepage	1.00 1.00 0.50 0.35 0.26
753: Tripod, cool-----	45	Very limited Filtering capacity Slope Seepage, bottom layer Large stones content	1.00 1.00 1.00 0.01	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy Large stones content	1.00 1.00 0.50 0.43
Packerjohn, ashy sandy loam, cool---	25	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Too sandy	1.00 1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
753: Shirts, sandy loam, moist-----	20	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
754: Packerjohn, ashy sandy loam-----	55	Very limited Seepage, bottom layer Slope Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Seepage Slope Too sandy	1.00 1.00 0.50
Shirts, sandy loam, moist-----	20	Very limited Seepage, bottom layer Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
755: Zimmer-----	40	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
Quartzburg-----	35	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage Depth to hard bedrock	1.00 1.00 1.00 0.96	Very limited Slope Seepage Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 0.94 0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Filtering capacity Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Too sandy Seepage Depth to bedrock Gravel content	1.00 1.00 1.00 1.00 0.47
Tripod-----	25	Very limited Filtering capacity Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too sandy Seepage Gravel content	1.00 1.00 1.00 0.48

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
756: Kosh, moist-----	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
758: Eagleson, sandy loam	40	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.03
Kosh, moist-----	30	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Charters, fine gravelly sandy loam	20	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.25
759: Charters, sandy loam	30	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.02
Shirts, sandy loam, south slope-----	30	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.05
Kosh, moist-----	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
761: Charters, fine gravelly sandy loam	45	Very limited Seepage, bottom layer Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.25
Middlefork, moist---	40	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.25	Very limited Slope	1.00

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
762: Drybuck, dry-----	40	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 0.41	Very limited Slope Seepage Depth to hard bedrock	1.00 1.00 0.02	Very limited Slope Seepage Depth to bedrock	1.00 0.26 0.02
Hellake-----	30	Very limited Seepage, bottom layer Slow water movement Slope	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too clayey Gravel content	1.00 0.50 0.01
Deerrun-----	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.26
763: Eagleson, fine gravelly sandy loam	40	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Kosh-----	35	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.26 0.24
Zimmer, warm-----	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.26 0.09
Rock outcrop-----	15	Not rated		Not rated		Not rated	

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
766: Backswitch, coarse sandy loam-----	55	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Depth to soft bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.26 0.24
Charters, coarse sandy loam-----	15	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 0.26
Zimmer, dry-----	15	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.26 0.19
767: Shirts, sandy loam, dry-----	45	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Kosh-----	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.08
768: Shirts, sandy loam, south slope-----	35	Very limited Slope Depth to bedrock Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage Gravel content	1.00 1.00 0.26 0.05
Kosh, moist-----	25	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
768: Eagleson, fine gravelly sandy loam	15	Very limited Slope Seepage, bottom layer Depth to bedrock Filtering capacity	1.00 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to bedrock Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
770: Shirts, sandy loam, dry-----	50	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Charters, fine gravelly sandy loam, dry-----	20	Very limited Slope Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage Gravel content	1.00 0.26 0.08
Kosh, moist-----	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
771: Backswitch, sandy loam-----	55	Very limited Slope Seepage, bottom layer Depth to bedrock	1.00 1.00 1.00	Very limited Slope Seepage Depth to soft bedrock Depth to hard bedrock	1.00 1.00 1.00 0.42	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26
Shirts, sandy loam, dry-----	25	Very limited Slope Seepage, bottom layer layer Depth to bedrock	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Slope Depth to bedrock Seepage	1.00 1.00 0.26

Table 15.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Filtering capacity Slope Seepage, bottom layer Depth to bedrock Large stones content	1.00  1.00 1.00 1.00 0.28	Very limited Depth to hard bedrock Slope Seepage	1.00  1.00 1.00	Very limited Slope Seepage Depth to bedrock Too sandy Large stones content	1.00 1.00 1.00 0.50 0.28
Packerjohn, ashy sandy loam, dry----	25	Very limited Slope Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 1.00
Kosh, moist-----	20	Very limited Depth to bedrock Slope Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content Too sandy	1.00 1.00 1.00 1.00 0.50
900: Pits, gravel-----	75	Not rated		Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated		Not rated	
999: Water-----	100	Not rated		Not rated		Not rated	

Table 16a.--Construction Materials (Part I)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the soil is a source of gravel, sand, and topsoil. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Fair Bottom layer not a source Thickest layer possible source	0.00 0.33	Fair Bottom layer possible source Thickest layer possible source	0.10 0.33	Poor Too sandy Rock fragments Hard to reclaim (rock fragments) Wetness depth	0.00 0.00 0.00 0.53
Cumulic Haploxerolls-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.02 0.08	Good	
221: Bissell-----	85	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.09	Fair Hard to reclaim (rock fragments)	0.08
222: Bissell-----	85	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.09	Fair Hard to reclaim (rock fragments)	0.08
223: Staircase, dry-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Fair Rock fragments Hard to reclaim (rock fragments)	0.88 0.92
224: Porter-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.11	Fair Rock fragments	0.88

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
225: Boise-----	85	Fair Thickest layer possible source Bottom layer possible source	0.12 0.38	Fair Bottom layer possible source Thickest layer possible source	0.11 0.11	Poor Hard to reclaim (rock fragments) Rock fragments Too sandy	0.00 0.12 0.78
226: Flofeather, very rarely flooded----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.11 0.11	Good	
Shawmount, stony surface-----	30	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Thickest layer not a source Bottom layer not a source	0.00 0.00	Poor Hard to reclaim (rock fragments) Rock fragments	0.00 0.00
227: Piercepark, loam---	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Rock fragments Hard to reclaim (rock fragments)	0.88 0.92
228: Piercepark, loam---	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Rock fragments Hard to reclaim (rock fragments)	0.88 0.92
229: Piercepark, coarse sandy loam-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.88 0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
230: Hann-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
Doubledia, silty clay loam-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey	0.00
232: Jasseek-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.11	Poor Too clayey	0.00
233: Jasseek-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.11	Poor Too clayey	0.00
238: Adaboi-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey	0.00
240: Collister-----	65	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.00	Good	
Flofeather-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.09	Fair Hard to reclaim (rock fragments)	0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
300: Shawmount, stony surface-----	75	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Thickest layer not a source Bottom layer not a source	0.00 0.00	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
301: Breadloaf-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Depth to bedrock Slope	0.00 0.05 0.84
Doubledia, silty clay loam-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey	0.00
302: Breadloaf-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Depth to bedrock	0.00 0.00 0.05
Doubledia, silty clay loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey	0.00 0.00
Hann-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
303: Doubledia, silty clay loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey	0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
303: Hann-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Breadloaf-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Depth to bedrock	0.00 0.00 0.05
304: Breadloaf-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Depth to bedrock Slope	0.00 0.05 0.37
Doubledia, silty clay loam-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope	0.00 0.00
Hullsgulch, loam---	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.23	Poor Slope	0.00
305: Siphonlake, south slope-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.06	Poor Slope	0.00
Solarview-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.47	Poor Slope Depth to bedrock Too sandy Rock fragments	0.00 0.00 0.22 0.88

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
306: Van Dusen-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Siphonlake-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.11	Poor Slope	0.00
307: Adaboi-----	65	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope	0.00 0.84
Meclo-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Too clayey Depth to bedrock Slope	0.06 0.65 0.84
308: Breadloaf-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Depth to bedrock	0.00 0.00 0.05
Crawley, silt loam	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock	0.00 0.00
Doubledia, clay loam-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey	0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
309: Hullsgulch, sandy loam-----	65	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.05 0.05	Poor Slope	0.00
Solarview-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.47	Poor Slope Depth to bedrock Too sandy Rock fragments	0.00 0.00 0.22 0.88
311: Meclo-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Depth to bedrock	0.00 0.06 0.65
Crawley, silt loam	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock	0.00 0.00
Adaboi-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey	0.00 0.00
328: Gacey, extremely stony surface-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer not a source	0.00 0.00	Poor Depth to cemented pan Too clayey Rock fragments	0.00 0.00 0.00
329: Ayette-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey	0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
329: Duco, stony loam, very stony surface	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock Rock fragments Too clayey	0.00 0.00 0.00 0.60
330: Breadloaf-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock	0.00 0.04 0.05
Ayette, moist-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope	0.00 0.00
Immig, rubbly surface-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Rock fragments Slope Depth to bedrock	0.00 0.00 0.00 0.16
331: Ayette, moist-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope	0.00 0.00
Yad-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Rock fragments Hard to reclaim (rock fragments)	0.00 0.59 0.88 0.92
332: Hann-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
332: Ayette, moist-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey	0.00 0.00
Picketpin-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.09	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.08 0.88
333: Ayette-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey	0.00 0.00
Crawley, loam-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock	0.00 0.00
Hullsgulch, loam---	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.23	Poor Slope	0.00
335: Gimmi, very stony surface-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock Rock fragments	0.00 0.65 0.82
Ayette, moist-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope	0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
335: Doubledia, silty clay loam-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope	0.00 0.00
400: Ralsen-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Wetness depth Too sandy	0.00 0.78
Foxlane-----	30	Fair Thickest layer possible source Bottom layer possible source	0.12 0.43	Fair Bottom layer possible source Thickest layer possible source	0.43 0.43	Poor Too sandy Hard to reclaim (rock fragments) Rock fragments Too acid	0.00 0.00 0.00 0.99
Pay-----	20	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Fair Thickest layer possible source Bottom layer possible source	0.26 0.47	Poor Wetness depth Hard to reclaim (rock fragments) Too sandy	0.00 0.00 0.78
401: Staircase-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.00 0.10	Poor Rock fragments Hard to reclaim (rock fragments)	0.00 0.08
402: Crossbow-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Good Thickest layer not a source Bottom layer possible source	0.00 0.86	Fair Hard to reclaim (rock fragments) Wetness depth	0.08 0.68
Foxlane-----	20	Fair Thickest layer possible source Bottom layer possible source	0.12 0.43	Fair Bottom layer possible source Thickest layer possible source	0.43 0.43	Poor Too sandy Hard to reclaim (rock fragments) Rock fragments Too acid	0.00 0.00 0.00 0.99

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
403: Ralsen-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Wetness depth Too sandy	0.00 0.78
Pay-----	25	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Fair Thickest layer possible source Bottom layer possible source	0.26 0.47	Poor Wetness depth Hard to reclaim (rock fragments) Too sandy	0.00 0.00 0.78
Crossbow-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Good Thickest layer not a source Bottom layer possible source	0.00 0.86	Fair Hard to reclaim (rock fragments) Wetness depth	0.08 0.68
404: Riverpoint-----	55	Fair Thickest layer possible source Bottom layer possible source	0.25 0.50	Fair Thickest layer possible source Bottom layer possible source	0.04 0.12	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
Hellake-----	25	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Hard to reclaim (rock fragments) Too acid	0.00 0.98
405: Hellake-----	65	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Hard to reclaim (rock fragments) Too acid	0.00 0.98
Staircase-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.00 0.10	Poor Rock fragments Hard to reclaim (rock fragments)	0.00 0.08

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
406: Hellake-----	75	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Hard to reclaim (rock fragments) Too acid	0.00 0.98
407: Hellake-----	75	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Hard to reclaim (rock fragments) Slope Too acid	0.00 0.00 0.98
408: Stardust-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Rock fragments Hard to reclaim (rock fragments)	0.00 0.92
409: Stardust-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Rock fragments Hard to reclaim (rock fragments)	0.00 0.92
410: Stardust-----	65	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
Riverpoint, very stony surface-----	20	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Rock fragments Hard to reclaim (rock fragments) Slope	0.00 0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
411: Huston, very stony surface-----	45	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer possible source	0.00 0.04	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Zeb, gravelly sandy loam-----	35	Fair Thickest layer possible source Bottom layer possible source	0.12 0.50	Fair Thickest layer possible source Bottom layer possible source	0.10 0.38	Poor Slope Hard to reclaim (rock fragments) Rock fragments Too sandy	0.00 0.00 0.00 0.22
412: Huston, very stony surface-----	50	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.07	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Stardust-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
413: Cloudyway-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.07 0.10	Poor Rock fragments Hard to reclaim (rock fragments) Too sandy Slope	0.00 0.08 0.78 0.84
414: Hellake-----	40	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Hard to reclaim (rock fragments) Slope Too acid	0.00 0.00 0.98

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
414: Middlefork-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
415: Middlefork-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Pinney-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
416: Pinney, moist-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.32
Middlefork, moist--	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Zeb, gravelly sandy loam-----	20	Fair Thickest layer possible source Bottom layer possible source	0.12 0.50	Fair Thickest layer possible source Bottom layer possible source	0.10 0.38	Poor Slope Hard to reclaim (rock fragments) Rock fragments Too sandy	0.00 0.00 0.00 0.22
417: Middlefork-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
417: Zeb, fine gravelly sandy loam-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
418: Middlefork-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Zeb, fine gravelly sandy loam-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00
419: Charters, fine gravelly sandy loam, dry-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.07	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.50
Zeb, fine gravelly sandy loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00
420: Pioneervil-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer possible source	0.00 0.02	Good	

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
420: Grimescreek-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.02 0.08	Fair Wetness depth Rock fragments Hard to reclaim (rock fragments)	0.68 0.88 0.92
421: Dumps, dredge tailings-----	50	Not rated		Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
422: Lithic Xerorthents, very stony surface	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too sandy Rock fragments Depth to bedrock	0.00 0.00 0.00
Dumps, placer tailings-----	25	Not rated		Not rated		Not rated	
Dystric Xeropsamments, very stony surface	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.70	Fair Too sandy Depth to bedrock Rock fragments	0.01 0.10 0.88
423: Dystric Xeropsamments, very stony surface	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.70	Poor Slope Too sandy Depth to bedrock Rock fragments	0.00 0.01 0.10 0.88

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
423: Ultic Haploxeralfs	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.12 0.68
Lithic Xerorthents	15	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.38	Fair Thickest layer not a source Bottom layer possible source	0.00 0.12	Poor Too sandy Rock fragments Depth to bedrock Slope	0.00 0.00 0.00 0.84
424: Middlefork-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Charters, coarse sandy loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.01 0.01	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.12 0.92
425: Middlefork-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
Brassey-----	25	Fair Thickest layer possible source Bottom layer possible source	0.16 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.52	Poor Rock fragments Hard to reclaim (rock fragments)	0.00 0.00
426: Middlefork, moist--	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
427: Middlefork, moist--	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
428: Zeb, gravelly sandy loam-----	45	Fair Thickest layer possible source Bottom layer possible source	0.12 0.50	Fair Thickest layer possible source Bottom layer possible source	0.10 0.38	Poor Slope Hard to reclaim (rock fragments) Rock fragments Too sandy	0.00 0.00 0.00 0.22
Republic-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.04 0.05	Poor Slope	0.00
429: Huston, very stony surface-----	85	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer possible source	0.00 0.04	Poor Rock fragments Hard to reclaim (rock fragments) Slope	0.00 0.00 0.00
503: Cartwright, dry----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragments Hard to reclaim (rock fragments)	0.00 0.32
504: Cartwright, dry----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.32

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
505: Brownlee-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.00 0.00	Poor Rock fragments Hard to reclaim (rock fragments)	0.00 0.92
506: Brownlee-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
Robbscreek-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.12 0.54
Whisk-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock Rock fragments Slope	0.00 0.00 0.00
507: Shoebend-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock Too clayey	0.00 0.35 0.60
Dobson-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.12
Jerusalem-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.50 0.68

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
509: Arrowrock-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments Too sandy	0.00 0.00 0.00 0.22
Borid-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.02 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.92
Roney, moist-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.01 0.02	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.99
513: Shimo, fine gravelly loamy sand, north slope	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.22 0.54
Cartwright-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Robbscreek, moist--	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.54

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
516: Shimo, extremely stony surface-----	35	Poor		Fair		Poor	
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope	0.00
		Bottom layer not a source	0.00	Bottom layer possible source	0.08	Rock fragments	0.00
Olaton, south slope	30	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer possible source	0.02	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible source	0.02	Rock fragments	0.00
Schiller, south slope-----	25	Poor		Poor		Poor	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope	0.00
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Rock fragments	0.00
525: Robbscreek-----	35	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragments	0.12
Dobson-----	30	Poor		Fair		Poor	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer possible source	0.10	Depth to bedrock	0.00
Brownlee-----	20	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer possible source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible source	0.00	Rock fragments	0.00
526: Cartwright-----	35	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00		

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
526: Brownlee, moist----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.88 0.92
Robbscreek, moist--	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.54
527: Dobson-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.12
Roney, dry-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.01 0.01	Poor Slope Rock fragments Depth to bedrock	0.00 0.12 0.54
528: Roney, dry-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.01 0.01	Poor Slope Rock fragments Depth to bedrock	0.00 0.12 0.54
Dobson-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.12
Olaton, south slope	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.02 0.02	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.08

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
529: Roney-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.02 0.11	Poor Slope Rock fragments Depth to bedrock	0.00 0.12 0.54
Kisky, fine gravelly sandy loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
Olaton, south slope	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.02 0.02	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.08
532: Schiller, north slope-----	55	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Shimo, fine gravelly loamy sand, north slope	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.22 0.54
533: Olaton, north slope, dry-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.09 0.11	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.08 0.12

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
533: Roney, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.02 0.02	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.99
534: Shimo, fine gravelly loamy sand-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.06 0.08	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.16 0.22
Kisky, fine gravelly sandy loam-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
Schiller-----	15	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Thickest layer not a source Bottom layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
538: Borid-----	65	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
Shimo, fine gravelly loamy sand-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.06 0.08	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.16 0.22

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
541: Roney-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.02 0.11	Poor Slope Rock fragments Depth to bedrock	0.00 0.12 0.54
Kisky, fine gravelly sandy loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Depth to bedrock Rock fragments Slope	0.00 0.00 0.00
544: Arrowrock-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments Too sandy	0.00 0.00 0.00 0.22
Borid-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
Painter-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.08 0.08	Poor Slope Depth to bedrock Too sandy	0.00 0.10 0.22
551: Shimo, fine gravelly loamy sand, north slope	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.22 0.54

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
551: Kisky, fine gravelly loamy sand-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Slope Depth to bedrock Rock fragments Too sandy	0.00 0.00 0.00 0.22
555: Brownlee-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
Schiller-----	40	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Thickest layer not a source Bottom layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
556: Kisky, fine gravelly sandy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
Shimo, fine gravelly loamy sand-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.06 0.08	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.16 0.22
Brownlee-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
558: Kisky, fine gravelly sandy loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
Whisk-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
Roney, dry-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.01 0.01	Poor Slope Rock fragments Depth to bedrock	0.00 0.12 0.54
560: Robbscreek, moist--	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.54
Hellake-----	25	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Slope Hard to reclaim (rock fragments) Too acid	0.00 0.00 0.98
Shimo, fine gravelly loamy sand, north slope	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.22 0.54

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
561: Shimo, fine gravelly sandy loam, north slope	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.08 0.08	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.22 0.71
Kisky, fine gravelly loamy sand-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Slope Depth to bedrock Rock fragments Too sandy	0.00 0.00 0.00 0.22
Olaton, north slope, moist-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.02 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.92
562: Kisky, fine gravelly sandy loam-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
Shimo, fine gravelly sandy loam-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.71 0.78
Roney-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.02 0.11	Poor Slope Rock fragments Depth to bedrock	0.00 0.12 0.54

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
600: McDesh-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock	0.00 0.00 0.10
Immig, rubbly surface-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Rock fragments Slope Depth to bedrock	0.00 0.00 0.00 0.16
Gwin, very stony loam, extremely stony surface-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock Rock fragments Slope Too clayey	0.00 0.00 0.00 0.64
601: Hann-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Gwin, very stony loam, extremely stony surface-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock Rock fragments Slope Too clayey	0.00 0.00 0.00 0.64
Shafer-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock	0.00 0.00 0.03

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
602: Hillcreek-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.88
Hovelton, cobbly ashy loam, moist, very stony surface	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.03
Hann-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
604: Shafer-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock	0.00 0.00 0.03
Hann-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
605: Gwin, very stony loam, extremely stony surface-----	70	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock Rock fragments Slope Too clayey	0.00 0.00 0.00 0.64
Flybow-----	20	Good Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.75	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragments Depth to bedrock Slope	0.00 0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
606: Hillcreek-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.88
Hovelton, cobbly ashy loam, moist, very stony surface	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.03
607: Duco, stony loam, very stony surface	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock Rock fragments Too clayey	0.00 0.00 0.00 0.60
Immig, very stony surface-----	35	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.14	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Rock fragments Depth to bedrock	0.00 0.00 0.00 0.16
Rubble land-----	15	Not rated		Not rated		Not rated	
608: Duco, very gravelly loam, stony surface-----	40	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.57	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
Hovelton, gravelly ashy loam-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.99

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
608: McDesh, south slope	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Depth to bedrock	0.00 0.00 0.97
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.10
Duco, stony loam, very stony surface	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock Rock fragments Too clayey	0.00 0.00 0.00 0.60
McDesh, south slope	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Depth to bedrock	0.00 0.00 0.97
612: Hann-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
Hillcreek, dry-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Too clayey Hard to reclaim (rock fragments) Rock fragments	0.66 0.68 0.88

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
613: Duco, stony loam, very stony surface	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock Rock fragments Too clayey	0.00 0.00 0.00 0.60
Searles, very stony surface-----	25	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.25	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.16
McDesh, south slope	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Depth to bedrock	0.00 0.00 0.97
618: McDesh, south slope	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock	0.00 0.00 0.97
Duco, very gravelly loam, stony surface-----	25	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.57	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragments Depth to bedrock Slope	0.00 0.00 0.00
Shafer-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock	0.00 0.00 0.03
619: McDesh-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock	0.00 0.00 0.10

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
619: Gwin, gravelly loam, stony surface-----	25	Fair		Poor		Poor	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Rock fragments	0.00
		Bottom layer possible source	0.12	Thickest layer not a source	0.00	Depth to bedrock	0.00
Shafer-----	20	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Too clayey	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope	0.00
620: Immig, very stony surface-----	35	Fair		Poor		Poor	
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Slope	0.00
		Bottom layer possible source	0.14	Thickest layer not a source	0.00	Too clayey	0.00
McDesh, south slope	30	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Too clayey	0.00
Duco, stony loam, very stony surface	20	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Depth to bedrock	0.00
621: McDaniel-----	45	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
621: Hovelton, gravelly ashy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.99
622: Hovelton, gravelly ashy loam-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock Depth to bedrock	0.00 0.00 0.99 0.99
Gwin, very stony loam, extremely stony surface-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Depth to bedrock Rock fragments Too clayey	0.00 0.00 0.00 0.64
630: Gwin, very gravelly loam-----	45	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
Flybow-----	25	Good Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.75	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
631: Flybow-----	40	Good Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.75	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
631: Rock outcrop-----	30	Not rated		Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated		Not rated	
634: Gwin, very stony loam, extremely stony surface-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock Rock fragments Slope Too clayey	0.00 0.00 0.00 0.64
McDesh, very stony loam, very stony surface-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock Rock fragments	0.00 0.00 0.10 0.88
Rock outcrop-----	25	Not rated		Not rated		Not rated	
635: Shafer, very stony surface-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock Rock fragments	0.00 0.00 0.03 0.88
Karney-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Depth to bedrock Rock fragments	0.00 0.00 0.65 0.88
Yad-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Rock fragments Hard to reclaim (rock fragments)	0.00 0.59 0.88 0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
636: Hann, stony surface	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Rock fragments	0.00 0.00 0.86
McDesh, very stony loam, extremely bouldery surface--	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey Rock fragments Depth to bedrock	0.00 0.00 0.98 0.99
Robbscreek, moist--	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.54
638: Yad-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Too clayey Rock fragments Hard to reclaim (rock fragments)	0.59 0.88 0.92
Cranegulch-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope Rock fragments	0.00 0.84 0.88
Duco, stony loam, very stony surface	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock Rock fragments Too clayey	0.00 0.00 0.60
640: Timberbutte-----	85	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.29	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
641: Aradaran-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Hard to reclaim (rock fragments) Slope	0.00 0.50 0.84
Yad-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Too clayey Slope Rock fragments Hard to reclaim (rock fragments)	0.59 0.84 0.88 0.92
650: Longs-----	40	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00
Highvalley-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Hoff-----	20	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
651: Hess-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments	0.00 0.50
Lidos-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragments Slope Too clayey	0.00 0.00 0.66

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
651: Cleymor-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope	0.00 0.00
652: Hess-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments	0.00 0.50
Lidos-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too clayey	0.00 0.00 0.66
Klicker-----	20	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock Too clayey	0.00 0.00 0.21 0.66
653: Lidos-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too clayey	0.00 0.00 0.66
Klicker-----	30	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock Too clayey	0.00 0.00 0.21 0.66
Hess-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments	0.00 0.88

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
654: Shilling-----	40	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Highvalley-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
Hoff-----	20	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
655: Shilling, moist----	40	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Highvalley, moist--	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.88
656: Shilling, moist----	50	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Highvalley, moist--	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.88

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
657: Pumpkin, stony surface-----	95	Fair Thickest layer possible source Bottom layer possible source	0.25 0.50	Poor Bottom layer not a source Thickest layer possible source	0.00 0.03	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
658: Cleymor-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Too clayey Slope	0.00 0.00
Pumpkin, stony surface-----	30	Fair Thickest layer possible source Bottom layer possible source	0.25 0.50	Poor Bottom layer not a source Thickest layer possible source	0.00 0.03	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
659: Hoff, south slope--	85	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock Rock fragments Slope	0.00 0.00 0.00
660: Longs-----	60	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00
Highvalley-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
661: Awley-----	50	Fair Thickest layer possible source Bottom layer possible source	0.11 0.71	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Bo-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
662: Awley-----	65	Fair Thickest layer possible source Bottom layer possible source	0.11 0.71	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Bo-----	20	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
663: Cleymor-----	65	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Too clayey	0.00 0.00
Hoff-----	20	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.00
666: Pachic Argixerolls, very stony surface	40	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.46
Rubble land-----	30	Not rated		Not rated		Not rated	

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
666: Typic Haploxerolls, extremely stony surface-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00
700: Drybuck-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.02 0.02	Poor Slope Rock fragments	0.00 0.50
Whisk, moist-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Depth to bedrock Rock fragments Slope	0.00 0.00 0.00
701: Drybuck-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.02 0.02	Poor Slope Rock fragments	0.00 0.50
Whisk, moist-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
702: Deerrun-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.07 0.07	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.79
Kisky, fine gravelly sandy loam, moist-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.11	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
702: Drybuck, dry-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.02 0.02	Poor Slope	0.00
704: Drybuck-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.02 0.02	Poor Slope Rock fragments	0.00 0.50
Northfork, fine gravelly sandy loam-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.03 0.03	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.08
Whisk, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
705: Northfork, sandy loam-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.04 0.05	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.32
Shirts, sandy loam, dry-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.78 0.88 0.99

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
706: Northfork, fine gravelly sandy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.03 0.03	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.08
Shirts, coarse sandy loam-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.46 0.78
Zimmer-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50
707: Packerjohn, ashy coarse sandy loam	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.10	Poor Slope Rock fragments Hard to reclaim (rock fragments) Too sandy	0.00 0.00 0.00 0.78
Shirts, coarse sandy loam-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.46 0.78
Zimmer-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
708: Zimmer-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50
Northfork, fine gravelly sandy loam-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.03 0.03	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.08
Rock outcrop-----	25	Not rated		Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.01 0.06	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.78 0.90
Charters, sandy loam-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
710: Charters, fine gravelly sandy loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.11	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
710: Northfork, fine gravelly sandy loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.03 0.03	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.08
Shirts, coarse sandy loam-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.46 0.78
711: Charters, fine gravelly sandy loam, dry-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.07	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.50
Shirts, sandy loam, dry-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.78 0.88 0.99
Zimmer-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
712: Charters, fine gravelly sandy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.11	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
Shirts, coarse sandy loam-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.46 0.78
Zimmer-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50
714: Shirts, sandy loam, south slope-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.01 0.06	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.78 0.90
Eagleson, fine gravelly sandy loam-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.16 0.78
Charters, sandy loam-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
715: Eagleson, fine gravelly sandy loam, dry-----	45	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Bottom layer not a source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Rock fragments	0.00
Kosh-----	35	Fair		Fair		Poor	
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer not a source	0.00	Slope	0.00
		Bottom layer possible source	0.12	Bottom layer possible source	0.08	Depth to bedrock	0.00
716: Zan-----	45	Poor		Fair		Poor	
		Thickest layer not a source due to fines or thin layer	0.00	Thickest layer possible source	0.10	Slope	0.00
		Bottom layer not a source	0.00	Bottom layer possible source	0.12	Rock fragments	0.00
Belsh-----	25	Poor		Fair		Poor	
		Bottom layer not a source	0.00	Thickest layer possible source	0.40	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer possible source	0.47	Too sandy	0.00
Montchief-----	25	Poor		Poor		Poor	
		Bottom layer not a source	0.00	Thickest layer not a source	0.00	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer not a source	0.00	Rock fragments	0.00
718: Charters, fine gravelly sandy loam-----	35	Poor		Fair		Poor	
		Bottom layer not a source	0.00	Thickest layer possible source	0.09	Slope	0.00
		Thickest layer not a source due to fines or thin layer	0.00	Bottom layer possible source	0.11	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
718: Crumley-----	30	Fair Bottom layer possible source Thickest layer possible source	0.50 0.62	Fair Thickest layer possible source Bottom layer possible source	0.08 0.08	Poor Slope Rock fragments Hard to reclaim (rock fragments) Too sandy Too acid	0.00 0.00 0.00 0.22 0.99
Eagleson, sandy loam-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.78 0.97
720: Drybuck, dry-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.02 0.02	Poor Slope	0.00
Deerrun-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.07 0.07	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.79
Kisky, fine gravelly sandy loam, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.11	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
721: Shirts, fine gravelly sandy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer possible source	0.00 0.07	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.46 0.78

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
721: Kosh-----	30	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
Charters, fine gravelly sandy loam, dry-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.07	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.50
726: Garval-----	50	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.14	Fair Thickest layer not a source Bottom layer possible source	0.00 0.14	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.00 0.00 0.46
Kisky, fine gravelly loamy coarse sand-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.12	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.00 0.00 0.00
730: Hellake-----	40	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Hard to reclaim (rock fragments) Slope Too acid	0.00 0.00 0.98
Stardust-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
731: Shirts, sandy loam, dry-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.78 0.88 0.99
Charters, fine gravelly sandy loam, dry-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.07	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.50
Zimmer-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50
733: Shirts, fine gravelly sandy loam-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer possible source	0.00 0.07	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.46 0.78
Kosh-----	30	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Depth to bedrock Rock fragments Slope	0.00 0.00 0.00
734: Shirts, sandy loam, dry-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.78 0.88 0.99

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
734: Kosh-----	35	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
735: Shirts, coarse sandy loam-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.46 0.78
Zimmer-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50
Charters, fine gravelly sandy loam-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.11	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
738: Tripod-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.14 0.29	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.00
Packerjohn, ashy coarse sandy loam	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.10	Poor Slope Rock fragments Hard to reclaim (rock fragments) Too sandy	0.00 0.00 0.00 0.78

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
738: Pajo, fine gravelly ashy coarse sandy loam-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.14	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.00 0.00 0.29
739: Shirts, sandy loam, moist-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.04	Poor Slope Rock fragments Depth to bedrock	0.00 0.88 0.99
Zimmer-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50
Packerjohn, ashy coarse sandy loam	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.10	Poor Slope Rock fragments Hard to reclaim (rock fragments) Too sandy	0.00 0.00 0.00 0.78
740: Charters, sandy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
Eagleson, fine gravelly sandy loam-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.16 0.78

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
741: Zan-----	85	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.10 0.12	Poor Rock fragments Hard to reclaim (rock fragments) Slope	0.00 0.00 0.00
742: Crumley-----	65	Fair Bottom layer possible source Thickest layer possible source	0.50 0.62	Fair Thickest layer possible source Bottom layer possible source	0.08 0.08	Poor Slope Rock fragments Hard to reclaim (rock fragments) Too sandy Too acid	0.00 0.00 0.00 0.22 0.99
Eagleson, sandy loam-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.78 0.97
743: Packerjohn, ashy coarse sandy loam	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.10	Poor Rock fragments Slope Hard to reclaim (rock fragments) Too sandy	0.00 0.00 0.00 0.78
Shirts, sandy loam, moist-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.04	Poor Slope Rock fragments Depth to bedrock	0.00 0.88 0.99

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
744: Packerjohn, ashy sandy loam, cool--	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.08 0.08	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.22 0.88 0.92
Shirts, sandy loam, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.04	Poor Slope Rock fragments Depth to bedrock	0.00 0.88 0.99
Tripod, cool-----	15	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Thickest layer not a source Bottom layer not a source	0.00 0.00	Poor Too sandy Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.12 0.50
745: Tripod, moist-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.37 0.38	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.00
Packerjohn, ashy sandy loam-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.08 0.08	Poor Slope Rock fragments Too sandy Hard to reclaim (rock fragments)	0.00 0.12 0.78 0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
746: Packerjohn, ashy sandy loam-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.08 0.08	Poor Slope Rock fragments Too sandy Hard to reclaim (rock fragments)	0.00 0.12 0.78 0.92
747: Pinney, moist-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.32
Charters, fine gravelly sandy loam-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.11	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
Shirts, sandy loam, dry-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.78 0.88 0.99
748: Belsh, moist-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.12	Poor Rock fragments Slope Hard to reclaim (rock fragments)	0.00 0.00 0.00
Zan, moist-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.11 0.12	Poor Rock fragments Slope Too sandy Hard to reclaim (rock fragments)	0.00 0.00 0.08 0.32

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
749: Quartzburg-----	50	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.10 0.11	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.22 0.97
Charters, sandy loam-----	25	Poor Bottom layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
750: Garval-----	50	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.14	Fair Thickest layer not a source Bottom layer possible source	0.00 0.14	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.00 0.00 0.46
Kisky, fine gravelly loamy coarse sand-----	20	Poor Bottom layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.12	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.00 0.00 0.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
751: Belsh, moist-----	50	Poor Bottom layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.12	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
Zan, moist-----	40	Poor Bottom layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.11 0.12	Poor Slope Rock fragments Too sandy Hard to reclaim (rock fragments)	0.00 0.00 0.08 0.32

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
752: Josie-----	70	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Slope Rock fragments	0.00 0.88
Zimmer, fine gravelly sandy loam-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Rock fragments Depth to bedrock Slope	0.00 0.00 0.00
753: Tripod, cool-----	45	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Thickest layer not a source Bottom layer not a source	0.00 0.00	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.12 0.50
Packerjohn, ashy sandy loam, cool--	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.08 0.08	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.22 0.88 0.92
Shirts, sandy loam, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.04	Poor Slope Rock fragments Depth to bedrock	0.00 0.88 0.99
754: Packerjohn, ashy sandy loam-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.08 0.08	Poor Slope Rock fragments Too sandy Hard to reclaim (rock fragments)	0.00 0.12 0.78 0.92

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
754: Shirts, sandy loam, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.04	Poor Slope Rock fragments Depth to bedrock	0.00 0.88 0.99
755: Zimmer-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.50
Quartzburg-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.10 0.11	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.22 0.97
Rock outcrop-----	20	Not rated		Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.14	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.00 0.00 0.29
Tripod-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Bottom layer possible source Thickest layer possible source	0.14 0.29	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.00
Kosh, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.06	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.00 0.78

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
758: Eagleson, sandy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.78 0.97
Kosh, moist-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.06	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.00 0.78
Charters, fine gravelly sandy loam-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.11	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
759: Charters, sandy loam-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.04 0.08	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.92
Shirts, sandy loam, south slope-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.01 0.06	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.78 0.90
Kosh, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.06	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.00 0.78

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
761: Charters, fine gravelly sandy loam-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.09 0.11	Poor Rock fragments Slope Hard to reclaim (rock fragments)	0.00 0.00 0.92
Middlefork, moist--	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope	0.00
762: Drybuck, dry-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.02 0.02	Poor Slope	0.00
Hellake-----	30	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.50	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Hard to reclaim (rock Slope Too acid	0.00 0.00 0.98
Deerrun-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer possible source Thickest layer possible source	0.07 0.07	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.79
763: Eagleson, fine gravelly sandy loam-----	40	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.16 0.78
Kosh-----	35	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
763: Rock outcrop-----	15	Not rated		Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.09	Poor Rock fragments Slope Depth to bedrock	0.00 0.00 0.90
Zimmer, warm-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.04	Poor Depth to bedrock Rock fragments Slope	0.00 0.00 0.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.09	Poor Rock fragments Slope Depth to bedrock	0.00 0.00 0.90
Charters, coarse sandy loam-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.01 0.01	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.12 0.92
Zimmer, dry-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock Slope Rock fragments	0.00 0.00 0.50
767: Shirts, sandy loam, dry-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.78 0.88 0.99

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
767: Kosh-----	25	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.12	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Slope Depth to bedrock Rock fragments	0.00 0.00 0.00
Charters, fine gravelly sandy loam, dry-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.07	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.50
768: Shirts, sandy loam, south slope-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.01 0.06	Poor Slope Rock fragments Too sandy Depth to bedrock	0.00 0.00 0.78 0.90
Kosh, moist-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.06	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.00 0.78
Eagleson, fine gravelly sandy loam-----	15	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Fair Thickest layer not a source Bottom layer possible source	0.00 0.10	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.12 0.16 0.78
770: Shirts, sandy loam, dry-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.78 0.88 0.99

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
770: Charters, fine gravelly sandy loam, dry-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.04 0.07	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.50
Kosh, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.06	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.00 0.78
771: Backswitch, sandy loam-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00
Shirts, sandy loam, dry-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.01 0.10	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.78 0.88 0.99
772: Pajo, fine gravelly ashy sandy loam---	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer not a source	0.00 0.00	Poor Slope Too sandy Rock fragments Depth to bedrock	0.00 0.00 0.00 0.99
Packerjohn, ashy sandy loam, dry---	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.06 0.10	Poor Slope Rock fragments	0.00 0.00

Table 16a.--Construction Materials (Part I)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
772: Kosh, moist-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.06	Poor Slope Rock fragments Depth to bedrock Too sandy	0.00 0.00 0.00 0.78
900: Pits, gravel-----	75	Not rated		Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated		Not rated	
901: Dumps, landfill----	100	Not rated		Not rated		Not rated	
999: Water-----	100	Not rated		Not rated		Not rated	

Table 16b.--Construction Materials (Part II)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Poor Too sandy Wind erosion Droughty Low organic matter content Too acid	0.00 0.00 0.00 0.50 0.99	Fair Wetness depth	0.53
Cumulic Haploxerolls	40	Good		Good	
221: Bissell-----	85	Fair Low organic matter content Water erosion	0.08 0.99	Fair Shrink-swell	0.99
222: Bissell-----	85	Fair Low organic matter content Water erosion	0.08 0.99	Fair Shrink-swell	0.99
223: Staircase, dry-----	85	Fair Low organic matter content Droughty	0.08 0.92	Good	
224: Porter-----	85	Fair Low organic matter content	0.18	Good	
225: Boise-----	85	Fair Low organic matter content Droughty Too sandy Too acid	0.50 0.75 0.78 0.92	Good	
226: Flofeather, very rarely flooded-----	55	Fair Low organic matter content Droughty	0.18 0.89	Good	

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
226: Shawmount, stony surface-----	30	Fair		Fair	
		Stone content	0.26	Stone content	0.59
		Droughty	0.30	Cobble content	0.99
		Low organic matter content	0.50		
		Too acid	0.97		
		No cobble limitation	0.99		
227: Piercepark, loam----	85	Fair		Good	
		Low organic matter content	0.82		
228: Piercepark, loam----	85	Fair		Good	
		Low organic matter content	0.82		
229: Piercepark, coarse sandy loam-----	85	Fair		Good	
		Low organic matter content	0.50		
230: Hann-----	60	Fair		Poor	
		Low organic matter content	0.50	Low strength	0.00
		Water erosion	0.90	Shrink-swell	0.67
Doubledia, silty clay loam-----	15	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Water erosion	0.99	Depth to bedrock	0.01
				Shrink-swell	0.12
232: Jasseek-----	85	Poor		Fair	
		Too clayey	0.00	Shrink-swell	0.89
		Low organic matter content	0.12		
		Water erosion	0.99		
233: Jasseek-----	85	Poor		Fair	
		Too clayey	0.00	Shrink-swell	0.89
		Low organic matter content	0.12		
		Water erosion	0.99		
238: Adaboi-----	85	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Water erosion	0.68	Shrink-swell	0.33
		Low organic matter content	0.88		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
240: Collister-----	65	Fair Water erosion	0.37	Fair Shrink-swell	0.98
Flofeather-----	25	Good		Good	
300: Shawmount, stony surface-----	75	Fair Stone content Droughty Low organic matter content Too acid	0.26 0.30 0.50 0.97	Fair Slope Stone content Cobble content	0.50 0.59 0.99
301: Breadloaf-----	55	Poor Too clayey Depth to bedrock Droughty Low organic matter content	0.00 0.05 0.12 0.50	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.12
Doubledia, silty clay loam-----	25	Poor Too clayey Water erosion	0.00 0.99	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.01 0.12
302: Breadloaf-----	40	Poor Too clayey Depth to bedrock Droughty Low organic matter content	0.00 0.05 0.12 0.50	Poor Low strength Depth to bedrock Slope Shrink-swell	0.00 0.00 0.00 0.12
Doubledia, silty clay loam-----	35	Poor Too clayey Water erosion	0.00 0.99	Poor Low strength Slope Depth to bedrock Shrink-swell	0.00 0.00 0.01 0.12
Hann-----	20	Fair Low organic matter content Water erosion	0.50 0.90	Poor Low strength Slope Shrink-swell	0.00 0.50 0.67
303: Doubledia, silty clay loam-----	40	Poor Too clayey Water erosion	0.00 0.99	Poor Low strength Slope Depth to bedrock Shrink-swell	0.00 0.00 0.01 0.12

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
303: Hann-----	25	Fair		Poor	
		Low organic matter content	0.50	Low strength	0.00
		Water erosion	0.90	Slope	0.50
				Shrink-swell	0.67
Breadloaf-----	20	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Depth to bedrock	0.05	Depth to bedrock	0.00
		Droughty	0.12	Slope	0.00
		Low organic matter content	0.50	Shrink-swell	0.12
304: Breadloaf-----	30	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Depth to bedrock	0.05	Depth to bedrock	0.00
		Droughty	0.12	Shrink-swell	0.12
		Low organic matter content	0.50		
Doubledia, silty clay loam-----	30	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Water erosion	0.99	Depth to bedrock	0.01
				Shrink-swell	0.12
Hullsgulch, loam----	30	Fair		Fair	
		Low organic matter content	0.50	Slope	0.50
				Shrink-swell	0.99
305: Siphonlake, south slope-----	60	Fair		Poor	
		Low organic matter content	0.50	Slope	0.00
				Depth to bedrock	0.95
Solarview-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.22		
		Low organic matter content	0.50		
306: Van Dusen-----	45	Fair		Poor	
		Too acid	0.92	Slope	0.00
		Water erosion	0.99	Low strength	0.78
Siphonlake-----	35	Fair		Poor	
		Too acid	0.92	Slope	0.00
		Droughty	0.99	Depth to bedrock	0.29
307: Adaboi-----	65	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Water erosion	0.68	Shrink-swell	0.33
		Low organic matter content	0.88		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
307: Meclo-----	20	Fair		Poor	
		Too clayey	0.08	Depth to bedrock	0.00
		Depth to bedrock	0.65	Low strength	0.00
		Water erosion	0.68	Shrink-swell	0.43
		Low organic matter content	0.88		
		Droughty	0.97		
		Too acid	0.97		
308: Breadloaf-----	40	Poor		Poor	
		Too clayey	0.00	Slope	0.00
		Depth to bedrock	0.05	Low strength	0.00
		Droughty	0.12	Depth to bedrock	0.00
		Low organic matter content	0.50	Shrink-swell	0.12
Crawley, silt loam--	30	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Low organic matter content	0.50	Low strength	0.00
		Water erosion	0.68	Shrink-swell	0.87
		Too acid	0.99		
Doubledia, clay loam	20	Poor		Poor	
		Too clayey	0.00	Slope	0.00
		Low organic matter content	0.88	Low strength	0.00
				Shrink-swell	0.12
				Depth to bedrock	0.92
309: Hullsgulch, sandy loam-----	65	Fair		Poor	
		Low organic matter content	0.50	Slope	0.00
Solarview-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.22		
		Low organic matter content	0.50		
311: Meclo-----	35	Fair		Poor	
		Too clayey	0.08	Depth to bedrock	0.00
		Depth to bedrock	0.65	Low strength	0.00
		Water erosion	0.68	Slope	0.00
		Low organic matter content	0.88	Shrink-swell	0.43
		Droughty	0.97		
		Too acid	0.97		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
311: Crawley, silt loam--	30	Poor Droughty Depth to bedrock Low organic matter content Water erosion Too acid	0.00 0.00 0.50 0.68 0.99	Poor Depth to bedrock Low strength Slope Shrink-swell	0.00 0.00 0.00 0.87
Adaboi-----	20	Poor Too clayey Water erosion Low organic matter content	0.00 0.68 0.88	Poor Low strength Slope Shrink-swell	0.00 0.00 0.33
328: Gacey, extremely stony surface-----	75	Poor Droughty Depth to cemented pan Too clayey Stone content Low organic matter content	0.00 0.00 0.00 0.31 0.50	Poor Depth to cemented pan Stone content Low strength Shrink-swell Cobble content	0.00 0.00 0.00 0.12 0.76
329: Ayette-----	55	Poor Too clayey Low organic matter content	0.00 0.82	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.07 0.26
Duco, stony loam, very stony surface	25	Poor Stone content Droughty Depth to bedrock Low organic matter content Too clayey Cobble content	0.00 0.00 0.00 0.50 0.92 0.99	Poor Depth to bedrock Slope Stone content Low strength Shrink-swell Cobble content	0.00 0.00 0.00 0.87 0.99
330: Breadloaf-----	35	Poor Too clayey Depth to bedrock Droughty Low organic matter content	0.00 0.05 0.12 0.50	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.12
Ayette, moist-----	30	Poor Too clayey Low organic matter content	0.00 0.82	Poor Low strength Shrink-swell Depth to bedrock	0.00 0.30 0.92

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
330: Immig, rubbly surface-----	20	Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00
		Droughty	0.00	Low strength	0.00
		Cobble content	0.03	Cobble content	0.01
		Depth to bedrock	0.16	Shrink-swell	0.12
		Stone content	0.50	Slope	0.50
		Low organic matter content	0.88	Stone content	0.90
331: Ayette, moist-----	50	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Low organic matter content	0.82	Shrink-swell	0.30
				Depth to bedrock	0.92
Yad-----	30	Fair		Poor	
		Too clayey	0.82	Low strength	0.00
		Low organic matter content	0.88	Shrink-swell	0.67
332: Hann-----	35	Fair		Poor	
		Low organic matter content	0.50	Slope	0.00
		Water erosion	0.90	Low strength	0.00
				Shrink-swell	0.67
Ayette, moist-----	30	Poor		Poor	
		Too clayey	0.00	Slope	0.00
		Low organic matter content	0.82	Low strength	0.00
				Shrink-swell	0.30
				Depth to bedrock	0.92
Picketpin-----	20	Fair		Poor	
		Low organic matter content	0.08	Slope	0.00
333: Ayette-----	50	Poor		Poor	
		Too clayey	0.00	Slope	0.00
		Low organic matter content	0.82	Low strength	0.00
				Depth to bedrock	0.07
				Shrink-swell	0.26
Crawley, loam-----	15	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
				Low strength	0.00
				Shrink-swell	0.94
Hullsgulch, loam---	15	Fair		Poor	
		Low organic matter content	0.50	Slope	0.00
				Shrink-swell	0.99

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
335: Gimmi, very stony surface-----	30	Fair		Poor	
		Droughty	0.04	Low strength	0.00
		Depth to bedrock	0.65	Depth to bedrock	0.00
		Low organic matter content	0.88	Shrink-swell	0.31
		Too acid	0.99	Slope	0.50
Ayette, moist-----	25	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Low organic matter content	0.82	Shrink-swell	0.30
				Depth to bedrock	0.92
Doubledia, silty clay loam-----	25	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Water erosion	0.99	Depth to bedrock	0.01
				Shrink-swell	0.12
400: Ralsen-----	35	Fair		Poor	
		Too sandy	0.78	Wetness depth	0.00
		Too acid	0.84		
		Low organic matter content	0.88		
Foxlane-----	30	Poor		Good	
		Too sandy	0.00		
		Droughty	0.01		
		Too acid	0.32		
		Low organic matter content	0.88		
Pay-----	20	Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.00
		Droughty	0.09		
		Too acid	0.74		
		Too sandy	0.78		
		Low organic matter content	0.88		
401: Staircase-----	85	Fair		Good	
		Too acid	0.84		
		Low organic matter content	0.88		
402: Crossbow-----	60	Fair		Fair	
		Too acid	0.74	Wetness depth	0.68
		Low organic matter content	0.88		
Foxlane-----	20	Poor		Good	
		Too sandy	0.00		
		Droughty	0.01		
		Too acid	0.32		
		Low organic matter content	0.88		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
403: Ralsen-----	40	Fair Too sandy Too acid Low organic matter content	0.78 0.84 0.88	Poor Wetness depth	0.00
Pay-----	25	Poor Wind erosion Droughty Too acid Too sandy Low organic matter content	0.00 0.09 0.74 0.78 0.88	Poor Wetness depth	0.00
Crossbow-----	20	Fair Too acid Low organic matter content	0.74 0.88	Fair Wetness depth	0.68
404: Riverpoint-----	55	Fair Droughty Too acid Low organic matter content	0.52 0.80 0.88	Good	
Hellake-----	25	Fair Too acid Low organic matter content	0.46 0.88	Fair Low strength Shrink-swell	0.22 0.98
405: Hellake-----	65	Fair Too acid Low organic matter content	0.46 0.88	Fair Low strength Shrink-swell	0.22 0.98
Staircase-----	15	Fair Too acid Low organic matter content	0.84 0.88	Good	
406: Hellake-----	75	Fair Too acid Low organic matter content	0.46 0.88	Fair Low strength Shrink-swell	0.22 0.98
407: Hellake-----	75	Fair Too acid Low organic matter content	0.46 0.88	Fair Low strength Shrink-swell	0.22 0.98
408: Stardust-----	75	Fair Too acid Low organic matter content	0.32 0.88	Good	

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
409: Stardust-----	75	Fair Too acid Low organic matter content	0.32 0.88	Good	
410: Stardust-----	65	Fair Too acid Low organic matter content	0.32 0.88	Good	
Riverpoint, very stony surface-----	20	Poor Stone content Too acid Droughty Low organic matter content	0.00 0.32 0.80 0.88	Poor Stone content	0.00
411: Huston, very stony surface-----	45	Fair Droughty Too acid Stone content Low organic matter content	0.29 0.32 0.84 0.88	Poor Slope Stone content	0.00 0.94
Zeb, gravelly sandy loam-----	35	Poor Droughty Too sandy Too acid Low organic matter content	0.00 0.22 0.32 0.88	Poor Slope Cobble content	0.00 0.99
412: Huston, very stony surface-----	50	Fair Droughty Too acid Stone content Low organic matter content	0.29 0.32 0.84 0.88	Poor Slope Stone content	0.00 0.94
Stardust-----	30	Fair Too acid Low organic matter content	0.32 0.88	Good	
413: Cloudyway-----	75	Fair Too acid Too sandy Low organic matter content Droughty	0.32 0.78 0.88 0.88	Good	

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
414: Hellake-----	40	Fair		Fair	
		Too acid	0.46	Low strength	0.22
		Low organic matter content	0.88	Slope Shrink-swell	0.50 0.98
Middlefork-----	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Low strength	0.22
415: Middlefork-----	55	Fair		Fair	
		Too acid	0.32	Low strength	0.22
		Low organic matter content	0.88		
Pinney-----	20	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Low strength	0.00
416: Pinney, moist-----	35	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Shrink-swell	0.99
Middlefork, moist---	30	Fair		Poor	
		Too acid	0.32	Slope	0.00
Zeb, gravelly sandy loam-----	20	Poor		Poor	
		Droughty	0.00	Slope	0.00
		Too sandy	0.22	Cobble content	0.99
		Too acid	0.32		
		Low organic matter content	0.88		
417: Middlefork-----	60	Fair		Fair	
		Too acid	0.32	Low strength	0.22
		Low organic matter content	0.88		
Zeb, fine gravelly sandy loam-----	20	Fair		Good	
		Droughty	0.21		
		Too acid	0.32		
		Low organic matter content	0.88		
418: Middlefork-----	55	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Low strength	0.22

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
418: Zeb, fine gravelly sandy loam-----	25	Fair		Poor	
		Droughty	0.21	Slope	0.00
		Too acid	0.32		
		Low organic matter content	0.88		
419: Charters, fine gravelly sandy loam, dry-----	50	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
Zeb, fine gravelly sandy loam-----	35	Fair		Poor	
		Droughty	0.21	Slope	0.00
		Too acid	0.32		
		Low organic matter content	0.88		
420: Pioneervil-----	40	Fair		Good	
		Too acid	0.50		
		Low organic matter content	0.88		
Grimescreek-----	35	Fair		Fair	
		Low organic matter content	0.88	Wetness depth	0.68
		Too acid	0.95		
421: Dumps, dredge tailings-----	50	Not rated		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Poor		Poor	
		Too sandy	0.00	Cobble content	0.00
		Droughty	0.00	Stone content	0.19
		Low organic matter content	0.00		
		Cobble content	0.02		
		Stone content	0.08		
		Too acid	0.50		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
422: Lithic Xerorthents, very stony surface	30	Poor Too sandy Droughty Depth to bedrock Cobble content Low organic matter content Too acid Stone content	0.00 0.00 0.00 0.00 0.12 0.50 0.69	Poor Depth to bedrock Cobble content	0.00 0.72
Dumps, placer tailings-----	25	Not rated		Not rated	
Dystric Xeropsamments, very stony surface-----	20	Poor Wind erosion Droughty Too sandy Depth to bedrock Too acid Low organic matter content	0.00 0.00 0.01 0.10 0.50 0.50	Poor Depth to bedrock	0.00
423: Dystric Xeropsamments, very stony surface-----	35	Poor Wind erosion Droughty Too sandy Depth to bedrock Too acid Low organic matter content	0.00 0.00 0.01 0.10 0.50 0.50	Poor Depth to bedrock	0.00
Ultic Haploxeraalfs--	35	Fair Too acid Low organic matter content	0.50 0.50	Fair Slope	0.50
Lithic Xerorthents--	15	Poor Too sandy Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.00 0.12 0.50	Poor Depth to bedrock	0.00
424: Middlefork-----	50	Fair Too acid Low organic matter content	0.32 0.88	Fair Low strength	0.22

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
424: Charters, coarse sandy loam-----	35	Fair Too acid Low organic matter content	 0.32 0.88	Good	
425: Middlefork-----	55	Fair Too acid Low organic matter content	 0.32 0.88	Fair Low strength	0.22
Brassey-----	25	Fair Too acid Droughty Low organic matter content	 0.32 0.62 0.88	Good	
426: Middlefork, moist---	85	Fair Too acid	 0.32	Good	
427: Middlefork, moist---	85	Fair Too acid	 0.32	Poor Slope	0.00
428: Zeb, gravelly sandy loam-----	45	Poor Droughty Too sandy Too acid Low organic matter content	 0.00 0.22 0.32 0.88	Poor Slope Cobble content	 0.00 0.99
Republic-----	35	Fair Too acid Low organic matter content	 0.32 0.88	Poor Slope	0.00
429: Huston, very stony surface-----	85	Fair Droughty Too acid Stone content Low organic matter content	 0.29 0.32 0.84 0.88	Fair Stone content	0.94
503: Cartwright, dry-----	85	Fair Low organic matter content Too acid	 0.88 0.99	Good	

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
504: Cartwright, dry-----	85	Fair		Good	
		Low organic matter content	0.88		
		Too acid	0.99		
505: Brownlee-----	85	Fair		Fair	
		Too acid	0.74	Depth to bedrock	0.16
		Low organic matter content	0.88		
		Droughty	0.99		
506: Brownlee-----	45	Fair		Fair	
		Too acid	0.74	Depth to bedrock	0.16
		Low organic matter content	0.88	Slope	0.50
		Droughty	0.99		
Robbscreek-----	20	Fair		Poor	
		Droughty	0.03	Depth to bedrock	0.00
		Depth to bedrock	0.54	Slope	0.50
		Low organic matter content	0.88		
		Too acid	0.97		
Whisk-----	15	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.50
		Too acid	0.84		
507: Shoebend-----	35	Fair		Poor	
		Depth to bedrock	0.35	Slope	0.00
		Droughty	0.39	Depth to bedrock	0.00
		Low organic matter content	0.50	Shrink-swell	0.97
		Too clayey	0.92		
Dobson-----	30	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Low organic matter content	0.88		
		Too acid	0.95		
Jerusalem-----	20	Fair		Poor	
		Low organic matter content	0.50	Slope	0.00
		Water erosion	0.99	Shrink-swell	0.97
509: Arrowrock-----	35	Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00
		Droughty	0.00	Slope	0.00
		Depth to bedrock	0.00		
		Too sandy	0.22		
		Low organic matter content	0.50		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
509: Borid-----	25	Poor Droughty Depth to bedrock Low organic matter content	0.00 0.00 0.50	Poor Depth to bedrock Slope	0.00 0.00
Rock outcrop-----	25	Not rated		Not rated	
511: Olaton, north slope, moist-----	50	Fair Too acid	0.84	Poor Slope	0.00
Roney, moist-----	25	Fair Droughty Too acid Low organic matter content Depth to bedrock	0.08 0.74 0.88 0.99	Poor Slope Depth to bedrock	0.00 0.00
513: Shimo, fine gravelly loamy sand, north slope-----	30	Poor Wind erosion Droughty Too sandy Depth to bedrock Low organic matter content Cobble content	0.00 0.00 0.22 0.54 0.88 0.99	Poor Slope Depth to bedrock Cobble content	0.00 0.00 0.89
Cartwright-----	25	Fair Low organic matter content Too acid	0.88 0.99	Poor Slope Low strength	0.00 0.22
Robbscreek, moist---	25	Fair Droughty Depth to bedrock Too acid Low organic matter content	0.07 0.54 0.84 0.88	Poor Slope Depth to bedrock	0.00 0.00
516: Shimo, extremely stony surface-----	35	Poor Droughty Depth to bedrock Too sandy Low organic matter content Cobble content Too acid	0.00 0.10 0.22 0.88 0.94 0.99	Poor Slope Depth to bedrock Cobble content	0.00 0.00 0.83

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
516: Olaton, south slope	30	Fair Droughty Low organic matter content Too acid	0.71 0.88 0.88	Poor Slope	0.00
Schiller, south slope-----	25	Fair Droughty Low organic matter content Too acid	0.39 0.88 0.99	Poor Slope	0.00
525: Robbscreek-----	35	Fair Droughty Depth to bedrock Low organic matter content Too acid	0.03 0.54 0.88 0.97	Poor Slope Depth to bedrock	0.00 0.00
Dobson-----	30	Poor Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.88 0.95	Poor Depth to bedrock Slope	0.00 0.00
Brownlee-----	20	Fair Too acid Low organic matter content Droughty	0.74 0.88 0.99	Poor Slope Depth to bedrock	0.00 0.16
526: Cartwright-----	35	Fair Low organic matter content Too acid	0.88 0.99	Poor Slope Low strength	0.00 0.22
Brownlee, moist-----	30	Fair Low organic matter content Too acid Droughty	0.88 0.97 0.99	Poor Slope Depth to bedrock	0.00 0.23
Robbscreek, moist---	20	Fair Droughty Depth to bedrock Too acid Low organic matter content	0.07 0.54 0.84 0.88	Poor Slope Depth to bedrock	0.00 0.00

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
527: Dobson-----	50	Poor Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.88 0.95	Poor Depth to bedrock Slope	0.00 0.00
Roney, dry-----	35	Poor Droughty Depth to bedrock Too acid Low organic matter content	0.00 0.54 0.74 0.88	Poor Slope Depth to bedrock	0.00 0.00
528: Roney, dry-----	40	Poor Droughty Depth to bedrock Too acid Low organic matter content	0.00 0.54 0.74 0.88	Poor Slope Depth to bedrock	0.00 0.00
Dobson-----	30	Poor Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.88 0.95	Poor Depth to bedrock Slope	0.00 0.00
Olaton, south slope	15	Fair Droughty Low organic matter content Too acid	0.71 0.88 0.88	Poor Slope	0.00
529: Roney-----	40	Poor Droughty Depth to bedrock Too acid Low organic matter content	0.00 0.54 0.74 0.88	Poor Slope Depth to bedrock	0.00 0.00
Kisky, fine gravelly sandy loam-----	35	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.99	Poor Depth to bedrock Slope	0.00 0.00
Olaton, south slope	15	Fair Droughty Low organic matter content Too acid	0.71 0.88 0.88	Poor Slope	0.00

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
532: Schiller, north slope-----	55	Fair		Poor	
		Droughty	0.42	Slope	0.00
		Low organic matter content	0.88		
		Too acid	0.95		
Shimo, fine gravelly loamy sand, north slope-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Droughty	0.00	Depth to bedrock	0.00
		Too sandy	0.22	Cobble content	0.89
		Depth to bedrock	0.54		
		Low organic matter content	0.88		
		Cobble content	0.99		
533: Olaton, north slope, dry-----	60	Fair		Poor	
		Droughty	0.83	Slope	0.00
		Too acid	0.88		
Roney, moist-----	20	Fair		Poor	
		Droughty	0.07	Slope	0.00
		Too acid	0.74	Depth to bedrock	0.00
		Low organic matter content	0.88		
		Depth to bedrock	0.99		
534: Shimo, fine gravelly loamy sand-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.16		
		Too sandy	0.22		
		Low organic matter content	0.88		
Kisky, fine gravelly sandy loam-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.99		
Schiller-----	15	Poor		Poor	
		Droughty	0.00	Slope	0.00
		Cobble content	0.34	Cobble content	0.68
		Low organic matter content	0.88		
		Too acid	0.95		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
538: Borid-----	65	Poor Droughty Depth to bedrock Low organic matter content	0.00 0.00 0.50	Poor Depth to bedrock Slope	0.00 0.00
Shimo, fine gravelly loamy sand-----	20	Poor Wind erosion Droughty Depth to bedrock Too sandy Low organic matter content	0.00 0.00 0.16 0.22 0.88	Poor Slope Depth to bedrock	0.00 0.00
541: Roney-----	55	Poor Droughty Depth to bedrock Too acid Low organic matter content	0.00 0.54 0.74 0.88	Poor Depth to bedrock Slope	0.00 0.50
Kisky, fine gravelly sandy loam-----	35	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.99	Poor Depth to bedrock Slope	0.00 0.50
544: Arrowrock-----	40	Poor Wind erosion Droughty Depth to bedrock Too sandy Low organic matter content	0.00 0.00 0.00 0.22 0.50	Poor Depth to bedrock Slope	0.00 0.00
Borid-----	30	Poor Droughty Depth to bedrock Low organic matter content	0.00 0.00 0.50	Poor Depth to bedrock Slope	0.00 0.00
Painter-----	20	Poor Droughty Depth to bedrock Too sandy Low organic matter content	0.00 0.10 0.22 0.50	Poor Depth to bedrock Slope	0.00 0.00

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
551: Shimo, fine gravelly loamy sand, north slope-----	45	Poor Wind erosion Droughty Too sandy Depth to bedrock Low organic matter content Cobble content	0.00 0.00 0.22 0.54 0.88 0.99	Poor Slope Depth to bedrock Cobble content	0.00 0.00 0.89
Kisky, fine gravelly loamy sand-----	30	Poor Wind erosion Droughty Depth to bedrock Too sandy Too acid	0.00 0.00 0.00 0.22 0.99	Poor Depth to bedrock Slope	0.00 0.00
555: Brownlee-----	50	Fair Too acid Low organic matter content Droughty	0.74 0.88 0.99	Poor Slope Depth to bedrock	0.00 0.16
Schiller-----	40	Poor Droughty Cobble content Low organic matter content Too acid	0.00 0.34 0.88 0.95	Poor Slope Cobble content	0.00 0.68
556: Kisky, fine gravelly sandy loam-----	40	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.99	Poor Depth to bedrock Slope	0.00 0.00
Shimo, fine gravelly loamy sand-----	30	Poor Wind erosion Droughty Depth to bedrock Too sandy Low organic matter content	0.00 0.00 0.16 0.22 0.88	Poor Slope Depth to bedrock	0.00 0.00
Brownlee-----	20	Fair Too acid Low organic matter content Droughty	0.74 0.88 0.99	Poor Slope Depth to bedrock	0.00 0.16

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
558: Kisky, fine gravelly sandy loam-----	35	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.99	Poor Depth to bedrock Slope	0.00 0.00
Whisk-----	30	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.84	Poor Depth to bedrock Slope	0.00 0.00
Roney, dry-----	25	Poor Droughty Depth to bedrock Too acid Low organic matter content	0.00 0.54 0.74 0.88	Poor Slope Depth to bedrock	0.00 0.00
560: Robbscreek, moist---	30	Fair Droughty Depth to bedrock Too acid Low organic matter content	0.07 0.54 0.84 0.88	Poor Slope Depth to bedrock	0.00 0.00
Hellake-----	25	Fair Too acid Low organic matter content	0.46 0.88	Poor Slope Low strength Shrink-swell	0.00 0.22 0.98
Shimo, fine gravelly loamy sand, north slope-----	20	Poor Wind erosion Droughty Too sandy Depth to bedrock Low organic matter content Cobble content	0.00 0.00 0.22 0.54 0.88 0.99	Poor Slope Depth to bedrock Cobble content	0.00 0.00 0.89
561: Shimo, fine gravelly sandy loam, north slope-----	35	Poor Droughty Too sandy Depth to bedrock Low organic matter content	0.00 0.22 0.71 0.88	Poor Slope Depth to bedrock	0.00 0.00
Kisky, fine gravelly loamy sand-----	30	Poor Wind erosion Droughty Depth to bedrock Too sandy Too acid	0.00 0.00 0.00 0.22 0.99	Poor Depth to bedrock Slope	0.00 0.00

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
561: Olaton, north slope, moist-----	25	Fair Too acid	0.84	Poor Slope	0.00
562: Kisky, fine gravelly sandy loam-----	30	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.99	Poor Depth to bedrock Slope	0.00 0.00
Shimo, fine gravelly sandy loam-----	30	Poor Droughty Cobble content Depth to bedrock Too sandy Low organic matter content Too acid	0.00 0.00 0.71 0.78 0.88 0.99	Poor Slope Depth to bedrock Cobble content	0.00 0.00 0.00
Roney-----	25	Poor Droughty Depth to bedrock Too acid Low organic matter content	0.00 0.54 0.74 0.88	Poor Slope Depth to bedrock	0.00 0.00
600: McDesh-----	50	Poor Too clayey Depth to bedrock Droughty	0.00 0.10 0.28	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.22
Immig, rubbly surface-----	25	Poor Too clayey Droughty Cobble content Depth to bedrock Stone content Low organic matter content	0.00 0.00 0.03 0.16 0.50 0.88	Poor Depth to bedrock Low strength Cobble content Shrink-swell Stone content	0.00 0.00 0.01 0.12 0.90
Gwin, very stony loam, extremely stony surface-----	15	Poor Droughty Depth to bedrock Stone content Cobble content Low organic matter content Too clayey	0.00 0.00 0.04 0.41 0.50 0.98	Poor Depth to bedrock Cobble content Stone content Shrink-swell	0.00 0.70 0.82 0.87

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
601: Hann-----	45	Fair		Poor	
		Low organic matter content	0.50	Low strength	0.00
		Water erosion	0.90	Shrink-swell	0.67
Gwin, very stony loam, extremely stony surface-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Cobble content	0.70
		Stone content	0.04	Stone content	0.82
		Cobble content	0.41	Shrink-swell	0.87
		Low organic matter content	0.50		
		Too clayey	0.98		
Shafer-----	20	Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.03	Low strength	0.00
		Droughty	0.18	Shrink-swell	0.12
		Too acid	0.99		
602: Hillcreek-----	35	Good		Poor	
				Slope	0.00
				Low strength	0.00
				Shrink-swell	0.87
Hovelton, cobbly ashy loam, moist, very stony surface	30	Poor		Poor	
		Droughty	0.00	Slope	0.00
		Depth to bedrock	0.03	Depth to bedrock	0.00
		Cobble content	0.86	Cobble content	0.77
		Stone content	0.99	Shrink-swell	0.94
Hann-----	20	Fair		Poor	
		Low organic matter content	0.50	Slope	0.00
		Water erosion	0.90	Low strength	0.00
				Shrink-swell	0.67
604: Shafer-----	55	Poor		Poor	
		Too clayey	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.03	Low strength	0.00
		Droughty	0.18	Shrink-swell	0.12
		Too acid	0.99	Slope	0.50
Hann-----	25	Fair		Poor	
		Low organic matter content	0.50	Low strength	0.00
		Water erosion	0.90	Shrink-swell	0.67

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
605: Gwin, very stony loam, extremely stony surface-----	70	Poor Droughty Depth to bedrock Stone content Cobble content Low organic matter content Too clayey	0.00 0.00 0.04 0.41 0.50 0.98	Poor Depth to bedrock Cobble content Stone content Shrink-swell	0.00 0.70 0.82 0.87
Flybow-----	20	Poor Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.88 0.99	Poor Depth to bedrock	0.00
606: Hillcreek-----	50	Good		Poor Slope Low strength Shrink-swell	0.00 0.00 0.87
Hovelton, cobbly ashy loam, moist, very stony surface	40	Poor Droughty Depth to bedrock Cobble content Stone content	0.00 0.03 0.86 0.99	Poor Slope Depth to bedrock Cobble content Shrink-swell	0.00 0.00 0.77 0.94
607: Duco, stony loam, very stony surface	35	Poor Stone content Droughty Depth to bedrock Low organic matter content Too clayey Cobble content	0.00 0.00 0.00 0.50 0.92 0.99	Poor Depth to bedrock Slope Stone content Low strength Shrink-swell Cobble content	0.00 0.00 0.00 0.00 0.87 0.99
Immig, very stony surface-----	35	Poor Too clayey Droughty Depth to bedrock Cobble content Low organic matter content	0.00 0.00 0.16 0.76 0.88	Poor Slope Depth to bedrock Shrink-swell Cobble content	0.00 0.00 0.12 0.58
Rubble land-----	15	Not rated		Not rated	

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
608: Duco, very gravelly loam, stony surface	40	Poor Droughty Depth to bedrock Low organic matter content	0.00 0.00 0.50	Poor Depth to bedrock Slope Shrink-swell	0.00 0.00 0.99
Hovelton, gravelly ashy loam-----	25	Fair Droughty Cobble content Depth to bedrock	0.01 0.08 0.99	Poor Slope Depth to bedrock Cobble content Shrink-swell	0.00 0.00 0.00 0.97
McDesh, south slope	20	Poor Too clayey Depth to bedrock Droughty	0.00 0.97 0.98	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.00 0.12
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Poor Droughty Stone content Depth to bedrock Cobble content Low organic matter content	0.00 0.00 0.10 0.57 0.88	Poor Slope Depth to bedrock Stone content Cobble content Shrink-swell	0.00 0.00 0.00 0.41 0.87
Duco, stony loam, very stony surface	20	Poor Stone content Droughty Depth to bedrock Low organic matter content Too clayey Cobble content	0.00 0.00 0.00 0.50 0.92 0.99	Poor Depth to bedrock Slope Stone content Low strength Shrink-swell Cobble content	0.00 0.00 0.00 0.00 0.87 0.99
McDesh, south slope	20	Poor Too clayey Depth to bedrock Droughty	0.00 0.97 0.98	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.00 0.12
612: Hann-----	60	Fair Low organic matter content Water erosion	0.50 0.90	Poor Low strength Shrink-swell	0.00 0.67
Hillcreek, dry-----	25	Fair Low organic matter content Too clayey	0.88 0.92	Fair Shrink-swell	0.87

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
613: Duco, stony loam, very stony surface	40	Poor Stone content Droughty Depth to bedrock Low organic matter content Too clayey Cobble content	0.00 0.00 0.00 0.50 0.92 0.99	Poor Depth to bedrock Slope Stone content Low strength Shrink-swell Cobble content	0.00 0.00 0.00 0.00 0.87 0.99
Searles, very stony surface-----	25	Poor Droughty Depth to bedrock Low organic matter content Stone content	0.00 0.16 0.50 0.93	Poor Slope Depth to bedrock	0.00 0.00
McDesh, south slope	20	Poor Too clayey Depth to bedrock Droughty	0.00 0.97 0.98	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.00 0.12
618: McDesh, south slope	35	Poor Too clayey Depth to bedrock Droughty	0.00 0.97 0.98	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.12
Duco, very gravelly loam, stony surface	25	Poor Droughty Depth to bedrock Low organic matter content	0.00 0.00 0.50	Poor Depth to bedrock Slope Shrink-swell	0.00 0.50 0.99
Shafer-----	20	Poor Too clayey Depth to bedrock Droughty Too acid	0.00 0.03 0.18 0.99	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.12
619: McDesh-----	35	Poor Too clayey Depth to bedrock Droughty	0.00 0.10 0.28	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.22
Gwin, gravelly loam, stony surface-----	25	Poor Droughty Depth to bedrock Low organic matter content	0.00 0.00 0.88	Poor Depth to bedrock Slope Shrink-swell	0.00 0.50 0.87

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
619: Shafer-----	20	Poor Too clayey Depth to bedrock Droughty Too acid	0.00 0.03 0.18 0.99	Poor Depth to bedrock Low strength Shrink-swell	0.00 0.00 0.12
620: Immig, very stony surface-----	35	Poor Too clayey Droughty Depth to bedrock Cobble content Low organic matter content	0.00 0.00 0.16 0.76 0.88	Poor Slope Depth to bedrock Shrink-swell Cobble content	0.00 0.00 0.12 0.58
McDesh, south slope	30	Poor Too clayey Depth to bedrock Droughty	0.00 0.97 0.98	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.00 0.12
Duco, stony loam, very stony surface	20	Poor Stone content Droughty Depth to bedrock Low organic matter content Too clayey Cobble content	0.00 0.00 0.00 0.50 0.87 0.92 0.99	Poor Depth to bedrock Slope Stone content Low strength Shrink-swell Cobble content	0.00 0.00 0.00 0.00 0.87 0.99
621: McDaniel-----	45	Fair Low organic matter content Droughty	0.88 0.95	Poor Slope	0.00
Hovelton, gravelly ashy loam-----	40	Fair Droughty Cobble content Depth to bedrock	0.01 0.08 0.99	Poor Slope Depth to bedrock Cobble content Shrink-swell	0.00 0.00 0.00 0.97
622: Hovelton, gravelly ashy loam-----	50	Fair Droughty Cobble content Depth to bedrock	0.01 0.08 0.99	Poor Slope Depth to bedrock Cobble content Shrink-swell	0.00 0.00 0.00 0.97

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
622: Gwin, very stony loam, extremely stony surface-----	30	Poor Droughty Depth to bedrock Stone content Cobble content Low organic matter content Too clayey	0.00 0.00 0.04 0.41 0.50 0.98	Poor Depth to bedrock Slope Cobble content Stone content Shrink-swell	0.00 0.00 0.70 0.82 0.87
630: Gwin, very gravelly loam-----	45	Poor Droughty Depth to bedrock Low organic matter content	0.00 0.00 0.50	Poor Depth to bedrock Slope Shrink-swell	0.00 0.00 0.87
Flybow-----	25	Poor Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.88 0.99	Poor Depth to bedrock Slope	0.00 0.00
Rock outcrop-----	20	Not rated		Not rated	
631: Flybow-----	40	Poor Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.88 0.99	Poor Depth to bedrock Slope	0.00 0.00
Rock outcrop-----	30	Not rated		Not rated	
Rubble land-----	20	Not rated		Not rated	
634: Gwin, very stony loam, extremely stony surface-----	40	Poor Droughty Depth to bedrock Stone content Cobble content Low organic matter content Too clayey	0.00 0.00 0.04 0.41 0.50 0.98	Poor Depth to bedrock Cobble content Stone content Shrink-swell	0.00 0.70 0.82 0.87

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
634: McDesh, very stony loam, very stony surface-----	25	Poor Too clayey Droughty Depth to bedrock Stone content	0.00 0.01 0.10 0.89	Poor Low strength Depth to bedrock Shrink-swell No stoniness limitation	0.00 0.00 0.20 0.99
Rock outcrop-----	25	Not rated		Not rated	
635: Shafer, very stony surface-----	40	Poor Too clayey Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.03 0.88 0.99	Poor Low strength Depth to bedrock Shrink-swell Slope	0.00 0.00 0.29 0.50
Karney-----	25	Poor Too clayey Droughty Depth to bedrock Low organic matter content	0.00 0.35 0.65 0.88	Poor Depth to bedrock Low strength Shrink-swell Slope	0.00 0.00 0.15 0.50
Yad-----	20	Fair Too clayey Low organic matter content	0.82 0.88	Poor Low strength Slope Shrink-swell	0.00 0.50 0.67
636: Hann, stony surface	30	Poor Too clayey Low organic matter content Water erosion	0.00 0.88 0.99	Poor Low strength Slope Shrink-swell	0.00 0.00 0.25
McDesh, very stony loam, extremely bouldery surface---	30	Poor Too clayey Stone content Low organic matter content Droughty Water erosion Depth to bedrock	0.00 0.17 0.88 0.99 0.99 0.99	Poor Slope Low strength Depth to bedrock Stone content Shrink-swell	0.00 0.00 0.00 0.18 0.33
Robbscreek, moist---	25	Fair Droughty Depth to bedrock Too acid Low organic matter content	0.07 0.54 0.84 0.88	Poor Slope Depth to bedrock	0.00 0.00

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
638: Yad-----	35	Fair Too clayey Low organic matter content	0.82 0.88	Poor Low strength Shrink-swell	0.00 0.67
Cranegulch-----	25	Poor Too clayey Low organic matter content Too acid	0.00 0.88 0.99	Fair Shrink-swell Low strength	0.17 0.22
Duco, stony loam, very stony surface	25	Poor Stone content Droughty Depth to bedrock Low organic matter content Too clayey Cobble content	0.00 0.00 0.00 0.50 0.92 0.99	Poor Depth to bedrock Stone content Low strength Shrink-swell Cobble content	0.00 0.00 0.00 0.87 0.99
640: Timberbutte-----	85	Poor Wind erosion Too acid Low organic matter content	0.00 0.50 0.88	Poor Slope	0.00
641: Aradaran-----	45	Poor Too clayey Low organic matter content Too acid	0.00 0.88 0.88	Poor Low strength Shrink-swell	0.00 0.52
Yad-----	40	Fair Too clayey Low organic matter content	0.82 0.88	Poor Low strength Shrink-swell	0.00 0.67
650: Longs-----	40	Fair Too acid Low organic matter content	0.32 0.88	Poor Slope Depth to bedrock	0.00 0.46
Highvalley-----	30	Fair Too acid Low organic matter content	0.32 0.88	Poor Slope	0.00
Hoff-----	20	Poor Droughty Depth to bedrock Too acid Cobble content	0.00 0.00 0.95 0.99	Poor Depth to bedrock Slope Shrink-swell Cobble content	0.00 0.00 0.93 0.97

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
651: Hess-----	35	Fair Too acid Low organic matter content	0.50 0.88	Poor Low strength Depth to bedrock Slope Shrink-swell	0.00 0.12 0.50 0.94
Lidos-----	30	Fair Too acid Low organic matter content Too clayey	0.32 0.88 0.92	Fair Slope Shrink-swell	0.50 0.88
Cleymor-----	25	Poor Too clayey Too acid	0.00 0.32	Poor Low strength Shrink-swell Slope	0.00 0.12 0.50
652: Hess-----	40	Fair Too acid Low organic matter content	0.50 0.88	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.12 0.94
Lidos-----	30	Fair Too acid Low organic matter content Too clayey	0.32 0.88 0.92	Poor Slope Shrink-swell	0.00 0.88
Klicker-----	20	Fair Droughty Depth to bedrock Too acid Low organic matter content Too clayey	0.13 0.21 0.50 0.88 0.92	Poor Depth to bedrock Slope Shrink-swell	0.00 0.00 0.93
653: Lidos-----	45	Fair Too acid Low organic matter content Too clayey	0.32 0.88 0.92	Poor Slope Shrink-swell	0.00 0.88
Klicker-----	30	Fair Droughty Depth to bedrock Too acid Low organic matter content Too clayey	0.13 0.21 0.50 0.88 0.92	Poor Slope Depth to bedrock Shrink-swell	0.00 0.00 0.93
Hess-----	20	Fair Too acid Low organic matter content	0.50 0.88	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.12 0.94

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
654: Shilling-----	40	Fair Too acid Low organic matter content Droughty	0.32 0.88 0.99	Poor Slope	0.00
Highvalley-----	30	Fair Too acid Low organic matter content	0.32 0.88	Poor Slope	0.00
Hoff-----	20	Poor Droughty Depth to bedrock Too acid Cobble content	0.00 0.00 0.95 0.99	Poor Depth to bedrock Slope Shrink-swell Cobble content	0.00 0.00 0.93 0.97
655: Shilling, moist----	40	Fair Too acid	0.32	Poor Slope	0.00
Highvalley, moist---	35	Fair Too acid	0.50	Poor Slope	0.00
656: Shilling, moist----	50	Fair Too acid	0.32	Poor Slope	0.00
Highvalley, moist---	40	Fair Too acid	0.50	Poor Slope	0.00
657: Pumpkin, stony surface-----	95	Fair Too acid Droughty Stone content Low organic matter content	0.32 0.53 0.65 0.88	Fair Stone content	0.71
658: Cleymor-----	50	Poor Too clayey Too acid	0.00 0.32	Poor Low strength Shrink-swell Slope	0.00 0.12 0.50
Pumpkin, stony surface-----	30	Fair Too acid Droughty Stone content Low organic matter content	0.32 0.53 0.65 0.88	Fair Stone content	0.71
659: Hoff, south slope---	85	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.97	Poor Depth to bedrock Slope Shrink-swell	0.00 0.00 0.87

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
660: Longs-----	60	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Depth to bedrock	0.46
Highvalley-----	30	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
661: Awley-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Low organic matter content	0.88		
Bo-----	35	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Low organic matter content	0.88		
662: Awley-----	65	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Low organic matter content	0.88		
Bo-----	20	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Low organic matter content	0.88		
663: Cleymor-----	65	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Too acid	0.32	Slope	0.00
				Shrink-swell	0.12
Hoff-----	20	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.95	Shrink-swell	0.93
		Cobble content	0.99	Cobble content	0.97
666: Pachic Argixerolls, very stony surface	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Stone content	0.41		
		Low organic matter content	0.88		
Rubble land-----	30	Not rated		Not rated	

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
666: Typic Haploxerolls, extremely stony surface-----	15	Fair		Poor	
		Stone content	0.10	Slope	0.00
		Droughty	0.11	Cobble content	0.06
		Cobble content	0.35	Stone content	0.22
		Low organic matter content	0.88		
700: Drybuck-----	50	Fair		Fair	
		Too acid	0.32	Depth to bedrock	0.82
Whisk, moist-----	30	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00		
		Too acid	0.74		
		Low organic matter content	0.88		
701: Drybuck-----	55	Fair		Poor	
		Too acid	0.32	Slope	0.00
				Depth to bedrock	0.82
Whisk, moist-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.74		
		Low organic matter content	0.88		
702: Deerrun-----	40	Fair		Poor	
		Droughty	0.22	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00
		Depth to bedrock	0.79		
		Low organic matter content	0.88		
Kisky, fine gravelly sandy loam, moist--	40	Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00
		Droughty	0.00	Slope	0.00
		Depth to bedrock	0.00		
		Too acid	0.50		
Drybuck, dry-----	15	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Depth to bedrock	0.98
704: Drybuck-----	35	Fair		Poor	
		Too acid	0.32	Slope	0.00
				Depth to bedrock	0.82

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
704: Northfork, fine gravelly sandy loam	30	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.93		
Whisk, moist-----	20	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.74		
		Low organic matter content	0.88		
705: Northfork, sandy loam-----	60	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.94		
Shirts, sandy loam, dry-----	20	Fair		Poor	
		Too acid	0.50	Depth to bedrock	0.00
		Droughty	0.64	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.99		
706: Northfork, fine gravelly sandy loam	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.93		
Shirts, coarse sandy loam-----	25	Fair		Poor	
		Droughty	0.02	Slope	0.00
		Depth to bedrock	0.46	Depth to bedrock	0.00
		Too acid	0.50		
		Too sandy	0.78		
		Low organic matter content	0.88		
Zimmer-----	20	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.92		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
707: Packerjohn, ashy coarse sandy loam--	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
Shirts, coarse sandy loam-----	30	Fair		Poor	
		Droughty	0.02	Slope	0.00
		Depth to bedrock	0.46	Depth to bedrock	0.00
		Too acid	0.50		
		Too sandy	0.78		
		Low organic matter content	0.88		
Zimmer-----	15	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.92		
708: Zimmer-----	35	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.92		
Northfork, fine gravelly sandy loam	25	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.93		
Rock outcrop-----	25	Not rated		Not rated	
709: Shirts, sandy loam, south slope-----	45	Fair		Poor	
		Droughty	0.15	Depth to bedrock	0.00
		Too acid	0.50	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.90		
Charters, sandy loam	30	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.99		
710: Charters, fine gravelly sandy loam	35	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
710: Northfork, fine gravelly sandy loam	35	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.93		
Shirts, coarse sandy loam-----	15	Fair		Poor	
		Droughty	0.02	Slope	0.00
		Depth to bedrock	0.46	Depth to bedrock	0.00
		Too acid	0.50		
		Too sandy	0.78		
		Low organic matter content	0.88		
711: Charters, fine gravelly sandy loam, dry-----	30	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
Shirts, sandy loam, dry-----	30	Fair		Poor	
		Too acid	0.50	Depth to bedrock	0.00
		Droughty	0.64	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.99		
Zimmer-----	30	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.92		
712: Charters, fine gravelly sandy loam	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
Shirts, coarse sandy loam-----	35	Fair		Poor	
		Droughty	0.02	Slope	0.00
		Depth to bedrock	0.46	Depth to bedrock	0.00
		Too acid	0.50		
		Too sandy	0.78		
		Low organic matter content	0.88		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
712: Zimmer-----	15	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.92	Poor Depth to bedrock Slope	0.00 0.00
714: Shirts, sandy loam, south slope-----	40	Fair Droughty Too acid Too sandy Low organic matter content Depth to bedrock	0.15 0.50 0.78 0.88 0.90	Poor Slope Depth to bedrock	0.00 0.00
Eagleson, fine gravelly sandy loam	35	Poor Droughty Depth to bedrock Too acid Too sandy	0.00 0.16 0.50 0.78	Poor Slope Depth to bedrock	0.00 0.00
Charters, sandy loam	15	Fair Too acid Low organic matter content Droughty	0.32 0.88 0.99	Poor Slope	0.00
715: Eagleson, fine gravelly sandy loam, dry-----	45	Poor Droughty Depth to bedrock Cobble content Too acid Too sandy Low organic matter content	0.00 0.29 0.40 0.50 0.78 0.88	Poor Slope Depth to bedrock Cobble content	0.00 0.00 0.21
Kosh-----	35	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.84	Poor Depth to bedrock Slope	0.00 0.00
716: Zan-----	45	Fair Droughty Too acid Low organic matter content	0.24 0.50 0.88	Poor Slope	0.00
Belsh-----	25	Poor Too sandy Droughty Too acid Low organic matter content	0.00 0.11 0.50 0.88	Poor Slope Cobble content Stone content	0.00 0.00 0.86

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
716: Montchief-----	25	Poor		Poor	
		Droughty	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00
		Depth to bedrock	0.79	Cobble content	0.75
		Cobble content	0.99		
718: Charters, fine gravelly sandy loam	35	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
Crumley-----	30	Poor		Poor	
		Droughty	0.00	Slope	0.00
		Too sandy	0.22		
		Too acid	0.50		
		Low organic matter content	0.88		
Eagleson, sandy loam	20	Fair		Poor	
		Droughty	0.03	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00
		Too sandy	0.78	Cobble content	0.94
		Low organic matter content	0.88		
		Depth to bedrock	0.97		
720: Drybuck, dry-----	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Depth to bedrock	0.98
Deerrun-----	30	Fair		Poor	
		Droughty	0.22	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00
		Depth to bedrock	0.79		
		Low organic matter content	0.88		
Kisky, fine gravelly sandy loam, moist--	20	Poor		Poor	
		Wind erosion	0.00	Depth to bedrock	0.00
		Droughty	0.00	Slope	0.00
		Depth to bedrock	0.00		
		Too acid	0.50		
721: Shirts, fine gravelly sandy loam	40	Fair		Poor	
		Droughty	0.09	Slope	0.00
		Depth to bedrock	0.46	Depth to bedrock	0.00
		Too acid	0.50		
		Too sandy	0.78		
		Low organic matter content	0.88		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
721: Kosh-----	30	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.84	Poor Depth to bedrock Slope	0.00 0.00
Charters, fine gravelly sandy loam, dry-----	15	Fair Too acid Low organic matter content Droughty	0.32 0.88 0.96	Poor Slope	0.00
726: Garval-----	50	Poor Too sandy Wind erosion Droughty Depth to bedrock Too acid Low organic matter content	0.00 0.00 0.00 0.46 0.50 0.88	Poor Slope Depth to bedrock	0.00 0.00
Kisky, fine gravelly loamy coarse sand--	25	Poor Too sandy Wind erosion Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.00 0.00 0.88 0.99	Poor Depth to bedrock Slope	0.00 0.00
730: Hellake-----	40	Fair Too acid Low organic matter content	0.46 0.88	Fair Low strength Shrink-swell	0.22 0.98
Stardust-----	40	Fair Too acid Low organic matter content	0.32 0.88	Good	
731: Shirts, sandy loam, dry-----	40	Fair Too acid Droughty Too sandy Low organic matter content Depth to bedrock	0.50 0.64 0.78 0.88 0.99	Poor Slope Depth to bedrock	0.00 0.00

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
731: Charters, fine gravelly sandy loam, dry-----	25	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
Zimmer-----	25	Droughty	0.00	Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00
		Too acid	0.92	Slope	0.00
733: Shirts, fine gravelly sandy loam	50	Fair		Poor	
		Droughty	0.09	Depth to bedrock	0.00
		Depth to bedrock	0.46		
		Too acid	0.50		
		Too sandy	0.78		
		Low organic matter content	0.88		
Kosh-----	30	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00		
734: Shirts, sandy loam, dry-----	45	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Droughty	0.64	Depth to bedrock	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.99		
Kosh-----	35	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
735: Shirts, coarse sandy loam-----	50	Fair		Poor	
		Droughty	0.02	Slope	0.00
		Depth to bedrock	0.46	Depth to bedrock	0.00
		Too acid	0.50		
		Too sandy	0.78		
		Low organic matter content	0.88		
Zimmer-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.92		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
735: Charters, fine gravelly sandy loam	15	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
738: Tripod-----	35	Poor		Poor	
		Too sandy	0.00	Slope	0.00
		Droughty	0.01	Cobble content	0.91
		Too acid	0.32		
		Low organic matter content	0.88		
Packerjohn, ashy coarse sandy loam--	30	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
Pajo, fine gravelly ashy coarse sandy loam-----	20	Poor		Poor	
		Too sandy	0.00	Slope	0.00
		Droughty	0.00	Depth to bedrock	0.00
		Stone content	0.16	Stone content	0.69
		Depth to bedrock	0.29		
		Too acid	0.50		
		Low organic matter content	0.88		
739: Shirts, sandy loam, moist-----	40	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Droughty	0.77	Depth to bedrock	0.00
		Depth to bedrock	0.99		
Zimmer-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.92		
Packerjohn, ashy coarse sandy loam--	20	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
740: Charters, sandy loam	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.99		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
740: Eagleson, fine gravelly sandy loam	35	Poor Droughty Depth to bedrock Too acid Too sandy	0.00 0.16 0.50 0.78	Poor Slope Depth to bedrock	0.00 0.00
741: Zan-----	85	Fair Droughty Too acid Low organic matter content	0.24 0.50 0.88	Fair Slope	0.50
742: Crumley-----	65	Poor Droughty Too sandy Too acid Low organic matter content	0.00 0.22 0.50 0.88	Poor Slope	0.00
Eagleson, sandy loam	20	Fair Droughty Too acid Too sandy Low organic matter content Depth to bedrock	0.03 0.50 0.78 0.88 0.97	Poor Slope Depth to bedrock Cobble content	0.00 0.00 0.84
743: Packerjohn, ashy coarse sandy loam--	50	Fair Too acid Too sandy Low organic matter content	0.32 0.78 0.88	Fair Slope	0.50
Shirts, sandy loam, moist-----	35	Fair Too acid Droughty Depth to bedrock	0.50 0.77 0.99	Poor Depth to bedrock Slope	0.00 0.50
744: Packerjohn, ashy sandy loam, cool---	60	Fair Too sandy Too acid Droughty Low organic matter content	0.22 0.50 0.65 0.88	Fair Slope	0.50
Shirts, sandy loam, moist-----	20	Fair Too acid Droughty Depth to bedrock	0.50 0.77 0.99	Poor Depth to bedrock Slope	0.00 0.50

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
744: Tripod, cool-----	15	Poor		Poor	
		Too sandy	0.00	Stone content	0.00
		Stone content	0.00	Slope	0.50
		Droughty	0.38		
		Too acid	0.50		
		Low organic matter content	0.88		
745: Tripod, moist-----	50	Poor		Poor	
		Too sandy	0.00	Slope	0.00
		Droughty	0.00		
		Too acid	0.50		
		Low organic matter content	0.88		
Packerjohn, ashy sandy loam-----	45	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
746: Packerjohn, ashy sandy loam-----	90	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
747: Pinney, moist-----	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Shrink-swell	0.99
Charters, fine gravelly sandy loam	25	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
Shirts, sandy loam, dry-----	15	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Droughty	0.64	Depth to bedrock	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.99		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
748: Belsh, moist-----	45	Fair		Fair	
		Droughty	0.37	Stone content	0.41
		Too acid	0.50	Slope	0.50
		Low organic matter content	0.88	Cobble content	0.91
		Stone content	0.93		
Zan, moist-----	40	Fair		Fair	
		Too sandy	0.08	Slope	0.50
		Too acid	0.32		
		Droughty	0.70		
		Low organic matter content	0.88		
749: Quartzburg-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Droughty	0.00	Depth to bedrock	0.00
		Too sandy	0.22		
		Too acid	0.50		
		Low organic matter content	0.88		
		Depth to bedrock	0.97		
Charters, sandy loam	25	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.99		
750: Garval-----	50	Poor		Poor	
		Too sandy	0.00	Slope	0.00
		Wind erosion	0.00	Depth to bedrock	0.00
		Droughty	0.00		
		Depth to bedrock	0.46		
		Too acid	0.50		
		Low organic matter content	0.88		
Kisky, fine gravelly loamy coarse sand--	20	Poor		Poor	
		Too sandy	0.00	Depth to bedrock	0.00
		Wind erosion	0.00	Slope	0.00
		Droughty	0.00		
		Depth to bedrock	0.00		
		Low organic matter content	0.88		
		Too acid	0.99		
Rock outcrop-----	20	Not rated		Not rated	
751: Belsh, moist-----	50	Fair		Poor	
		Droughty	0.37	Slope	0.00
		Too acid	0.50	Stone content	0.41
		Low organic matter content	0.88	Cobble content	0.91
		Stone content	0.93		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
751: Zan, moist-----	40	Fair		Poor	
		Too sandy	0.08	Slope	0.00
		Too acid	0.32		
		Droughty	0.70		
		Low organic matter content	0.88		
752: Josie-----	70	Fair		Poor	
		Too acid	0.84	Slope	0.00
		Low organic matter content	0.88		
Zimmer, fine gravelly sandy loam	20	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.92		
753: Tripod, cool-----	45	Poor		Poor	
		Too sandy	0.00	Slope	0.00
		Stone content	0.00	Stone content	0.00
		Droughty	0.38		
		Too acid	0.50		
		Low organic matter content	0.88		
Packerjohn, ashy sandy loam, cool---	25	Fair		Poor	
		Too sandy	0.22	Slope	0.00
		Too acid	0.50		
		Droughty	0.65		
		Low organic matter content	0.88		
Shirts, sandy loam, moist-----	20	Fair		Poor	
		Too acid	0.50	Depth to bedrock	0.00
		Droughty	0.77	Slope	0.00
		Depth to bedrock	0.99		
754: Packerjohn, ashy sandy loam-----	55	Fair		Fair	
		Too acid	0.50	Slope	0.50
		Too sandy	0.78		
		Low organic matter content	0.88		
Shirts, sandy loam, moist-----	20	Fair		Poor	
		Too acid	0.50	Depth to bedrock	0.00
		Droughty	0.77	Slope	0.50
		Depth to bedrock	0.99		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
755: Zimmer-----	40	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.92	Poor Depth to bedrock Slope	0.00 0.00
Quartzburg-----	35	Poor Wind erosion Droughty Too sandy Too acid Low organic matter content Depth to bedrock	0.00 0.00 0.22 0.50 0.88 0.97	Poor Slope Depth to bedrock	0.00 0.00
Rock outcrop-----	20	Not rated		Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Poor Too sandy Droughty Stone content Depth to bedrock Too acid Low organic matter content	0.00 0.00 0.16 0.29 0.50 0.88	Poor Slope Depth to bedrock Stone content	0.00 0.00 0.69
Tripod-----	25	Poor Too sandy Droughty Too acid Low organic matter content	0.00 0.01 0.32 0.88	Poor Slope Cobble content	0.00 0.91
Kosh, moist-----	20	Poor Droughty Depth to bedrock Too sandy Too acid Low organic matter content	0.00 0.00 0.78 0.84 0.88	Poor Depth to bedrock Slope	0.00 0.00
758: Eagleson, sandy loam	40	Fair Droughty Too acid Too sandy Low organic matter content Depth to bedrock	0.03 0.50 0.78 0.88 0.97	Poor Slope Depth to bedrock Cobble content	0.00 0.00 0.84
Kosh, moist-----	30	Poor Droughty Depth to bedrock Too sandy Too acid Low organic matter content	0.00 0.00 0.78 0.84 0.88	Poor Depth to bedrock Slope	0.00 0.00

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
758: Charters, fine gravelly sandy loam	20	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
759: Charters, sandy loam	30	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.99		
Shirts, sandy loam, south slope-----	30	Fair		Poor	
		Droughty	0.15	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.90		
Kosh, moist-----	20	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.78		
		Too acid	0.84		
		Low organic matter content	0.88		
761: Charters, fine gravelly sandy loam	45	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
Middlefork, moist---	40	Fair		Fair	
		Too acid	0.32	Slope	0.50
762: Drybuck, dry-----	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88	Depth to bedrock	0.98
Hellake-----	30	Fair		Fair	
		Too acid	0.46	Low strength	0.22
		Low organic matter content	0.88	Slope	0.50
				Shrink-swell	0.98
Deerrun-----	20	Fair		Poor	
		Droughty	0.22	Depth to bedrock	0.00
		Too acid	0.50	Slope	0.00
		Depth to bedrock	0.79		
		Low organic matter content	0.88		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
763: Eagleson, fine gravelly sandy loam	40	Poor Droughty Depth to bedrock Too acid Too sandy	0.00 0.16 0.50 0.78	Poor Slope Depth to bedrock	0.00 0.00
Kosh-----	35	Poor Droughty Depth to bedrock Too acid	0.00 0.00 0.84	Poor Depth to bedrock Slope	0.00 0.00
Rock outcrop-----	15	Not rated		Not rated	
765: Backswitch, coarse sandy loam-----	40	Fair Droughty Too acid Low organic matter content Depth to bedrock	0.35 0.50 0.88 0.90	Poor Depth to bedrock Slope	0.00 0.50
Zimmer, warm-----	20	Poor Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.88 0.92	Poor Depth to bedrock Slope	0.00 0.50
Rock outcrop-----	15	Not rated		Not rated	
766: Backswitch, coarse sandy loam-----	55	Fair Droughty Too acid Low organic matter content Depth to bedrock	0.35 0.50 0.88 0.90	Poor Depth to bedrock Slope	0.00 0.00
Charters, coarse sandy loam-----	15	Fair Too acid Low organic matter content	0.32 0.88	Good	
Zimmer, dry-----	15	Poor Droughty Depth to bedrock Low organic matter content Too acid	0.00 0.00 0.88 0.92	Poor Depth to bedrock Slope	0.00 0.00

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
767: Shirts, sandy loam, dry-----	45	Fair		Poor	
		Too acid	0.50	Depth to bedrock	0.00
		Droughty	0.64	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.99		
Kosh-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too acid	0.84		
Charters, fine gravelly sandy loam, dry-----	20	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
768: Shirts, sandy loam, south slope-----	35	Fair		Poor	
		Droughty	0.15	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.90		
Kosh, moist-----	25	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.78		
		Too acid	0.84		
		Low organic matter content	0.88		
Eagleson, fine gravelly sandy loam	15	Poor		Poor	
		Droughty	0.00	Slope	0.00
		Depth to bedrock	0.16	Depth to bedrock	0.00
		Too acid	0.50		
		Too sandy	0.78		
770: Shirts, sandy loam, dry-----	50	Fair		Poor	
		Too acid	0.50	Depth to bedrock	0.00
		Droughty	0.64	Slope	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.99		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
770: Charters, fine gravelly sandy loam, dry-----	20	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.88		
		Droughty	0.96		
Kosh, moist-----	20	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.78		
		Too acid	0.84		
		Low organic matter content	0.88		
771: Backswitch, sandy loam-----	55	Fair		Poor	
		Droughty	0.23	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00
		Low organic matter content	0.88		
Shirts, sandy loam, dry-----	25	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Droughty	0.64	Depth to bedrock	0.00
		Too sandy	0.78		
		Low organic matter content	0.88		
		Depth to bedrock	0.99		
772: Pajo, fine gravelly ashy sandy loam----	35	Poor		Poor	
		Too sandy	0.00	Slope	0.00
		Droughty	0.00	Depth to bedrock	0.00
		Too acid	0.50	Cobble content	0.01
		Cobble content	0.72		
		Low organic matter content	0.88		
		Depth to bedrock	0.99		
Packerjohn, ashy sandy loam, dry----	25	Fair		Poor	
		Too acid	0.32	Slope	0.00
Kosh, moist-----	20	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.78		
		Too acid	0.84		
		Low organic matter content	0.88		

Table 16b.--Construction Materials (Part II)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
900: Pits, gravel-----	75	Not rated		Not rated	
Dumps, gravel-----	25	Not rated		Not rated	
901: Dumps, landfill-----	100	Not rated		Not rated	
999: Water-----	100	Not rated		Not rated	

Table 17.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
220: Oxyaquic Xerofluvents-----	45	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	0.99 0.47
Cumulic Haploxerolls	40	Very limited Seepage	1.00	Somewhat limited Seepage	0.08
221: Bissell-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.09
222: Bissell-----	85	Very limited Seepage Slope	1.00 0.68	Somewhat limited Seepage	0.09
223: Staircase, dry-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.08
224: Porter-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.11
225: Boise-----	85	Very limited Seepage Slope	1.00 0.32	Somewhat limited Seepage	0.38
226: Flofeather, very rarely flooded-----	55	Very limited Seepage	1.00	Somewhat limited Seepage	0.11
Shawmount, stony surface-----	30	Very limited Seepage	1.00	Somewhat limited Seepage	0.04
227: Piercepark, loam----	85	Very limited Seepage	1.00	Not limited	
228: Piercepark, loam----	85	Very limited Seepage Slope	1.00 0.68	Not limited	

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
229: Piercepark, coarse sandy loam-----	85	Very limited Seepage Slope	1.00 1.00	Not limited	
230: Hann-----	60	Very limited Slope	1.00	Somewhat limited Piping	0.01
Doubledia, silty clay loam-----	15	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.42
232: Jasseek-----	85	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.29 0.11
233: Jasseek-----	85	Very limited Seepage Slope	1.00 0.32	Somewhat limited Piping Seepage	0.29 0.11
238: Adaboi-----	85	Not limited		Somewhat limited Hard to pack	0.80
240: Collister-----	65	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.96 0.01
Flofeather-----	25	Very limited Seepage	1.00	Somewhat limited Seepage	0.09
300: Shawmount, stony surface-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.04
301: Breadloaf-----	55	Very limited Slope Depth to bedrock	1.00 0.34	Somewhat limited Thin layer Hard to pack	0.99 0.87
Doubledia, silty clay loam-----	25	Somewhat limited Slope Depth to bedrock	0.68 0.01	Somewhat limited Thin layer	0.42
302: Breadloaf-----	40	Very limited Slope Depth to bedrock	1.00 0.34	Somewhat limited Thin layer Hard to pack	0.99 0.87

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
302: Doubledia, silty clay loam-----	35	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.42
Hann-----	20	Very limited Slope	1.00	Somewhat limited Piping	0.01
303: Doubledia, silty clay loam-----	40	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.42
Hann-----	25	Very limited Slope	1.00	Somewhat limited Piping	0.01
Breadloaf-----	20	Very limited Slope Depth to bedrock	1.00 0.34	Somewhat limited Thin layer Hard to pack	0.99 0.87
304: Breadloaf-----	30	Very limited Slope Depth to bedrock	1.00 0.34	Somewhat limited Thin layer Hard to pack	0.99 0.87
Doubledia, silty clay loam-----	30	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.42
Hullsgulch, loam----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.23
305: Siphonlake, south slope-----	60	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.01	Somewhat limited Seepage Thin layer	0.06 0.01
Solarview-----	25	Very limited Slope Depth to bedrock	1.00 0.61	Very limited Thin layer Seepage	1.00 0.47
306: Van Dusen-----	45	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.53
Siphonlake-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.01	Somewhat limited Thin layer Seepage	0.19 0.11

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
307: Adaboi-----	65	Very limited Slope	1.00	Somewhat limited Hard to pack	0.80
Meclo-----	20	Very limited Slope Depth to bedrock Seepage	1.00 0.09 0.02	Somewhat limited Thin layer	0.83
308: Breadloaf-----	40	Very limited Slope Depth to bedrock	1.00 0.34	Somewhat limited Thin layer Hard to pack	0.99 0.87
Crawley, silt loam--	30	Very limited Slope Depth to bedrock	1.00 0.74	Very limited Thin layer Piping	1.00 0.18
Doubledia, clay loam	20	Very limited Slope Depth to bedrock	1.00 0.01	Very limited Hard to pack Thin layer	1.00 0.02
309: Hullsgulch, sandy loam-----	65	Very limited Slope Seepage	1.00 0.50	Somewhat limited Seepage	0.05
Solarview-----	25	Very limited Slope Depth to bedrock	1.00 0.61	Very limited Thin layer Seepage	1.00 0.47
311: Meclo-----	35	Very limited Slope Depth to bedrock Seepage	1.00 0.09 0.02	Somewhat limited Thin layer	0.83
Crawley, silt loam--	30	Very limited Slope Depth to bedrock	1.00 0.74	Very limited Thin layer Piping	1.00 0.18
Adaboi-----	20	Very limited Slope	1.00	Somewhat limited Hard to pack	0.80
328: Gacey, extremely stony surface-----	75	Very limited Seepage Depth to cemented pan Slope	1.00 1.00 0.32	Very limited Thin layer Large stones content Seepage	1.00 0.09 0.07
329: Ayette-----	55	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.34

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
329: Duco, stony loam, very stony surface	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content Piping	1.00 1.00 0.09
330: Breadloaf-----	35	Very limited Slope Depth to bedrock	1.00 0.34	Somewhat limited Thin layer Hard to pack	0.99 0.87
Ayette, moist-----	30	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.02
Immig, rubbly surface-----	20	Very limited Slope Depth to bedrock	1.00 0.96	Very limited Large stones content Thin layer Hard to pack	1.00 0.96 0.09
331: Ayette, moist-----	50	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.02
Yad-----	30	Very limited Slope	1.00	Not limited	
332: Hann-----	35	Very limited Slope	1.00	Somewhat limited Piping	0.01
Ayette, moist-----	30	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.02
Picketpin-----	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.09
333: Ayette-----	50	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.34
Crawley, loam-----	15	Very limited Slope Depth to bedrock	1.00 0.69	Very limited Thin layer Piping	1.00 0.09
Hullsgulch, loam----	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.23

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
335: Gimmi, very stony surface-----	30	Very limited Slope Depth to bedrock Seepage	1.00 0.09 0.02	Somewhat limited Thin layer	0.83
Ayette, moist-----	25	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.02
Doubledia, silty clay loam-----	25	Very limited Slope Depth to bedrock	1.00 0.01	Somewhat limited Thin layer	0.42
400: Ralsen-----	35	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.10
Foxlane-----	30	Very limited Seepage	1.00	Somewhat limited Seepage	0.86
Pay-----	20	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.47
401: Staircase-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.10
402: Crossbow-----	60	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.98 0.86
Foxlane-----	20	Very limited Seepage	1.00	Somewhat limited Seepage	0.86
403: Ralsen-----	40	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.10
Pay-----	25	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.47
Crossbow-----	20	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.98 0.86

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
404: Riverpoint-----	55	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
Hellake-----	25	Very limited Seepage Slope	1.00 0.32	Somewhat limited Seepage	0.50
405: Hellake-----	65	Very limited Seepage	1.00	Somewhat limited Seepage	0.50
Staircase-----	15	Very limited Seepage	1.00	Somewhat limited Seepage	0.10
406: Hellake-----	75	Very limited Seepage Slope	1.00 0.32	Somewhat limited Seepage	0.50
407: Hellake-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
408: Stardust-----	75	Very limited Seepage	1.00	Somewhat limited Seepage	0.03
409: Stardust-----	75	Very limited Seepage Slope	1.00 0.32	Somewhat limited Seepage	0.03
410: Stardust-----	65	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
Riverpoint, very stony surface-----	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones content Seepage	0.08 0.03
411: Huston, very stony surface-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.04
Zeb, gravelly sandy loam-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
412: Huston, very stony surface-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.07
Stardust-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
413: Cloudyway-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.10
414: Hellake-----	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
Middlefork-----	40	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.85
415: Middlefork-----	55	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.85
Pinney-----	20	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.78
416: Pinney, moist-----	35	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.86
Middlefork, moist---	30	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.88
Zeb, gravelly sandy loam-----	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
417: Middlefork-----	60	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.85
Zeb, fine gravelly sandy loam-----	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
418: Middlefork-----	55	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.85
Zeb, fine gravelly sandy loam-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
419: Charters, fine gravelly sandy loam, dry-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.07
Zeb, fine gravelly sandy loam-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
420: Pioneervil-----	40	Very limited Seepage	1.00	Somewhat limited Seepage	0.02
Grimescreek-----	35	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.98 0.08
421: Dumps, dredge tailings-----	50	Not limited		Not rated	
Oxyaquic Xerorthents, very stony surface-----	25	Very limited Seepage	1.00	Very limited Large stones content Seepage Depth to saturated zone	1.00 0.25 0.18
422: Lithic Xerorthents, very stony surface	30	Very limited Depth to bedrock Slope	1.00 0.32	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.12
Dumps, placer tailings-----	25	Somewhat limited Slope Depth to bedrock	0.32 0.30	Not rated	

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
422: Dystric Xeropsamments, very stony surface-----	20	Very limited Seepage Slope Depth to bedrock	1.00 0.32 0.30	Somewhat limited Thin layer Seepage	0.98 0.70
423: Dystric Xeropsamments, very stony surface-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.30	Somewhat limited Thin layer Seepage	0.98 0.70
Ultic Haploxera1fs--	35	Very limited Slope Seepage	1.00 1.00	Not limited	
Lithic Xerorthents--	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.38
424: Middlefork-----	50	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.85
Charters, coarse sandy loam-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.01
425: Middlefork-----	55	Somewhat limited Seepage Slope	0.50 0.32	Somewhat limited Piping	0.85
Brassey-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.52
426: Middlefork, moist---	85	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.88
427: Middlefork, moist---	85	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.88
428: Zeb, gravelly sandy loam-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
428: Republic-----	35	Very limited Slope Seepage	1.00 0.50	Somewhat limited Seepage	0.05
429: Huston, very stony surface-----	85	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.04
503: Cartwright, dry-----	85	Somewhat limited Seepage Slope	0.50 0.32	Not limited	
504: Cartwright, dry-----	85	Very limited Slope Seepage	1.00 0.50	Not limited	
505: Brownlee-----	85	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.10	Somewhat limited Thin layer Seepage	0.26 0.01
506: Brownlee-----	45	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.10	Somewhat limited Thin layer Seepage	0.26 0.01
Robbscreek-----	20	Very limited Slope Depth to bedrock Seepage	1.00 0.86 0.50	Somewhat limited Thin layer Seepage	0.86 0.01
Whisk-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer	1.00
507: Shoebend-----	35	Very limited Slope Depth to bedrock Seepage	1.00 0.74 0.02	Somewhat limited Piping Thin layer	0.96 0.91
Dobson-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Jerusalem-----	20	Very limited Slope Seepage	1.00 0.50	Not limited	

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
509: Arrowrock-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Borid-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.03
Rock outcrop-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Not rated	
511: Olaton, north slope, moist-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
Roney, moist-----	25	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.56	Somewhat limited Thin layer Seepage	0.56 0.02
513: Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage Large stones content	0.86 0.08 0.01
Cartwright-----	25	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.95
Robbscreek, moist---	25	Very limited Slope Depth to bedrock Seepage	1.00 0.86 0.50	Somewhat limited Thin layer	0.86
516: Shimo, extremely stony surface-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.98	Somewhat limited Thin layer Large stones content Seepage	0.98 0.27 0.08
Olaton, south slope	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.02
Schiller, south slope-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.02

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
525: Robbscreek-----	35	Very limited Slope Depth to bedrock Seepage	1.00 0.86 0.50	Somewhat limited Thin layer Seepage	0.86 0.01
Dobson-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Brownlee-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.10	Somewhat limited Thin layer Seepage	0.26 0.01
526: Cartwright-----	35	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.95
Brownlee, moist----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.01	Somewhat limited Thin layer Seepage	0.22 0.01
Robbscreek, moist---	20	Very limited Slope Depth to bedrock Seepage	1.00 0.86 0.50	Somewhat limited Thin layer	0.86
527: Dobson-----	50	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Roney, dry-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage	0.86 0.01
528: Roney, dry-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage	0.86 0.01
Dobson-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Olaton, south slope	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.02
529: Roney-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage	0.86 0.11

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
529: Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Olaton, south slope	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.02
532: Schiller, north slope-----	55	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.02
Shimo, fine gravelly loamy sand, north slope-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage Large stones content	0.86 0.08 0.01
533: Olaton, north slope, dry-----	60	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
Roney, moist-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.57	Somewhat limited Thin layer Seepage	0.58 0.02
534: Shimo, fine gravelly loamy sand-----	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.96	Somewhat limited Thin layer Seepage	0.96 0.08
Kisky, fine gravelly sandy loam-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Schiller-----	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
538: Borid-----	65	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.03

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
538: Shimo, fine gravelly loamy sand-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.96	Somewhat limited Thin layer Seepage	0.96 0.08
541: Roney-----	55	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage	0.86 0.11
Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
544: Arrowrock-----	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Borid-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.03
Painter-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.66	Somewhat limited Thin layer Seepage	0.98 0.08
551: Shimo, fine gravelly loamy sand, north slope-----	45	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage Large stones content	0.86 0.08 0.01
Kisky, fine gravelly loamy sand-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.08
555: Brownlee-----	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.10	Somewhat limited Thin layer Seepage	0.26 0.01
Schiller-----	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
556: Kisky, fine gravelly sandy loam-----	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Shimo, fine gravelly loamy sand-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.96	Somewhat limited Thin layer Seepage	0.96 0.08
Brownlee-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.10	Somewhat limited Thin layer Seepage	0.26 0.01
558: Kisky, fine gravelly sandy loam-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Whisk-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer	1.00
Roney, dry-----	25	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage	0.86 0.01
560: Robbscreek, moist---	30	Very limited Slope Depth to bedrock Seepage	1.00 0.86 0.50	Somewhat limited Thin layer	0.86
Hellake-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
Shimo, fine gravelly loamy sand, north slope-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage Large stones content	0.86 0.08 0.01
561: Shimo, fine gravelly sandy loam, north slope-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.81	Somewhat limited Thin layer Seepage	0.81 0.08

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
561: Kisky, fine gravelly loamy sand-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.08
Olaton, north slope, moist-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
562: Kisky, fine gravelly sandy loam-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.10
Shimo, fine gravelly sandy loam-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.81	Very limited Large stones content Thin layer Seepage	0.99 0.81 0.06
Roney-----	25	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.86	Somewhat limited Thin layer Seepage	0.86 0.11
600: McDesh-----	50	Very limited Slope Depth to bedrock	1.00 0.98	Somewhat limited Thin layer Hard to pack	0.98 0.04
Immig, rubbly surface-----	25	Very limited Slope Depth to bedrock	1.00 0.96	Very limited Large stones content Thin layer Hard to pack	1.00 0.96 0.09
Gwin, very stony loam, extremely stony surface-----	15	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Thin layer Large stones content	1.00 1.00
601: Hann-----	45	Very limited Slope	1.00	Somewhat limited Piping	0.01
Gwin, very stony loam, extremely stony surface-----	25	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Thin layer Large stones content	1.00 1.00

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
601: Shafer-----	20	Very limited Slope Depth to bedrock	1.00 0.96	Very limited Thin layer Hard to pack	0.99 0.90
602: Hillcreek-----	35	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.31
Hovelton, cobbly ashy loam, moist, very stony surface	30	Very limited Slope Depth to bedrock Seepage	1.00 0.99 0.02	Very limited Thin layer Large stones content	0.99 0.46
Hann-----	20	Very limited Slope	1.00	Somewhat limited Piping	0.01
604: Shafer-----	55	Very limited Slope Depth to bedrock	1.00 0.96	Very limited Thin layer Hard to pack	0.99 0.90
Hann-----	25	Very limited Slope	1.00	Somewhat limited Piping	0.01
605: Gwin, very stony loam, extremely stony surface-----	70	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Thin layer Large stones content	1.00 1.00
Flybow-----	20	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Thin layer Seepage	1.00 0.75
606: Hillcreek-----	50	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.31
Hovelton, cobbly ashy loam, moist, very stony surface	40	Very limited Slope Depth to bedrock Seepage	1.00 0.99 0.02	Very limited Thin layer Large stones content	0.99 0.46
607: Duco, stony loam, very stony surface	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content Piping	1.00 1.00 0.09

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
607: Immig, very stony surface-----	35	Very limited Slope Depth to bedrock	1.00 0.96	Somewhat limited Thin layer Large stones content Seepage	0.96 0.34 0.25
Rubble land-----	15	Very limited Slope Depth to bedrock	1.00 0.99	Not rated	
608: Duco, very gravelly loam, stony surface	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.75
Hovelton, gravelly ashy loam-----	25	Very limited Slope Depth to bedrock Seepage	1.00 0.56 0.02	Somewhat limited Large stones content Thin layer	0.92 0.56
McDesh, south slope	20	Very limited Slope Depth to bedrock	1.00 0.61	Somewhat limited Thin layer Hard to pack	0.61 0.33
610: Hovelton, cobbly ashy loam, very stony surface-----	50	Very limited Slope Depth to bedrock Seepage	1.00 0.98 0.02	Very limited Large stones content Thin layer	1.00 0.98
Duco, stony loam, very stony surface	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content Piping	1.00 1.00 0.09
McDesh, south slope	20	Very limited Slope Depth to bedrock	1.00 0.61	Somewhat limited Thin layer Hard to pack	0.61 0.33
612: Hann-----	60	Very limited Slope	1.00	Somewhat limited Piping	0.01
Hillcreek, dry-----	25	Somewhat limited Slope Seepage	0.68 0.50	Somewhat limited Piping	0.30

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
613: Duco, stony loam, very stony surface	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content Piping	1.00 1.00 0.09
Searles, very stony surface-----	25	Very limited Slope Depth to bedrock Seepage	1.00 0.96 0.02	Somewhat limited Thin layer Seepage	0.96 0.25
McDesh, south slope	20	Very limited Slope Depth to bedrock	1.00 0.61	Somewhat limited Thin layer Hard to pack	0.61 0.33
618: McDesh, south slope	35	Very limited Slope Depth to bedrock	1.00 0.61	Somewhat limited Thin layer Hard to pack	0.61 0.33
Duco, very gravelly loam, stony surface	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.75
Shafer-----	20	Very limited Slope Depth to bedrock	1.00 0.96	Very limited Thin layer Hard to pack	0.99 0.90
619: McDesh-----	35	Very limited Slope Depth to bedrock	1.00 0.98	Somewhat limited Thin layer Hard to pack	0.98 0.04
Gwin, gravelly loam, stony surface-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
Shafer-----	20	Very limited Slope Depth to bedrock	1.00 0.96	Very limited Thin layer Hard to pack	0.99 0.90
620: Immig, very stony surface-----	35	Very limited Slope Depth to bedrock	1.00 0.96	Somewhat limited Thin layer Large stones content Seepage	0.96 0.34 0.25
McDesh, south slope	30	Very limited Slope Depth to bedrock	1.00 0.61	Somewhat limited Thin layer Hard to pack	0.61 0.33

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
620: Duco, stony loam, very stony surface	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content Piping	1.00 1.00 0.09
621: McDaniel-----	45	Very limited Slope Seepage	1.00 0.50	Not limited	
Hovelton, gravelly ashy loam-----	40	Very limited Slope Depth to bedrock Seepage	1.00 0.56 0.02	Somewhat limited Large stones content Thin layer	0.92 0.56
622: Hovelton, gravelly ashy loam-----	50	Very limited Slope Depth to bedrock Seepage	1.00 0.56 0.02	Somewhat limited Large stones content Thin layer	0.92 0.56
Gwin, very stony loam, extremely stony surface-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content	1.00 1.00
630: Gwin, very gravelly loam-----	45	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
Flybow-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.75
Rock outcrop-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Not rated	
631: Flybow-----	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.75
Rock outcrop-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Not rated	
Rubble land-----	20	Very limited Slope Depth to bedrock	1.00 0.99	Not rated	

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
634: Gwin, very stony loam, extremely stony surface-----	40	Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00
		Slope	1.00	Large stones content	1.00
McDesh, very stony loam, very stony surface-----	25	Very limited		Somewhat limited	
		Slope	1.00	Thin layer	0.98
		Depth to bedrock	0.98	Hard to pack	0.13
Rock outcrop-----	25	Very limited		Not rated	
		Depth to bedrock	1.00		
		Slope	1.00		
635: Shafer, very stony surface-----	40	Very limited		Very limited	
		Slope	1.00	Thin layer	0.99
		Depth to bedrock	0.99	Hard to pack	0.41
		Seepage	0.02		
Karney-----	25	Very limited		Somewhat limited	
		Slope	1.00	Thin layer	0.83
		Depth to bedrock	0.09	Hard to pack	0.62
Yad-----	20	Very limited Slope	1.00	Not limited	
636: Hann, stony surface	30	Very limited Slope	1.00	Somewhat limited Hard to pack	0.25
McDesh, very stony loam, extremely bouldery surface---	30	Very limited		Somewhat limited	
		Slope	1.00	Thin layer	0.52
		Depth to bedrock	0.52	Hard to pack	0.19
Robbscreek, moist---	25	Very limited		Somewhat limited	
		Slope	1.00	Thin layer	0.86
		Depth to bedrock Seepage	0.86 0.50		
638: Yad-----	35	Very limited Slope	1.00	Not limited	
Cranegulch-----	25	Very limited Slope	1.00	Somewhat limited Hard to pack	0.03
Duco, stony loam, very stony surface	25	Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00
		Slope	1.00	Large stones content Piping	1.00 0.09

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
640: Timberbutte-----	85	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
641: Aradaran-----	45	Very limited Slope Seepage	1.00 0.02	Somewhat limited Hard to pack	0.05
Yad-----	40	Very limited Slope	1.00	Not limited	
650: Longs-----	40	Very limited Slope Seepage Depth to bedrock	1.00 0.50 0.13	Somewhat limited Seepage Thin layer	0.25 0.13
Highvalley-----	30	Very limited Slope Seepage	1.00 0.50	Very limited Piping	1.00
Hoff-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content	1.00 0.01
651: Hess-----	35	Very limited Slope Depth to bedrock Seepage	1.00 0.29 0.02	Somewhat limited Piping Thin layer	0.37 0.29
Lidos-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.16
Cleymor-----	25	Very limited Slope	1.00	Somewhat limited Hard to pack	0.19
652: Hess-----	40	Very limited Slope Depth to bedrock Seepage	1.00 0.29 0.02	Somewhat limited Piping Thin layer	0.37 0.29
Lidos-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.16
Klicker-----	20	Very limited Slope Depth to bedrock Seepage	1.00 0.95 0.02	Somewhat limited Thin layer Seepage	0.95 0.12
653: Lidos-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.16

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
653: Klicker-----	30	Very limited Slope Depth to bedrock Seepage	1.00 0.95 0.02	Somewhat limited Thin layer Seepage	0.95 0.12
Hess-----	20	Very limited Slope Depth to bedrock Seepage	1.00 0.29 0.02	Somewhat limited Piping Thin layer	0.37 0.29
654: Shilling-----	40	Very limited Slope Seepage	1.00 0.50	Not limited	
Highvalley-----	30	Very limited Slope Seepage	1.00 0.50	Very limited Piping	1.00
Hoff-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content	1.00 0.01
655: Shilling, moist----	40	Very limited Slope Seepage	1.00 0.50	Not limited	
Highvalley, moist---	35	Very limited Slope Seepage	1.00 0.50	Very limited Piping	1.00
656: Shilling, moist----	50	Very limited Slope Seepage	1.00 0.50	Not limited	
Highvalley, moist---	40	Very limited Slope Seepage	1.00 0.50	Very limited Piping	1.00
657: Pumpkin, stony surface-----	95	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
658: Cleymor-----	50	Very limited Slope	1.00	Somewhat limited Hard to pack	0.19
Pumpkin, stony surface-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
659: Hoff, south slope---	85	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.50
660: Longs-----	60	Very limited Slope Seepage Depth to bedrock	1.00 0.50 0.13	Somewhat limited Seepage Thin layer	0.25 0.13
Highvalley-----	30	Very limited Slope Seepage	1.00 0.50	Very limited Piping	1.00
661: Awley-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.75
Bo-----	35	Very limited Seepage Slope	1.00 1.00	Not limited	
662: Awley-----	65	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.75
Bo-----	20	Very limited Seepage Slope	1.00 1.00	Not limited	
663: Cleymor-----	65	Very limited Slope	1.00	Somewhat limited Hard to pack	0.19
Hoff-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones content	1.00 0.01
666: Pachic Argixerolls, very stony surface	40	Very limited Slope Seepage	1.00 0.02	Not limited	
Rubble land-----	30	Very limited Slope	1.00	Not rated	
Typic Haploxerolls, extremely stony surface-----	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones content	0.86

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
700: Drybuck-----	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.04	Somewhat limited Thin layer Seepage	0.04 0.02
Whisk, moist-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
701: Drybuck-----	55	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.04	Somewhat limited Thin layer Seepage	0.04 0.02
Whisk, moist-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
702: Deerrun-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.77	Somewhat limited Thin layer Seepage	0.77 0.07
Kisky, fine gravelly sandy loam, moist--	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.11
Drybuck, dry-----	15	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.01	Somewhat limited Seepage Thin layer	0.02 0.01
704: Drybuck-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.04	Somewhat limited Thin layer Seepage	0.04 0.02
Northfork, fine gravelly sandy loam	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
Whisk, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
705: Northfork, sandy loam-----	60	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.05

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
705: Shirts, sandy loam, dry-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.10
706: Northfork, fine gravelly sandy loam	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
Shirts, coarse sandy loam-----	25	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.10
Zimmer-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
707: Packerjohn, ashy coarse sandy loam--	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.10
Shirts, coarse sandy loam-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.10
Zimmer-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
708: Zimmer-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
Northfork, fine gravelly sandy loam	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
Rock outcrop-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Not rated	
709: Shirts, sandy loam, south slope-----	45	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.69	Somewhat limited Thin layer Seepage	0.70 0.06

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
709: Charters, sandy loam	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
710: Charters, fine gravelly sandy loam	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
Northfork, fine gravelly sandy loam	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
Shirts, coarse sandy loam-----	15	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.10
711: Charters, fine gravelly sandy loam, dry-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.07
Shirts, sandy loam, dry-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.10
Zimmer-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
712: Charters, fine gravelly sandy loam	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
Shirts, coarse sandy loam-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.10
Zimmer-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
714: Shirts, sandy loam, south slope-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.69	Somewhat limited Thin layer Seepage	0.70 0.06
Eagleson, fine gravelly sandy loam	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.96	Somewhat limited Thin layer Seepage	0.96 0.10
Charters, sandy loam	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
715: Eagleson, fine gravelly sandy loam, dry-----	45	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.93	Somewhat limited Thin layer Large stones content Seepage	0.93 0.84 0.06
Kosh-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
716: Zan-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.12
Belsh-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones content Seepage	0.92 0.47
Montchief-----	25	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.77	Somewhat limited Thin layer Seepage Large stones content	0.77 0.12 0.01
718: Charters, fine gravelly sandy loam	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
Crumley-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.62
Eagleson, sandy loam	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.61	Somewhat limited Thin layer Seepage	0.61 0.07

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
720: Drybuck, dry-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.01	Somewhat limited Seepage Thin layer	0.02 0.01
Deerrun-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.77	Somewhat limited Thin layer Seepage	0.77 0.07
Kisky, fine gravelly sandy loam, moist--	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.11
721: Shirts, fine gravelly sandy loam	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.07
Kosh-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
Charters, fine gravelly sandy loam, dry-----	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.07
726: Garval-----	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.47
Kisky, fine gravelly loamy coarse sand--	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
730: Hellake-----	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
Stardust-----	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.03
731: Shirts, sandy loam, dry-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.10

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
731: Charters, fine gravelly sandy loam, dry-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.07
Zimmer-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
733: Shirts, fine gravelly sandy loam	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.07
Kosh-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
734: Shirts, sandy loam, dry-----	45	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.10
Kosh-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
735: Shirts, coarse sandy loam-----	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.10
Zimmer-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
Charters, fine gravelly sandy loam	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
738: Tripod-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.29
Packerjohn, ashy coarse sandy loam--	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.10

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
738: Pajo, fine gravelly ashy coarse sandy loam-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.93	Somewhat limited Thin layer Seepage	0.93 0.47
739: Shirts, sandy loam, moist-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.04
Zimmer-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
Packerjohn, ashy coarse sandy loam--	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.10
740: Charters, sandy loam	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
Eagleson, fine gravelly sandy loam	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.96	Somewhat limited Thin layer Seepage	0.96 0.10
741: Zan-----	85	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.12
742: Crumley-----	65	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.62
Eagleson, sandy loam	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.61	Somewhat limited Thin layer Seepage	0.61 0.07
743: Packerjohn, ashy coarse sandy loam--	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.10

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
743: Shirts, sandy loam, moist-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.04
744: Packerjohn, ashy sandy loam, cool---	60	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
Shirts, sandy loam, moist-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.04
Tripod, cool-----	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage Large stones content	0.10 0.01
745: Tripod, moist-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.38
Packerjohn, ashy sandy loam-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
746: Packerjohn, ashy sandy loam-----	90	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
747: Pinney, moist-----	40	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.86
Charters, fine gravelly sandy loam	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
Shirts, sandy loam, dry-----	15	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.10

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
748: Belsh, moist-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage Large stones content	0.12 0.07
Zan, moist-----	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.12
749: Quartzburg-----	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.37	Somewhat limited Thin layer Seepage	0.61 0.11
Charters, sandy loam	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
750: Garval-----	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.88	Somewhat limited Thin layer Seepage	0.88 0.47
Kisky, fine gravelly loamy coarse sand--	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
Rock outcrop-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Not rated	
751: Belsh, moist-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage Large stones content	0.12 0.07
Zan, moist-----	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.12
752: Josie-----	70	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
Zimmer, fine gravelly sandy loam	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.08
753: Tripod, cool-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage Large stones content	0.10 0.01

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
753: Packerjohn, ashy sandy loam, cool---	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
Shirts, sandy loam, moist-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.04
754: Packerjohn, ashy sandy loam-----	55	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
Shirts, sandy loam, moist-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.04
755: Zimmer-----	40	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
Quartzburg-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.37	Somewhat limited Thin layer Seepage	0.61 0.11
Rock outcrop-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Not rated	
756: Pajo, fine gravelly ashy coarse sandy loam-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.93	Somewhat limited Thin layer Seepage	0.93 0.47
Tripod-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.29
Kosh, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.06
758: Eagleson, sandy loam	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.61	Somewhat limited Thin layer Seepage	0.61 0.07

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
758: Kosh, moist-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.06
Charters, fine gravelly sandy loam	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
759: Charters, sandy loam	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.08
Shirts, sandy loam, south slope-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.69	Somewhat limited Thin layer Seepage	0.70 0.06
Kosh, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.06
761: Charters, fine gravelly sandy loam	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
Middlefork, moist---	40	Very limited Slope Seepage	1.00 0.50	Somewhat limited Piping	0.88
762: Drybuck, dry-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.01	Somewhat limited Seepage Thin layer	0.02 0.01
Hellake-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.50
Deerrun-----	20	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.77	Somewhat limited Thin layer Seepage	0.77 0.07
763: Eagleson, fine gravelly sandy loam	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.96	Somewhat limited Thin layer Seepage	0.96 0.10
Kosh-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
763: Rock outcrop-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Not rated	
765: Backswitch, coarse sandy loam-----	40	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.56	Somewhat limited Thin layer Seepage	0.70 0.09
Zimmer, warm-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.04
Rock outcrop-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Not rated	
766: Backswitch, coarse sandy loam-----	55	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.56	Somewhat limited Thin layer Seepage	0.70 0.09
Charters, coarse sandy loam-----	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.01
Zimmer, dry-----	15	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer	1.00
767: Shirts, sandy loam, dry-----	45	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.10
Kosh-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.12
Charters, fine gravelly sandy loam, dry-----	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.07
768: Shirts, sandy loam, south slope-----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.69	Somewhat limited Thin layer Seepage	0.70 0.06

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
768: Kosh, moist-----	25	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.06
Eagleson, fine gravelly sandy loam	15	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.96	Somewhat limited Thin layer Seepage	0.96 0.10
770: Shirts, sandy loam, dry-----	50	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.10
Charters, fine gravelly sandy loam, dry-----	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.07
Kosh, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.06
771: Backswitch, sandy loam-----	55	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.10	Somewhat limited Thin layer Seepage	0.46 0.10
Shirts, sandy loam, dry-----	25	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.52	Somewhat limited Thin layer Seepage	0.52 0.10
772: Pajo, fine gravelly ashy sandy loam----	35	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.56	Somewhat limited Thin layer Large stones content Seepage	0.56 0.28 0.12
Packerjohn, ashy sandy loam, dry----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.10
Kosh, moist-----	20	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Seepage	1.00 0.06

Table 17.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
900: Pits, gravel-----	75	Very limited Slope	1.00	Not rated	
Dumps, gravel-----	25	Very limited Slope	1.00	Not rated	
901: Dumps, landfill-----	100	Very limited Slope	1.00	Not rated	
999: Water-----	100	Not rated		Not rated	

Table 18.--Engineering Properties

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
220: Oxyaquic Xerofluvents---	0-5	Loamy sand	SM	A-2	0	0-10	80-100	75-100	50-75	15-35	10-20	NP
	5-11	Loamy coarse sand, loamy sand	SP-SM, SM	A-2	0	0-10	80-100	75-100	50-75	10-35	10-20	NP
	11-18	Loamy coarse sand, loamy sand	SP-SM, SM	A-2	0	0-10	80-100	75-100	50-75	10-35	10-20	NP
	18-39	Very gravelly coarse sand, very gravelly sand, extremely gravelly coarse sand	GP, SP-SM	A-1	0	0-10	30-65	20-50	10-35	0-5	0-10	NP
	39-60	Stratified extremely gravelly coarse sand to fine gravelly loamy sand	SM, SP-SM, GP, GP-GM	A-1	0	0-10	30-85	20-70	10-50	0-20	0-20	NP
Cumulic Haploxerolls---	0-10	Sandy loam	SM	A-4, A-2	0	0	90-100	85-100	50-70	30-40	10-20	NP-5
	10-26	Sandy loam	SM	A-4, A-2	0	0	90-100	85-100	50-70	30-40	10-20	NP-5
	26-36	Fine sandy loam, sandy loam, coarse sandy loam, loamy sand	SM	A-2, A-4	0	0	80-100	75-100	50-70	20-45	10-20	NP-5
	36-50	Fine sandy loam, sandy loam, coarse sandy loam, loamy sand, loamy coarse sand	SM	A-2, A-4	0	0	80-100	75-100	50-70	20-45	10-20	NP-5
	50-60	Loamy sand, gravelly loamy sand, gravelly loamy coarse sand	SM, SP-SM	A-2, A-1	0	0-15	60-100	55-100	35-70	10-25	0-10	NP
221: Bissell-----	0-7	Loam	CL-ML, ML	A-4	0	0	100	95-100	85-95	65-75	25-35	5-10
	7-10	Loam	CL-ML, ML	A-4	0	0	100	95-100	85-95	65-75	25-35	5-10
	10-15	Clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	70-80	35-45	15-25
	15-26	Clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	70-80	35-45	15-25
	26-41	Sandy clay loam	SC	A-6	0	0	90-100	85-100	75-90	40-50	35-40	35-40
	41-60	Very gravelly coarse sandy loam, very gravelly loamy coarse sand, gravelly coarse sandy loam	GM, GW-GM, SM	A-1	0-10	0-25	35-65	30-60	20-40	10-20	20-30	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
222: Bissell-----	0-7	Loam	CL-ML, ML	A-4	0	0	100	95-100	85-95	65-75	25-35	5-10
	7-10	Loam	CL-ML, ML	A-4	0	0	100	95-100	85-95	65-75	25-35	5-10
	10-15	Clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	70-80	35-45	15-25
	15-26	Clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	70-80	35-45	15-25
	26-41	Sandy clay loam	SC	A-6	0	0	90-100	85-100	75-90	40-50	35-40	35-40
	41-60	Gravelly coarse sandy loam, very gravelly coarse sandy loam, very gravelly loamy coarse sand	GM, GW-GM, SM	A-1	0-10	0-25	35-65	30-60	20-40	10-20	20-30	NP-5
223: Staircase, dry--	0-6	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	85-100	60-100	50-70	25-40	20-30	NP-10
	6-20	Loam, sandy loam, gravelly sandy loam	SC, SC-SM, SM	A-4, A-2	0	0	85-100	60-100	40-80	25-50	20-30	NP-10
	20-27	Fine gravelly sandy loam, coarse sandy loam	SM	A-2, A-1	0	0	80-100	60-100	40-65	20-35	20-30	NP-5
	27-42	Fine gravelly sandy loam, fine gravelly coarse sandy loam, sandy loam	SM	A-1, A-2	0	0	60-100	50-90	30-60	15-35	20-30	NP-5
	42-60	Fine gravelly loamy sand, fine gravelly loamy coarse sand, loamy coarse sand	SM	A-1, A-2	0	0	60-100	50-90	30-55	15-30	0-0	NP
224: Porter-----	0-4	Sandy loam	SM	A-2	0	0	90-100	75-100	50-65	20-35	20-30	NP-5
	4-11	Sandy loam	SM	A-2	0	0	90-100	75-100	50-65	20-35	20-30	NP-5
	11-22	Sandy loam	SM	A-2	0	0	90-100	75-100	50-65	20-35	20-30	NP-5
	22-34	Sandy loam, fine gravelly sandy loam, loam	SM	A-1, A-2, A-4	0	0	80-100	60-90	40-80	20-50	20-30	NP-5
	34-48	Coarse sandy loam, gravelly coarse sandy loam, gravelly loamy coarse sand	SM	A-2, A-1	0	0	80-100	60-90	30-50	15-35	0-10	NP
	48-72	Gravelly loamy coarse sand, coarse sandy loam, gravelly coarse sandy loam	SM	A-1, A-2	0	0-10	60-95	50-85	30-50	15-35	0-10	NP

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
225: Boise-----	0-3	Coarse sandy loam	SM	A-2	0	0	85-100	75-90	50-65	25-35	25-30	NP-5
	3-7	Coarse sandy loam	SM	A-2	0	0	85-100	75-90	50-65	25-35	25-30	NP-5
	7-15	Fine gravelly coarse sandy loam, fine gravelly sandy loam, coarse sandy loam	SM	A-1, A-2	0	0	85-100	75-90	40-60	20-30	25-30	NP-5
	15-28	Fine gravelly coarse sandy loam, fine gravelly sandy loam, coarse sandy loam	SM	A-1, A-2	0	0	70-95	60-90	40-60	20-30	25-30	NP-5
	28-36	Very gravelly coarse sandy loam	SM, GP-GM, SP-SM	A-1	0-10	0-25	30-65	25-55	10-30	5-15	0-0	NP
	36-53	Very gravelly loamy coarse sand, very gravelly coarse sandy loam	GP-GM, SM	A-1	0-10	0-25	30-60	15-50	10-30	5-15	0-0	NP
	53-60	Extremely gravelly loamy coarse sand	GM, GW-GM	A-1	0-10	0-25	30-60	15-50	10-30	5-15	0-0	NP
226: Flofeather, very rarely flooded	0-7	Sandy loam	SM	A-2	0	0	90-100	85-100	55-75	20-30	20-30	NP-5
	7-11	Sandy loam	SM	A-2	0	0	90-100	85-100	55-75	20-30	20-30	NP-5
	11-17	Sandy loam, coarse sandy loam	SM	A-2	0	0	85-100	75-90	50-75	15-30	20-30	NP-5
	17-32	Sandy loam, coarse sandy loam	SM	A-2	0	0	85-100	75-90	50-75	15-30	20-30	NP-5
	32-52	Loamy coarse sand, loamy sand	SM	A-1, A-2	0	0	85-100	75-90	45-70	15-25	0-0	NP
	52-60	Gravelly loamy coarse sand, fine gravelly loamy coarse sand, loamy coarse sand	SM, SP-SM	A-1, A-2	0	0	60-100	50-90	40-60	10-20	0-0	NP

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
226: Shawmount, stony surface-----	0-4	Gravelly loam	GC-GM, SM, SC	A-4	0-10	5-15	60-80	55-75	45-65	35-50	25-35	5-10
	4-9	Very gravelly clay loam, very gravelly loam	GC	A-2	0-10	5-25	40-55	35-50	30-50	25-35	30-40	10-15
	9-14	Very gravelly clay loam, very gravelly loam	GC	A-2	0-10	5-25	40-55	35-50	30-50	25-35	30-40	10-20
	14-26	Very gravelly sandy clay loam	GC	A-2	0-10	5-25	40-55	35-50	30-45	15-30	30-35	10-15
	26-35	Very gravelly loamy sand, very gravelly sandy loam, sandy clay loam	GP-GM, GC, GM	A-1	0-10	5-30	35-55	30-50	20-40	10-20	20-30	NP-15
	35-60	Extremely cobbly sandy loam, extremely gravelly loamy sand	GP, GP-GM	A-1	0-15	10-45	20-55	15-50	10-30	0-10	20-30	NP-5
227: Piercepark, loam	0-7	Loam	CL-ML	A-4	0	0	95-100	75-100	65-90	50-75	20-30	5-10
	7-12	Loam	CL-ML	A-4	0	0	95-100	75-100	65-90	50-75	20-30	5-10
	12-22	Sandy loam, loam	CL, CL-ML	A-4	0	0	90-100	75-100	65-90	50-75	20-30	5-10
	22-28	Sandy clay loam	SC, SM	A-6, A-2	0	0	85-100	60-85	55-75	30-40	35-40	10-20
	28-37	Sandy clay loam, fine gravelly sandy clay loam	SC, SM	A-6, A-2	0	0	85-100	60-85	55-75	30-40	35-40	10-20
	37-50	Sandy clay loam, fine gravelly sandy clay loam	SC, SM	A-6, A-2	0	0	85-100	60-85	55-80	30-50	35-40	10-20
	50-60	Sandy clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	85-100	60-85	50-75	30-50	30-40	10-20

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
228: Piercepark, loam	0-7	Loam	CL-ML	A-4	0	0	95-100	75-100	65-90	50-75	20-30	5-10
	7-12	Loam	CL-ML	A-4	0	0	95-100	75-100	65-90	50-75	20-30	5-10
	12-22	Sandy loam, loam	CL, CL-ML	A-4	0	0	90-100	75-100	65-90	50-75	20-30	5-10
	22-28	Sandy clay loam	SC, SM	A-6, A-2	0	0	85-100	60-85	55-75	30-40	35-40	10-20
	28-37	Sandy clay loam, fine gravelly sandy clay loam	SC, SM	A-6, A-2	0	0	85-100	60-85	55-75	30-40	35-40	10-20
	37-50	Sandy clay loam, fine gravelly sandy clay loam	SC, SM	A-6, A-2	0	0	85-100	60-85	55-80	30-50	35-40	10-20
	50-60	Sandy clay loam, gravelly sandy clay loam	SC	A-2, A-6	0	0	85-100	60-85	50-75	30-50	30-40	10-20
229: Piercepark, coarse sandy loam-----	0-2	Coarse sandy loam	SM, SC-SM	A-4	0	0	95-100	75-100	50-60	40-50	20-30	NP-5
	2-6	Coarse sandy loam, sandy loam	SM, SC-SM	A-4	0	0	95-100	75-100	50-60	40-50	20-30	NP-5
	6-10	Loam, coarse sandy loam	SM, SC-SM	A-4	0	0	95-100	75-100	50-60	40-50	20-30	NP-5
	10-16	Sandy loam, loam, coarse sandy loam	SC	A-6, A-4	0	0	95-100	75-100	50-60	40-50	30-35	10-15
	16-27	Loam, coarse sandy loam, sandy loam	SC	A-6, A-4	0	0	95-100	75-100	50-60	40-50	30-35	10-15
	27-34	Fine gravelly coarse sandy loam, fine gravelly sandy clay loam, sandy clay loam	SC, SM	A-6, A-2	0	0	90-100	60-85	50-60	30-45	35-40	10-20
	34-60	Fine gravelly sandy clay loam, fine gravelly coarse sandy loam, sandy clay loam	SM, SC	A-2, A-6	0	0	80-100	60-85	50-60	30-45	35-40	10-20
230: Hann-----	0-3	Silt loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	10-20
	3-6	Silt loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-45	15-25
	6-13	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	70-90	45-55	25-35
	13-25	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	65-90	45-55	25-35
	25-44	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
	44-72	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
230: Doubledia, silty clay loam-----	0-3	Silty clay loam	CL	A-6	0	0	95-100	90-100	80-100	80-90	30-40	15-25
	3-6	Clay, silty clay	CL, CH	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	6-11	Silty clay, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	11-21	Silty clay, clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	21-25	Clay loam, silty clay, clay, silty clay loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	20-30
	25-34	Silty clay loam, clay loam, silty clay, paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	34-41	Clay loam, silty clay, silty clay loam, very paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	41-51	Weathered bedrock			---	---	---	---	---	---	---	---
232: Jasseek-----	0-7	Loam	CL	A-6	0	0	100	100	85-95	60-75	35-40	15-20
	7-10	Loam	CL	A-6	0	0	100	100	85-95	60-75	35-40	15-20
	10-18	Clay loam, silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-90	35-45	15-25
	18-27	Clay, clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	27-33	Clay, clay loam	CH, CL	A-7	0	0	100	95-100	90-100	75-95	45-55	20-30
	33-43	Clay loam, loam, sandy clay loam	CL, SC	A-6, A-7	0	0	90-100	85-100	75-95	40-75	30-45	10-20
	43-60	Loamy sand, sandy loam, gravelly sandy loam	GM, SC, GC-GM, SC-SM	A-1, A-2	0	0-5	55-100	50-100	35-65	15-35	15-30	NP-10
233: Jasseek-----	0-7	Loam	CL	A-6	0	0	100	100	85-95	60-75	35-40	15-20
	7-10	Loam	CL	A-6	0	0	100	100	85-95	60-75	35-40	15-20
	10-18	Clay loam, silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-90	35-45	15-25
	18-27	Clay, clay loam	CH, CL	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	27-33	Clay, clay loam	CH, CL	A-7	0	0	100	95-100	90-100	75-95	45-55	20-30
	33-43	Clay loam, loam, sandy clay loam	CL, SC	A-6, A-7	0	0	90-100	85-100	75-95	40-75	30-45	10-20
	43-60	Loamy sand, sandy loam, gravelly sandy loam	GM, SC, GC-GM, SC-SM	A-1, A-2	0	0-5	55-100	50-100	35-65	15-35	15-30	NP-10

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
238:												
Adaboi-----	0-2	Silt loam	CL	A-4, A-6	0	0	100	90-100	80-100	75-90	30-40	10-20
	2-9	Silt loam	CL	A-4, A-6	0	0	100	90-100	80-100	75-90	30-40	10-20
	9-13	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	90-100	85-95	80-85	45-55	20-30
	13-20	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	90-100	85-95	80-85	45-55	20-30
	20-25	Silty clay loam, silt loam, clay loam	CH, CL	A-6, A-7	0	0	100	90-100	85-100	75-90	40-55	20-35
	25-43	Silty clay, clay	CH	A-7	0	0	100	80-90	80-90	75-85	50-80	25-45
	43-66	Clay, silty clay	CH	A-7	0	0	100	80-90	80-90	75-85	50-80	25-45
240:												
Collister-----	0-4	Loam	ML, CL	A-4, A-6	0	0	95-100	90-100	80-95	65-80	30-40	5-15
	4-10	Loam	ML, CL	A-4, A-6	0	0	95-100	90-100	80-95	65-80	30-40	5-15
	10-19	Loam, silt loam	CL, ML	A-6, A-4	0	0	100	95-100	80-95	65-85	30-40	5-15
	19-23	Silt loam, loam	CL, ML	A-6, A-4	0	0	100	95-100	80-95	65-85	30-40	5-15
	23-28	Clay loam, loam	CL, ML	A-6, A-7	0	0	100	95-100	85-95	65-90	35-45	10-20
	28-36	Silty clay loam	CL, ML	A-6, A-7	0	0	85-100	75-100	75-95	65-90	35-45	10-20
	36-42	Silt loam	CL, ML	A-6, A-7	0	0	85-100	75-100	70-95	60-90	35-45	10-20
	42-58	Sandy clay loam	SC, SM	A-7, A-4, A-2	0	0	85-100	75-100	65-85	30-45	35-45	10-20
	58-66	Sandy loam, clay loam, loam	SC-SM, SC, CL	A-4, A-6	0	0	85-100	75-100	60-90	35-75	25-40	5-15
Flofeather-----	0-7	Sandy loam	SC-SM, SM	A-4, A-2	0	0	95-100	85-100	55-70	30-40	20-30	NP-10
	7-22	Sandy loam	SC-SM, SM	A-4, A-2	0	0	95-100	85-100	55-70	30-40	20-30	NP-10
	22-30	Sandy loam, coarse sandy loam	SC-SM, SM	A-2	0	0	90-100	75-90	50-65	25-35	20-30	NP-10
	30-41	Sandy loam, coarse sandy loam	SC-SM, SM	A-2	0	0	90-100	75-90	50-65	25-35	20-30	NP-10
	41-48	Fine gravelly sandy loam, fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM	A-2, A-1	0	0	70-100	50-90	25-50	15-30	15-25	NP-5
	48-60	Fine gravelly sandy loam, fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM	A-2, A-1	0	0	70-100	50-90	25-50	15-30	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
300: Shawmount, stony surface-----	0-4	Gravelly loam	GC-GM, SM, SC	A-4	0-10	5-15	60-80	55-75	45-65	35-50	25-35	5-10
	4-9	Very gravelly clay loam, very gravelly loam	GC	A-2	0-10	5-15	40-55	35-50	30-50	25-35	30-40	10-15
	9-14	Very gravelly clay loam, very gravelly loam	GC	A-2	0-10	5-15	40-55	35-50	30-50	25-35	30-40	10-20
	14-26	Very gravelly sandy clay loam	GC	A-2	0-10	5-15	40-55	35-50	30-45	15-30	30-35	10-15
	26-35	Very gravelly loamy sand, very gravelly sandy loam, sandy clay loam	GP-GM, GC, GM	A-1	0-10	5-30	35-55	30-50	20-40	10-20	20-30	NP-15
	35-60	Extremely cobbly sandy loam, extremely gravelly loamy sand	GP, GP-GM	A-1	0-15	10-45	20-55	15-50	10-30	0-10	20-30	NP-5
301: Breadloaf-----	0-2	Clay loam	CL	A-6, A-7	0	0-10	100	100	90-100	80-90	35-45	15-25
	2-6	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	6-12	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	12-17	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	17-23	Silty clay loam, silty clay, paragravelly clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	23-33	Weathered bedrock			---	---	---	---	---	---	---	---
Doubledia, silty clay loam-----	0-3	Silty clay loam	CL	A-6	0	0	95-100	90-100	80-100	80-90	30-40	15-25
	3-6	Clay, silty clay	CL, CH	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	6-11	Silty clay, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	11-21	Silty clay, clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	21-25	Clay loam, clay, silty clay, silty clay loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	20-30
	25-34	Clay loam, silty clay loam, silty clay, paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	34-41	Clay loam, silty clay, silty clay loam, very paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	41-51	Weathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
302:												
Breadloaf-----	0-2	Clay loam	CL	A-6, A-7	0	0-10	100	100	90-100	80-90	35-45	15-25
	2-6	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	6-12	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	12-17	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	17-23	Silty clay loam, silty clay, paragravelly clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	23-33	Weathered bedrock			---	---	---	---	---	---	---	---
Doubledia, silty clay loam-----	0-3	Silty clay loam	CL	A-6	0	0	95-100	90-100	80-100	80-90	30-40	15-25
	3-6	Clay, silty clay	CL, CH	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	6-11	Silty clay, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	11-21	Silty clay, clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	21-25	Clay loam, clay, silty clay, silty clay loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	20-30
	25-34	Silty clay loam, clay loam, silty clay, paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	34-41	Clay loam, silty clay, silty clay loam, very paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	41-51	Weathered bedrock			---	---	---	---	---	---	---	---
Hann-----	0-3	Silt loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	10-20
	3-6	Silt loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-45	15-25
	6-13	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	70-90	45-55	25-35
	13-25	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	65-90	45-55	25-35
	25-44	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
	44-72	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
303: Doubledia, silty clay loam-----	0-3	Silty clay loam	CL	A-6	0	0	95-100	90-100	80-100	80-90	30-40	15-25
	3-6	Clay, silty clay	CL, CH	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	6-11	Silty clay, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	11-21	Silty clay, clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	21-25	Clay loam, silty clay, clay, silty clay loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	20-30
	25-34	Silty clay loam, clay loam, silty clay, paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	34-41	Clay loam, silty clay, silty clay loam, very paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	41-51	Weathered bedrock			---	---	---	---	---	---	---	---
Hann-----	0-3	Silt loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	10-20
	3-6	Silt loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-45	15-25
	6-13	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	70-90	45-55	25-35
	13-25	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	65-90	45-55	25-35
	25-44	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
	44-72	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
Breadloaf-----	0-2	Clay loam	CL	A-6, A-7	0	0-10	100	100	90-100	80-90	35-45	15-25
	2-6	Silty clay, clay	CH, CL	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	6-12	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	12-17	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	17-23	Silty clay loam, silty clay, paragravelly clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	23-33	Weathered bedrock			---	---	---	---	---	---	---	---
304: Breadloaf-----	0-2	Clay loam	CL	A-6, A-7	0	0-10	100	100	90-100	80-90	35-45	15-25
	2-6	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	6-12	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	12-17	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	17-23	Silty clay loam, silty clay, paragravelly clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	23-33	Weathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
304: Doubledia, silty clay loam-----	0-3	Silty clay loam	CL	A-6	0	0	95-100	90-100	80-100	80-90	30-40	15-25
	3-6	Clay, silty clay	CL, CH	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	6-11	Silty clay, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	11-21	Silty clay, clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	21-25	Clay loam, clay, silty clay, silty clay loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	20-30
	25-34	Silty clay loam, clay loam, silty clay, paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	34-41	Clay loam, silty clay, silty clay loam, very paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	41-51	Weathered bedrock			---	---	---	---	---	---	---	---
Hullsgulch, loam	0-2	Loam	ML, CL-ML	A-4	0	0	100	90-100	75-95	60-75	25-35	5-10
	2-9	Loam	ML, CL-ML	A-4	0	0	100	90-100	75-95	60-75	25-35	5-10
	9-15	Loam	ML, CL-ML	A-4	0	0	100	90-100	75-95	60-75	25-35	5-10
	15-29	Sandy clay loam	CL, SC	A-7, A-6	0	0	100	75-100	65-90	40-55	30-45	10-20
	29-46	Sandy clay loam	CL, SC	A-6, A-7	0	0	100	75-100	65-90	40-55	30-45	10-20
	46-58	Fine gravelly coarse sandy loam, sandy clay loam	SC, SC-SM	A-2, A-1	0	0	90-100	60-85	40-70	20-35	20-35	5-15
	58-66	Sandy loam, fine gravelly loamy coarse sand	SW-SM, SM, SC-SM, SC	A-2, A-1	0	0	85-100	50-75	25-50	10-25	0-30	NP-10
305: Siphonlake, south slope----	0-10	Sandy loam	SC-SM, SM, SC	A-2	0	0	100	95-100	60-70	30-35	20-30	NP-10
	10-19	Sandy loam, loam	SC, SM, SC-SM	A-2, A-4	0	0	100	90-100	70-80	30-50	20-30	NP-10
	19-22	Sandy loam, loam	SC, SM, SC-SM	A-2, A-4	0	0	100	90-100	70-80	30-50	20-30	NP-10
	22-46	Sandy loam, coarse sandy loam	SM, SC-SM	A-2, A-4	0	0	95-100	80-100	55-75	25-40	15-25	NP-5
	46-56	Coarse sandy loam	SM	A-2	0	0	95-100	75-100	55-70	25-35	15-25	NP-5
	56-66	Weathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
305: Solarview-----	0-2	Coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	75-100	45-55	20-30	15-25	NP-5
	2-12	Fine gravelly loamy coarse sand, loamy coarse sand	SC-SM, SM	A-1, A-2	0	0	90-100	70-85	40-55	15-25	15-20	NP-5
	12-16	Fine gravelly coarse sand, fine gravelly loamy coarse sand	SP-SM	A-1	0	0	85-100	50-75	30-45	5-10	10-15	NP
	16-26	Weathered bedrock			---	---	---	---	---	---	---	---
306: Van Dusen-----	0-7	Loam	CL, CL-ML	A-4	0	0	100	95-100	85-95	65-75	25-35	5-15
	7-23	Loam	CL	A-4	0	0	100	90-100	80-95	60-75	30-35	10-15
	23-39	Loam, sandy clay loam	CL	A-6	0	0	95-100	85-100	75-95	55-75	30-35	10-15
	39-49	Sandy clay loam, clay loam, loam	CL	A-6	0	0	95-100	85-100	75-95	55-75	30-40	10-20
	49-60	Sandy clay loam, clay loam, loam	CL, SC	A-6	0	0	95-100	85-100	75-95	40-75	30-40	10-20
Siphonlake-----	0-2	Sandy loam	SC-SM, SM, SC	A-2	0	0	100	90-100	55-70	25-35	20-30	NP-10
	2-6	Sandy loam	SC-SM, SM, SC	A-2	0	0	100	90-100	55-70	25-35	20-30	NP-10
	6-19	Sandy loam, loam	SC-SM, SM, SC	A-2, A-4	0	0	100	90-100	60-75	25-40	20-30	NP-10
	19-31	Coarse sandy loam, loam	SC, SM, SC-SM	A-2, A-4	0	0	100	85-100	70-80	30-50	20-30	NP-10
	31-42	Coarse sandy loam, loam, fine gravelly coarse sandy loam	SM, SC-SM	A-2	0	0	85-100	70-100	50-70	25-35	15-25	NP-5
	42-47	Fine gravelly loamy coarse sand, fine gravelly coarse sandy loam, loamy coarse sand, coarse sandy loam	SM, SC-SM	A-2, A-1	0	0	85-100	70-90	40-65	20-30	15-25	NP-5
	47-57	Weathered bedrock			---	---	---	---	---	---	---	---
307: Adaboi-----	0-2	Silt loam	CL	A-4, A-6	0	0	100	90-100	80-100	75-90	30-40	10-20
	2-9	Silt loam	CL	A-4, A-6	0	0	100	90-100	80-100	75-90	30-40	10-20
	9-13	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	90-100	85-95	80-85	45-55	20-30
	13-20	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	90-100	85-95	80-85	45-55	20-30
	20-25	Silty clay loam, silt loam, clay loam	CH, CL	A-6, A-7	0	0	100	90-100	85-100	75-90	40-55	20-35
	25-43	Silty clay, clay	CH	A-7	0	0	100	80-90	80-90	75-85	50-80	25-45
	43-66	Clay, silty clay	CH	A-7	0	0	100	80-90	80-90	75-85	50-80	25-45

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
307: Meclo-----	0-4	Silt loam	CL, ML	A-6, A-4	0	0	100	100	90-100	70-90	30-40	5-15
	4-8	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90-100	70-90	30-40	10-20
	8-13	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	100	90-100	85-100	70-85	45-60	20-30
	13-22	Silty clay, silty clay loam, clay	CL, CH	A-7	0	0	100	90-100	85-100	70-85	45-60	20-30
	22-31	Silty clay loam, clay loam	CL	A-6, A-7	0	0	100	85-90	70-90	60-80	35-45	15-25
	31-41	Weathered bedrock			---	---	---	---	---	---	---	---
308: Breadloaf-----	0-2	Clay loam	CL	A-6, A-7	0	0-10	100	100	90-100	80-90	35-45	15-25
	2-6	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	6-12	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	12-17	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	17-23	Silty clay loam, silty clay, paragravelly clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	23-33	Weathered bedrock			---	---	---	---	---	---	---	---
Crawley, silt loam-----	0-4	Silt loam	CL, ML	A-6, A-4	0	0	100	85-100	80-100	70-90	30-40	5-15
	4-7	Silty clay loam, clay loam	CL	A-7, A-6	0	0	100	90-100	85-100	70-95	35-45	15-25
	7-13	Paragravelly silty clay loam, clay loam	CL	A-7, A-6	0	0	100	90-100	85-100	70-95	35-45	15-25
	13-23	Weathered bedrock			---	---	---	---	---	---	---	---
Doubledia, clay loam-----	0-3	Clay loam	CL	A-7	0	0	95-100	90-100	80-95	65-75	40-50	20-30
	3-7	Clay	CH	A-7	0	0	95-100	90-100	80-95	75-90	55-75	35-50
	7-12	Clay	CH	A-7	0	0	95-100	90-100	80-95	75-90	55-75	35-50
	12-24	Clay	CH	A-7	0	0	95-100	90-100	80-95	75-90	55-75	35-50
	24-37	Clay	CH	A-7	0	0	95-100	90-100	80-95	75-90	55-75	35-50
	37-55	Clay	CH	A-7	0	0	95-100	90-100	80-95	75-90	55-75	35-50
	55-65	Weathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
309: Hullsgulch, sandy loam-----	0-2	Sandy loam	SC-SM, SM	A-2	0	0	95-100	85-100	55-65	25-35	0-25	NP-5
	2-11	Sandy loam	SC-SM, SM	A-2	0	0	95-100	85-100	55-65	25-35	0-25	NP-5
	11-18	Sandy clay loam, coarse sandy loam	SC	A-2	0	0	95-100	75-100	45-85	30-35	30-40	10-20
	18-32	Sandy clay loam	SC	A-6, A-2	0	0	95-100	75-100	65-85	35-45	30-40	10-20
	32-48	Fine gravelly coarse sandy loam, sandy clay loam	SC, SC-SM	A-2, A-1	0	0	85-100	60-85	40-70	20-35	20-35	5-15
	48-60	Fine gravelly coarse sandy loam, sandy clay loam	SC-SM, SC	A-2, A-1	0	0	85-100	60-85	40-70	20-35	20-35	5-15
Solarview-----	0-2	Coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	75-100	45-55	20-30	15-25	NP-5
	2-12	Fine gravelly loamy coarse sand, loamy coarse sand	SC-SM, SM	A-1, A-2	0	0	90-100	70-85	40-55	15-25	15-20	NP-5
	12-16	Fine gravelly coarse sand, fine gravelly loamy coarse sand	SP-SM	A-1	0	0	85-100	50-75	30-45	5-10	10-15	NP
	16-26	Weathered bedrock			---	---	---	---	---	---	---	---
311: Meclo-----	0-4	Silt loam	CL, ML	A-6, A-4	0	0	100	100	90-100	70-90	30-40	5-15
	4-8	Silty clay loam, silt loam	CL	A-6	0	0	100	100	90-100	70-90	30-40	10-20
	8-13	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	100	90-100	85-100	70-85	45-60	20-30
	13-22	Silty clay, silty clay loam, clay	CL, CH	A-7	0	0	100	90-100	85-100	70-85	45-60	20-30
	22-31	Silty clay loam, clay loam	CL	A-6, A-7	0	0	100	85-90	70-90	60-80	35-45	15-25
	31-41	Weathered bedrock			---	---	---	---	---	---	---	---
Crawley, silt loam-----	0-4	Silt loam	CL, ML	A-6, A-4	0	0	100	85-100	80-100	70-90	30-40	5-15
	4-7	Silty clay loam, clay loam	CL	A-7, A-6	0	0	100	90-100	85-100	70-95	35-45	15-25
	7-13	Paragravelly silty clay loam, clay loam	CL	A-7, A-6	0	0	100	90-100	85-100	70-95	35-45	15-25
	13-23	Weathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
311: Adaboi-----	0-2	Silt loam	CL	A-4, A-6	0	0	100	90-100	80-100	75-90	30-40	10-20
	2-9	Silt loam	CL	A-4, A-6	0	0	100	90-100	80-100	75-90	30-40	10-20
	9-13	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	90-100	85-95	80-85	45-55	20-30
	13-20	Silty clay loam, clay loam	CL, CH	A-7	0	0	100	90-100	85-95	80-85	45-55	20-30
	20-25	Silty clay loam, silt loam, clay loam	CH, CL	A-6, A-7	0	0	100	90-100	85-100	75-90	40-55	20-35
	25-43	Silty clay, clay	CH	A-7	0	0	100	80-90	80-90	75-85	50-80	25-45
	43-66	Clay, silty clay	CH	A-7	0	0	100	80-90	80-90	75-85	50-80	25-45
328: Gacey, extremely stony surface--	0-3	Stony loam	ML, CL	A-6, A-4	10-30	10-30	65-90	60-85	55-75	50-60	30-40	5-15
	3-7	Gravelly clay loam, cobble clay loam, very cobble clay loam	GC, CL, SC	A-7	0-25	10-30	65-90	60-85	55-80	35-55	40-50	15-25
	7-10	Gravelly clay loam, very cobble clay loam, cobble clay loam	GC, SC, CH	A-7	0-25	15-30	65-80	60-75	50-75	35-55	45-55	20-30
	10-15	Very gravelly clay loam, very cobble clay loam, very cobble clay	GC, CH	A-7	0-25	10-40	60-90	55-85	40-75	35-60	45-60	20-35
	15-20	Cemented material			---	---	---	---	---	---	---	---
	20-60	Extremely stony sandy loam, very cobble sandy loam, extremely gravelly loamy sand	GM, GW-GM, SM	A-1	10-40	15-40	40-75	35-70	20-50	10-20	20-30	NP-5
329: Ayette-----	0-4	Loam	ML, CL	A-6, A-4	0	0	95-100	90-100	75-95	60-75	30-40	5-15
	4-8	Clay loam, silty clay	CL	A-7, A-6	0	0	95-100	90-100	80-100	65-80	35-50	15-25
	8-12	Silty clay, clay loam	CL	A-7, A-6	0	0	95-100	90-100	80-100	65-80	35-50	15-25
	12-30	Clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	65-80	45-60	20-30
	30-43	Clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	65-80	45-60	20-30
	43-53	Weathered bedrock			---	---	---	---	---	---	---	---
Duco, stony loam, very stony surface--	0-3	Stony loam	ML, CL	A-4, A-6	10-20	0-25	80-95	75-90	65-80	50-65	30-40	5-15
	3-15	Extremely stony clay loam	CL	A-7, A-6	40-65	10-45	70-95	65-90	60-85	50-70	35-45	15-20
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
330: Breadloaf-----	0-2	Clay loam	CL	A-6, A-7	0	0-10	100	100	90-100	80-90	35-45	15-25
	2-6	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	6-12	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	25-45
	12-17	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	17-23	Silty clay loam, silty clay, paragravelly clay	CL, CH	A-7	0	0	95-100	90-100	90-100	85-90	45-80	20-45
	23-33	Weathered bedrock			---	---	---	---	---	---	---	---
Ayette, moist---	0-4	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-15
	4-9	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-15
	9-15	Silty clay, clay loam	CL	A-7, A-6	0	0	95-100	90-100	80-100	65-90	35-50	15-25
	15-27	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	80-100	70-90	45-60	20-30
	27-36	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	80-100	70-90	45-60	20-30
	36-55	Clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	70-85	45-60	20-30
	55-65	Weathered bedrock			---	---	---	---	---	---	---	---
Immig, rubbly surface-----	0-4	Very stony loam	CL, ML, GM	A-6, A-4	30-45	10-45	70-95	65-90	55-80	45-65	30-40	5-15
	4-7	Very cobbly clay loam	CL	A-7, A-6	0-15	20-45	65-95	60-90	55-85	50-65	35-45	15-20
	7-17	Very cobbly silty clay	CH, GC	A-7	0-15	20-55	55-85	50-80	45-80	45-75	50-85	25-50
	17-25	Extremely cobbly silty clay	GC, CH	A-7	0-15	10-75	50-90	45-85	45-85	40-75	50-85	25-50
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
331: Ayette, moist---	0-4	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-15
	4-9	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-15
	9-15	Silty clay, clay loam	CL	A-7, A-6	0	0	95-100	90-100	80-100	65-90	35-50	15-25
	15-27	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	80-100	70-90	45-60	20-30
	27-36	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	80-100	70-90	45-60	20-30
	36-55	Clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	70-85	45-60	20-30
	55-65	Weathered bedrock			---	---	---	---	---	---	---	---
Yad-----	0-2	Clay loam	CL	A-6	0	0-10	100	100	85-90	75-80	30-40	15-20
	2-6	Clay loam	CL	A-6	0	0-10	100	100	85-90	75-80	30-40	15-20
	6-14	Clay loam, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-90	75-80	40-60	25-40
	14-25	Clay loam, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-90	75-80	40-60	25-40
	25-41	Clay loam, gravelly clay loam, sandy clay loam	CL	A-7, A-6	0	0	75-100	70-90	60-85	50-75	35-50	20-30
	41-52	Gravelly sandy clay loam, clay loam	CL	A-6, A-7	0	0	75-100	70-90	60-85	50-75	35-50	20-30
	52-60	Clay loam, gravelly sandy clay loam	CL	A-6, A-7	0	0	75-100	70-90	60-85	50-75	35-50	20-30

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
332:												
Hann-----	0-3	Silt loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	10-20
	3-6	Silt loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-45	15-25
	6-13	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	70-90	45-55	25-35
	13-25	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	65-90	45-55	25-35
	25-44	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
	44-72	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
Ayette, moist---	0-4	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-15
	4-9	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-15
	9-15	Silty clay, clay loam	CL	A-7, A-6	0	0	95-100	90-100	80-100	65-90	35-50	15-25
	15-27	Silty clay, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	70-90	45-60	20-30
	27-36	Silty clay, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	70-90	45-60	20-30
	36-55	Clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	70-85	45-60	20-30
	55-65	Weathered bedrock			---	---	---	---	---	---	---	---
Picketpin-----	0-5	Loam	CL-ML, CL	A-4	0	0	100	75-100	60-90	50-70	25-30	5-10
	5-11	Sandy clay loam, loam	ML, CL	A-7, A-6	0	0	100	75-90	60-70	50-60	35-45	10-20
	11-17	Clay loam, loam	ML, CL	A-7, A-6	0	0	100	75-90	60-70	50-60	35-45	10-20
	17-35	Sandy clay loam, loam	ML, CL	A-7, A-6	0	0	100	75-90	60-70	50-60	35-45	10-20
	35-60	Fine gravelly sandy clay loam, fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SC, SC-SM	A-6, A-2, A- 4, A-1	0	0	95-100	50-75	30-65	15-40	20-35	5-15
333:												
Ayette-----	0-4	Loam	ML, CL	A-6, A-4	0	0	95-100	90-100	75-95	60-75	30-40	5-15
	4-8	Clay loam, silty clay	CL	A-7, A-6	0	0	95-100	90-100	80-100	65-80	35-50	15-25
	8-12	Silty clay, clay loam	CL	A-7, A-6	0	0	95-100	90-100	80-100	65-80	35-50	15-25
	12-30	Clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	65-80	45-60	20-30
	30-43	Clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	65-80	45-60	20-30
	43-53	Weathered bedrock			---	---	---	---	---	---	---	---
Crawley, loam---	0-6	Loam	CL	A-6	0	0	95-100	85-100	70-95	55-75	25-35	10-20
	6-14	Clay loam	CL	A-6	0	0	95-100	90-100	70-95	60-80	30-40	15-25
	14-24	Weathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
333: Hullsgulch, loam	0-2	Loam	ML, CL-ML	A-4	0	0	100	90-100	75-95	60-75	25-35	5-10
	2-9	Loam	ML, CL-ML	A-4	0	0	100	90-100	75-95	60-75	25-35	5-10
	9-15	Loam	ML, CL-ML	A-4	0	0	100	90-100	75-95	60-75	25-35	5-10
	15-29	Sandy clay loam	CL, SC	A-7, A-6	0	0	100	75-100	65-90	40-55	30-45	10-20
	29-46	Sandy clay loam	CL, SC	A-6, A-7	0	0	100	75-100	65-90	40-55	30-45	10-20
	46-58	Fine gravelly coarse sandy loam, sandy clay loam	SC, SC-SM	A-2, A-1	0	0	90-100	60-85	40-70	20-35	20-35	5-15
	58-66	Sandy loam, fine gravelly loamy coarse sand	SW-SM, SM, SC-SM, SC	A-2, A-1	0	0	85-100	50-75	25-50	10-25	0-30	NP-10
335: Gimmi, very stony surface--	0-3	Very gravelly loam	SC, GC	A-2, A-6	0-10	10-25	55-85	50-75	30-50	25-40	35-40	15-20
	3-6	Very gravelly loam	SC, GC	A-2, A-6	0-10	10-25	55-85	50-75	30-50	25-40	35-40	15-20
	6-10	Gravelly clay loam	CL	A-6, A-7	0-10	10-25	65-95	60-85	55-75	50-60	40-50	20-30
	10-15	Gravelly clay loam, gravelly clay	CH	A-7	0-10	0-15	65-95	60-85	55-75	50-60	50-60	35-50
	15-23	Gravelly clay loam, gravelly clay	CH	A-7	0-10	0-15	65-95	60-85	55-75	50-60	50-60	35-50
	23-31	Extremely paragravelly silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	85-95	35-45	15-25
	31-41	Weathered bedrock			---	---	---	---	---	---	---	---
Ayette, moist---	0-4	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-15
	4-9	Loam	CL, ML	A-4, A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-15
	9-15	Silty clay, clay loam	CL	A-7, A-6	0	0	95-100	90-100	80-100	65-90	35-50	15-25
	15-27	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	80-100	70-90	45-60	20-30
	27-36	Silty clay, clay	CL, CH	A-7	0	0	95-100	90-100	80-100	70-90	45-60	20-30
	36-55	Clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	80-100	70-85	45-60	20-30
	55-65	Weathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
335: Doubledia, silty clay loam-----	0-3	Silty clay loam	CL	A-6	0	0	95-100	90-100	80-100	80-90	30-40	15-25
	3-6	Clay, silty clay	CL, CH	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	6-11	Silty clay, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	11-21	Silty clay, clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	40-60	20-35
	21-25	Clay loam, clay, silty clay, silty clay loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	20-30
	25-34	Clay loam, silty clay loam, silty clay, paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	34-41	Clay loam, silty clay, silty clay loam, very paragravelly clay	CH, CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-60	20-35
	41-51	Weathered bedrock			---	---	---	---	---	---	---	---
400: Ralsen-----	0-2	Fine sandy loam	CL, SM, SC-SM	A-4	0	0	100	95-100	70-85	40-55	15-30	NP-10
	2-10	Fine sandy loam	CL, SM, SC-SM	A-4	0	0	100	95-100	65-85	35-55	15-30	NP-10
	10-17	Fine sandy loam	SC-SM, SM, CL-ML	A-4	0	0	90-100	85-100	60-85	35-55	15-25	NP-5
	17-19	Loamy fine sand	SC-SM, SM	A-1, A-2	0	0	90-100	85-100	50-80	20-30	15-25	NP-5
	19-24	Fine sandy loam	SM, CL-ML, SC-SM	A-4	0	0	90-100	85-100	60-85	35-55	15-25	NP-5
	24-60	Stratified coarse sand to fine sandy loam	CL, SP-SC, SC	A-1, A-4	0	0	80-100	75-100	40-85	5-55	25-30	5-10
Foxlane-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-75	35-50	15-25	---	---
	1-4	Gravelly fine sandy loam	SC, SC-SM	A-1	0	0	85-100	50-75	35-50	15-25	20-30	5-10
	4-10	Gravelly fine sandy loam	SC, SC-SM	A-1	0	0	85-100	50-75	35-50	15-25	20-30	5-10
	10-13	Gravelly loamy fine sand, gravelly loamy sand, gravelly sandy loam	SM, SW-SM	A-1	0	0	85-100	45-70	30-45	10-25	10-20	NP-5
	13-47	Very gravelly coarse sand, very gravelly sand, very gravelly loamy coarse sand, very gravelly loamy sand	GP, GP-GM, SP-SM	A-1	0	10-25	40-65	35-60	20-35	0-10	10-20	NP-5
	47-60	Extremely gravelly coarse sand, extremely gravelly sand	GW, GP	A-1	0	10-35	25-40	20-35	10-20	0-5	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
400: Pay-----	0-3	Loamy fine sand	SM	A-2	0	0	95-100	90-100	75-90	25-35	15-25	NP-5
	3-7	Loamy fine sand	SM	A-2	0	0	95-100	90-100	75-90	25-35	15-25	NP-5
	7-11	Loamy fine sand	SM	A-2	0	0	95-100	90-100	75-90	25-35	15-25	NP-5
	11-26	Loamy fine sand, loamy coarse sand, loamy sand	SM	A-1, A-2	0	0	80-100	75-100	40-85	15-35	15-25	NP-5
	26-41	Fine gravelly coarse sand, very gravelly coarse sand	GW-GM, SW-SM	A-1	0	0-15	50-85	40-75	20-40	5-10	10-20	NP-5
	41-60	Very gravelly coarse sand, gravelly sand	GP-GM, SP-SM	A-1	0	0-15	45-80	40-75	20-40	5-10	10-20	NP-5
401: Staircase-----	0-4	Sandy loam	SC, SM, SC-SM	A-1, A-2	0	0	85-100	55-100	35-65	20-35	0-30	NP-10
	4-14	Fine gravelly sandy loam	SM, SC, SC-SM	A-2, A-1	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	14-22	Fine gravelly sandy loam	SC-SM, SM, SC	A-1, A-2	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	22-32	Fine gravelly sandy loam	SC-SM, SM, SC	A-1, A-2	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	32-42	Fine gravelly sandy loam	SC, SC-SM, SM	A-1, A-2	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	42-50	Fine gravelly sandy loam	SC-SM, SC, SM	A-2, A-1	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	50-58	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0	60-100	45-90	30-60	15-30	0-25	NP-5
	58-72	Gravelly loamy sand, sandy loam	SC-SM, SM	A-1	0	0	60-100	50-90	25-55	15-25	0-25	NP-5
402: Crossbow-----	0-4	Fine sandy loam	SM, SC-SM, CL	A-4	0	0	95-100	90-100	70-80	40-55	15-30	NP-10
	4-11	Fine sandy loam	SC-SM, SM, CL-ML	A-4	0	0	95-100	90-100	70-80	40-55	15-25	NP-5
	11-21	Fine sandy loam	SM, SC-SM, CL-ML	A-4	0	0	95-100	90-100	70-80	40-55	15-25	NP-5
	21-36	Fine sandy loam	SC-SM, SM, CL-ML	A-4	0	0	95-100	90-100	70-80	40-55	15-25	NP-5
	36-42	Loamy fine sand, loamy sand	SM	A-2, A-1	0	0	90-100	85-100	50-80	25-30	15-25	NP-5
	42-60	Gravelly coarse sand, gravelly sand	SP-SM, SP	A-1	0	0-10	60-80	55-75	30-40	0-10	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
402: Foxlane-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-75	35-50	15-25	---	---
	1-4	Gravelly fine sandy loam	SC, SC-SM	A-1	0	0	85-100	50-75	35-50	15-25	20-30	5-10
	4-10	Gravelly fine sandy loam	SC, SC-SM	A-1	0	0	85-100	50-75	35-50	15-25	20-30	5-10
	10-13	Gravelly loamy fine sand, gravelly loamy sand, gravelly sandy loam	SM, SW-SM	A-1	0	0	85-100	45-70	30-45	10-25	10-20	NP-5
	13-47	Very gravelly coarse sand, very gravelly sand, very gravelly loamy coarse sand, very gravelly loamy sand	GP, GP-GM, SP-SM	A-1	0	10-25	40-65	35-60	20-35	0-10	10-20	NP-5
	47-60	Extremely gravelly coarse sand, extremely gravelly sand	GW, GP	A-1	0	10-35	25-40	20-35	10-20	0-5	10-20	NP-5
403: Ralsen-----	0-2	Fine sandy loam	CL, SM, SC-SM	A-4	0	0	100	95-100	70-85	40-55	15-30	NP-10
	2-10	Fine sandy loam	CL, SM, SC-SM	A-4	0	0	100	95-100	65-85	35-55	15-30	NP-10
	10-17	Fine sandy loam	CL-ML, SC-SM, SM	A-4	0	0	90-100	85-100	60-85	35-55	15-25	NP-5
	17-19	Loamy fine sand	SC-SM, SM	A-1, A-2	0	0	90-100	85-100	50-80	20-30	15-25	NP-5
	19-24	Fine sandy loam	CL-ML, SC-SM, SM	A-4	0	0	90-100	85-100	60-85	35-55	15-25	NP-5
	24-60	Stratified coarse sand to fine sandy loam	CL, SP-SC, SC	A-1, A-4	0	0	80-100	75-100	40-85	5-55	25-30	5-10
Pay-----	0-3	Loamy fine sand	SM	A-2	0	0	95-100	90-100	75-90	25-35	15-25	NP-5
	3-7	Loamy fine sand	SM	A-2	0	0	95-100	90-100	75-90	25-35	15-25	NP-5
	7-11	Loamy fine sand	SM	A-2	0	0	95-100	90-100	75-90	25-35	15-25	NP-5
	11-26	Loamy coarse sand, loamy fine sand, loamy sand	SM	A-1, A-2	0	0	80-100	75-100	40-85	15-35	15-25	NP-5
	26-41	Fine gravelly coarse sand, very gravelly coarse sand	GW-GM, SW-SM	A-1	0	0-15	50-85	40-75	20-40	5-10	10-20	NP-5
	41-60	Very gravelly coarse sand, gravelly sand	GP-GM, SP-SM	A-1	0	0-15	45-80	40-75	20-40	5-10	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
403: Crossbow-----	0-4	Fine sandy loam	CL, SM, SC-SM	A-4	0	0	95-100	90-100	70-80	40-55	15-30	NP-10
	4-11	Fine sandy loam	CL-ML, SC-SM, SM	A-4	0	0	95-100	90-100	70-80	40-55	15-25	NP-5
	11-21	Fine sandy loam	CL-ML, SM, SC-SM	A-4	0	0	95-100	90-100	70-80	40-55	15-25	NP-5
	21-36	Fine sandy loam	CL-ML, SC-SM, SM	A-4	0	0	95-100	90-100	70-80	40-55	15-25	NP-5
	36-42	Loamy fine sand, loamy sand	SM	A-2, A-1	0	0	90-100	85-100	50-80	25-30	15-25	NP-5
	42-60	Gravelly coarse sand, gravelly sand	SP-SM, SP	A-1	0	0-10	60-80	55-75	30-40	0-10	10-20	NP-5
404: Riverpoint-----	0-6	Loam	SM, ML	A-4	0	0	80-100	75-100	60-95	45-75	30-35	5-10
	6-11	Loam	SC, CL	A-6, A-4	0	0	80-100	75-100	60-95	45-75	30-40	10-15
	11-14	Clay loam, loam	SM, CL	A-6	0	0	80-90	75-85	60-80	40-65	35-40	10-15
	14-19	Very gravelly clay loam, gravelly loam	GC, GM	A-2, A-6	0-5	0-15	50-70	45-65	40-60	30-50	40-40	10-15
	19-31	Very gravelly sandy loam, very gravelly coarse sandy loam	GP-GC, GC-GM, SC	A-2, A-1	0-30	10-30	40-70	35-65	25-50	10-25	20-30	5-10
	31-41	Very gravelly sandy loam, very gravelly coarse sandy loam	GP-GM, GM, SC-SM	A-1	0-30	5-30	40-70	35-65	25-50	10-25	15-25	NP-5
	41-60	Very gravelly coarse sandy loam, very gravelly loamy sand, extremely gravelly loamy coarse sand	GW, GC-GM, GW-GM	A-1	0-40	5-50	30-55	25-50	10-30	0-15	10-25	NP-5
Hellake-----	0-3	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	3-10	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	10-22	Clay loam, loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	22-36	Clay loam, loam	CL	A-6, A-4	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	36-43	Clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-75	35-45	15-20
	43-53	Very gravelly loam, very gravelly sandy loam	GC-GM, GC	A-1, A-2	0	0-25	30-60	25-60	15-40	10-25	25-40	5-15
	53-60	Very gravelly sandy loam, very gravelly loamy sand	GC-GM, GP-GM, GC	A-4, A-1	0	0-25	30-60	25-60	15-55	10-40	15-30	NP-10
	60-66	Extremely gravelly loamy sand, very gravelly sandy loam	GC, GP-GM	A-4, A-1	0	0-25	30-65	25-60	15-55	10-40	15-30	NP-10

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
405: Hellake-----	0-3	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	3-10	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	10-22	Clay loam, loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	22-36	Clay loam, loam	CL	A-6, A-4	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	36-43	Clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-75	35-45	15-20
	43-53	Very gravelly loam, very gravelly sandy loam	GC-GM, GC	A-1, A-2	0	0-25	30-60	25-60	15-40	10-25	25-40	5-15
	53-60	Very gravelly sandy loam, very gravelly loamy sand	GP-GM, GC-GM, GC	A-4, A-1	0	0-25	30-60	25-60	15-55	10-40	15-30	NP-10
	60-66	Extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, GC	A-4, A-1	0	0-25	30-65	25-60	15-55	10-40	15-30	NP-10
Staircase-----	0-4	Sandy loam	SC, SC-SM, SM	A-1, A-2	0	0	85-100	55-100	35-65	20-35	0-30	NP-10
	4-14	Fine gravelly sandy loam	SM, SC, SC-SM	A-2, A-1	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	14-22	Fine gravelly sandy loam	SC-SM, SM, SC	A-1, A-2	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	22-32	Fine gravelly sandy loam	SC-SM, SM, SC	A-1, A-2	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	32-42	Fine gravelly sandy loam	SC, SC-SM, SM	A-1, A-2	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	42-50	Fine gravelly sandy loam	SC-SM, SC, SM	A-2, A-1	0	0	85-100	60-100	35-65	20-35	0-30	NP-10
	50-58	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0	60-100	45-90	30-60	15-30	0-25	NP-5
	58-72	Gravelly loamy sand, sandy loam	SC-SM, SM	A-1	0	0	60-100	50-90	25-55	15-25	0-25	NP-5
406: Hellake-----	0-3	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	3-10	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	10-22	Clay loam, loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	22-36	Clay loam, loam	CL	A-6, A-4	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	36-43	Clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-75	35-45	15-20
	43-53	Very gravelly loam, very gravelly sandy loam	GC-GM, GC	A-1, A-2	0	0-25	30-60	25-60	15-40	10-25	25-40	5-15
	53-60	Very gravelly sandy loam, very gravelly loamy sand	GC-GM, GP-GM, GC	A-4, A-1	0	0-25	30-60	25-60	15-55	10-40	15-30	NP-10
	60-66	Extremely gravelly loamy sand, very gravelly sandy loam	GC, GP-GM	A-4, A-1	0	0-25	30-65	25-60	15-55	10-40	15-30	NP-10

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
407: Hellake-----	0-3	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	3-10	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	10-22	Clay loam, loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	22-36	Clay loam, loam	CL	A-6, A-4	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	36-43	Clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-75	35-45	15-20
	43-53	Very gravelly loam, very gravelly sandy loam	GC-GM, GC	A-1, A-2	0	0-25	30-60	25-60	15-40	10-25	25-40	5-15
	53-60	Very gravelly sandy loam, very gravelly loamy sand	GC-GM, GP-GM, GC	A-4, A-1	0	0-25	30-60	25-60	15-55	10-40	15-30	NP-10
	60-66	Extremely gravelly loamy sand, very gravelly sandy loam	GC, GP-GM	A-4, A-1	0	0-25	30-65	25-60	15-55	10-40	15-30	NP-10
408: Stardust-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	60-90	50-85	40-70	---	---
	1-3	Fine gravelly loam	SC-SM, SC	A-6, A-4	0	0	85-100	60-70	50-60	40-45	25-35	5-15
	3-9	Fine gravelly loam, loam	SC-SM, SC, CL	A-6, A-4	0	0	85-100	60-90	50-80	40-65	25-35	5-15
	9-18	Fine gravelly loam, sandy clay loam	SC, CL	A-6, A-2	0	0	85-100	60-90	50-75	35-55	30-40	10-15
	18-38	Sandy clay loam, fine gravelly sandy clay loam, gravelly loam	SC, CL	A-2, A-6	0	0	75-100	50-90	40-85	20-60	30-40	10-15
	38-54	Gravelly sandy clay loam, sandy clay loam	SC, GC	A-2, A-6	0	0	55-95	50-90	40-80	20-50	25-35	10-15
	54-67	Gravelly sandy loam	SC-SM, SC, GM	A-1, A-2	0	0	55-80	50-75	30-45	15-30	15-30	NP-10
409: Stardust-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	60-90	50-85	40-70	---	---
	1-3	Fine gravelly loam	SC-SM, SC	A-6, A-4	0	0	85-100	60-70	50-60	40-45	25-35	5-15
	3-9	Fine gravelly loam, loam	SC-SM, SC, CL	A-6, A-4	0	0	85-100	60-90	50-80	40-65	25-35	5-15
	9-18	Fine gravelly loam, sandy clay loam	SC, CL	A-6, A-2	0	0	85-100	60-90	50-75	35-55	30-40	10-15
	18-38	Sandy clay loam, fine gravelly sandy clay loam, gravelly loam	SC, CL	A-2, A-6	0	0	75-100	50-90	40-85	20-60	30-40	10-15
	38-54	Gravelly sandy clay loam, sandy clay loam	SC, GC	A-2, A-6	0	0	55-95	50-90	40-80	20-50	25-35	10-15
	54-67	Gravelly sandy loam	SC-SM, SC, GM	A-1, A-2	0	0	55-80	50-75	30-45	15-30	15-30	NP-10

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
410: Stardust-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	60-90	50-85	40-70	---	---
	1-3	Fine gravelly loam	SC-SM, SC	A-6, A-4	0	0	85-100	60-70	50-60	40-45	25-35	5-15
	3-9	Fine gravelly loam, loam	SC-SM, SC, CL	A-6, A-4	0	0	85-100	60-90	50-80	40-65	25-35	5-15
	9-18	Fine gravelly loam, sandy clay loam	SC, CL	A-6, A-2	0	0	85-100	60-90	50-75	35-55	30-40	10-15
	18-38	Sandy clay loam, fine gravelly sandy clay loam, gravelly loam	SC, CL	A-2, A-6	0	0	75-100	50-90	40-85	20-60	30-40	10-15
	38-54	Gravelly sandy clay loam, sandy clay loam	SC, GC	A-2, A-6	0	0	55-95	50-90	40-80	20-50	25-35	10-15
	54-67	Gravelly sandy loam	SC-SM, SC, GM	A-1, A-2	0	0	55-80	50-75	30-45	15-30	15-30	NP-10
Riverpoint, very stony surface--	0-1	Slightly decomposed plant material	PT	A-8	0-10	0-10	75-100	70-100	60-95	40-75	---	---
	1-7	Gravelly loam, loam	SC, CL	A-4, A-6	0-10	0-10	75-100	70-100	60-95	40-75	30-35	10-15
	7-12	Very gravelly loam, gravelly loam	GC, CL	A-4, A-6	0-10	0-10	70-90	65-85	55-75	40-60	30-40	10-15
	12-24	Very gravelly clay loam, very gravelly loam	GC	A-6, A-2	0-25	0-25	50-70	45-65	35-55	25-50	20-40	10-15
	24-40	Extremely stony clay loam, very gravelly clay loam, very cobbly loam	GC	A-6, A-2	0-30	10-30	45-70	35-65	30-60	25-50	25-40	10-15
	40-60	Extremely cobbly sandy loam, extremely gravelly sandy loam, extremely stony sandy loam	GC-GM, GW-GM	A-1	0-40	10-50	40-55	30-55	25-50	10-20	10-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
411: Huston, very stony surface--	0-1	Slightly decomposed plant material	PT	A-8	0-15	10-15	65-90	65-85	35-55	15-30	---	---
	1-6	Gravelly coarse sandy loam	SC-SM, SM, SC	A-1, A-2	0-15	10-15	65-90	60-85	35-55	15-30	15-25	NP-10
	6-13	Gravelly coarse sandy loam	SC-SM, SM, SC	A-1, A-2	0-15	10-15	65-90	65-85	35-55	15-30	15-25	NP-10
	13-26	Very gravelly coarse sandy loam	GM, SC, SC-SM	A-1, A-2	0-15	10-50	55-80	50-75	30-45	20-30	15-25	NP-10
	26-46	Very gravelly sandy loam, very gravelly coarse sandy loam	GC-GM, SC, GM	A-2, A-1	0-15	10-50	55-80	50-75	30-45	15-30	15-25	NP-10
	46-60	Stratified very gravelly coarse sandy loam to very gravelly fine sandy loam	GM, GC-GM	A-1, A-2	0-15	15-50	40-70	35-65	25-40	15-30	15-25	NP-5
Zeb, gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	65-90	50-80	30-50	15-30	---	---
	1-8	Gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	65-90	50-80	30-50	15-30	15-25	NP-5
	8-13	Gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	65-90	50-75	30-50	15-30	15-25	NP-5
	13-23	Very gravelly coarse sandy loam, cobbly coarse sandy loam, extremely gravelly coarse sandy loam	GP-GM, GM, SC-SM	A-2, A-1	0	10-45	35-90	25-85	15-55	10-30	15-25	NP-5
	23-43	Extremely gravelly loamy coarse sand, very cobbly loamy coarse sand, very gravelly sandy loam	GC-GM, GP-GM	A-1	0	10-45	30-60	25-50	10-40	5-20	10-25	NP-5
	43-60	Extremely gravelly sand, very gravelly loamy coarse sand	SP-SC, GW, GP	A-1	0	0-45	25-60	20-50	10-30	0-5	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
412: Huston, very stony surface--	0-1	Slightly decomposed plant material	PT	A-8	0-15	10-15	65-90	65-85	35-55	15-30	---	---
	1-6	Gravelly coarse sandy loam	SC-SM, SM, SC	A-1, A-2	0-15	10-15	65-90	60-85	35-55	15-30	15-25	NP-10
	6-13	Gravelly coarse sandy loam	SC-SM, SM, SC	A-1, A-2	0-15	10-15	65-90	65-85	35-55	15-30	15-25	NP-10
	13-26	Very gravelly coarse sandy loam	GM, SC, SC-SM	A-1, A-2	0-15	10-50	55-80	50-75	30-45	20-30	15-25	NP-10
	26-46	Very gravelly sandy loam, very gravelly coarse sandy loam	GC-GM, SC, GM	A-2, A-1	0-15	10-50	55-80	50-75	30-45	15-30	15-25	NP-10
	46-60	Stratified very gravelly coarse sandy loam to very gravelly fine sandy loam	GM, GC-GM	A-1, A-2	0-15	15-50	40-70	35-65	25-40	15-30	15-25	NP-5
Stardust-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	60-90	50-85	40-70	---	---
	1-3	Fine gravelly loam	SC-SM, SC	A-6, A-4	0	0	85-100	60-70	50-60	40-45	25-35	5-15
	3-9	Fine gravelly loam, loam	SC-SM, SC, CL	A-6, A-4	0	0	85-100	60-90	50-80	40-65	25-35	5-15
	9-18	Fine gravelly loam, sandy clay loam	SC, CL	A-6, A-2	0	0	85-100	60-90	50-75	35-55	30-40	10-15
	18-38	Sandy clay loam, fine gravelly sandy clay loam, gravelly loam	SC, CL	A-2, A-6	0	0	75-100	50-90	40-85	20-60	30-40	10-15
	38-54	Gravelly sandy clay loam, sandy clay loam	SC, GC	A-2, A-6	0	0	55-95	50-90	40-80	20-50	25-35	10-15
	54-67	Gravelly sandy loam	SC-SM, SC, GM	A-1, A-2	0	0	55-80	50-75	30-45	15-30	15-30	NP-10
413: Cloudyway-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	60-85	35-55	20-30	---	---
	1-4	Fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	60-85	35-55	20-30	15-25	NP-5
	4-9	Fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	60-85	35-55	20-30	15-25	NP-5
	9-18	Gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	65-90	60-85	35-55	20-30	15-25	NP-5
	18-24	Gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	65-90	60-85	35-55	20-30	15-25	NP-5
	24-43	Gravelly coarse sandy loam, gravelly sandy loam	GM, SC-SM	A-1	0	0-10	55-80	50-75	30-50	15-25	15-25	NP-5
	43-60	Gravelly loamy sand, gravelly loamy coarse sand	SW-SM, SM, SC-SM	A-1	0	0-10	55-80	50-75	25-50	10-20	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
414: Hellake-----	0-3	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	3-10	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	10-22	Clay loam, loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	22-36	Clay loam, loam	CL	A-6, A-4	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	36-43	Clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-75	35-45	15-20
	43-53	Very gravelly loam, very gravelly sandy loam	GC-GM, GC	A-1, A-2	0	0-25	30-60	25-60	15-40	10-25	25-40	5-15
	53-60	Very gravelly sandy loam, very gravelly loamy sand	GC-GM, GP-GM, GC	A-4, A-1	0	0-25	30-60	25-60	15-55	10-40	15-30	NP-10
	60-66	Extremely gravelly loamy sand, very gravelly sandy loam	GC, GP-GM	A-1, A-4	0	0-25	30-65	25-60	15-55	10-40	15-30	NP-10
Middlefork-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	1-4	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	4-12	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	12-15	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	75-95	55-75	25-35	5-15
	15-32	Loam, clay loam	CL, CL-ML	A-6, A-4	0	0	90-100	85-100	80-100	65-80	25-40	5-15
	32-47	Loam, clay loam	CL	A-6, A-7, A-4	0	0	85-100	75-100	60-95	45-80	30-45	10-20
	47-61	Sandy clay loam, loam	CL, SC	A-6, A-2, A-7	0	0	80-100	75-100	55-95	30-75	30-45	10-20
415: Middlefork-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	1-4	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	4-12	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	12-15	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	75-95	55-75	25-35	5-15
	15-32	Loam, clay loam	CL, CL-ML	A-6, A-4	0	0	90-100	85-100	80-100	65-80	25-40	5-15
	32-47	Loam, clay loam	CL	A-6, A-7, A-4	0	0	85-100	75-100	60-95	45-80	30-45	10-20
	47-61	Sandy clay loam, loam	CL, SC	A-6, A-2, A-7	0	0	80-100	75-100	55-95	30-75	30-45	10-20
Pinney-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	95-100	90-100	80-100	65-90	---	---
	2-5	Ashy silt loam	ML, CL-ML	A-4	0	0	95-100	90-100	80-100	65-90	25-35	5-10
	5-13	Ashy silt loam	CL-ML, CL, ML	A-4	0	0	95-100	90-100	80-100	65-90	25-35	5-10
	13-23	Loam, sandy clay loam	CL	A-6, A-4	0	0	90-100	80-100	70-95	55-75	30-40	10-15
	23-30	Clay loam, sandy clay loam	CL, SC	A-7, A-4, A-6	0	0	85-100	75-100	65-100	45-80	30-45	10-20
	30-49	Clay loam, sandy clay loam	CL, SC	A-2, A-7, A-6	0	0	65-100	50-100	45-100	30-80	30-45	10-20
	49-60	Loam, sandy clay loam	CL, GC	A-7, A-2, A-6	0	0	60-100	50-100	45-95	30-75	30-45	10-20

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
416: Pinney, moist---	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	90-100	80-100	65-90	---	---
	1-4	Ashy silt loam	ML, CL-ML	A-4	0	0	95-100	90-100	80-100	65-90	25-35	5-10
	4-10	Ashy silt loam, ashy loam	ML, CL-ML	A-4	0	0	95-100	90-100	80-100	65-90	25-35	5-10
	10-21	Ashy silt loam, ashy loam	ML, CL-ML	A-4	0	0	95-100	90-100	80-100	65-90	25-35	5-10
	21-32	Sandy clay loam, loam	CL, SC	A-6, A-2, A-7	0	0	85-100	75-100	55-90	25-55	30-45	10-20
	32-45	Sandy clay loam, clay loam	CL, SC	A-6, A-2, A-7	0	0	75-100	50-100	40-90	20-55	30-45	10-20
	45-60	Gravelly clay loam, clay loam	CL, SC	A-2, A-7, A-6	0	0	65-100	50-100	45-90	20-70	30-45	10-20
Middlefork, moist-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	2-5	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	20-30	5-10
	5-13	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	20-30	5-10
	13-28	Loam	CL-ML, ML, CL	A-4	0	0	90-100	85-100	75-90	55-75	25-35	5-10
	28-36	Loam, sandy clay loam	CL, SC, SC-SM	A-6, A-2	0	0	80-100	75-100	60-95	30-65	25-40	5-15
	36-47	Loam, sandy clay loam, gravelly sandy clay loam	SC	A-7, A-2, A-6	0	0	75-100	70-100	60-95	35-50	30-45	10-20
	47-62	Sandy clay loam, clay loam	CL	A-6, A-4, A-7	0	0	80-100	75-100	70-100	55-75	30-45	10-20
Zeb, gravelly sandy loam----	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	65-90	50-80	30-50	15-30	---	---
	1-8	Gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	65-90	50-80	30-50	15-30	15-25	NP-5
	8-13	Gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	65-90	50-75	30-50	15-30	15-25	NP-5
	13-23	Very gravelly coarse sandy loam, cobbly coarse sandy loam, extremely gravelly coarse sandy loam	GP-GM, GM, SC-SM	A-2, A-1	0	10-45	35-90	25-85	15-55	10-30	15-25	NP-5
	23-43	Extremely gravelly loamy coarse sand, very cobbly loamy coarse sand, very gravelly sandy loam	GC-GM, GP-GM	A-1	0	10-45	30-60	25-50	10-40	5-20	10-25	NP-5
	43-60	Extremely gravelly sand, very gravelly loamy coarse sand	SP-SC, GW, GP	A-1	0	0-45	25-60	20-50	10-30	0-5	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
417: Middlefork-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	1-4	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	4-12	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	12-15	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	75-95	55-75	25-35	5-15
	15-32	Loam, clay loam	CL, CL-ML	A-6, A-4	0	0	90-100	85-100	80-100	65-80	25-40	5-15
	32-47	Loam, clay loam	CL	A-6, A-7, A-4	0	0	85-100	75-100	60-95	45-80	30-45	10-20
	47-61	Sandy clay loam, loam	CL, SC	A-6, A-2, A-7	0	0	80-100	75-100	55-95	30-75	30-45	10-20
Zeb, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	80-100	50-75	30-45	15-25	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-10	80-100	50-75	30-45	15-25	0-25	NP-5
	4-11	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-10	75-95	45-65	30-45	15-25	0-25	NP-5
	11-21	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	70-95	45-65	30-45	15-25	0-25	NP-5
	21-43	Very gravelly sandy loam	SP-SM, GP-GM	A-1	0	0-20	50-75	25-50	15-30	5-15	0-10	NP
	43-60	Very gravelly loamy sand	SP-SM, GP-GM	A-1	0	0-20	50-75	25-50	15-25	5-10	0-10	NP
418: Middlefork-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	1-4	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	4-12	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	12-15	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	75-95	55-75	25-35	5-15
	15-32	Loam, clay loam	CL, CL-ML	A-6, A-4	0	0	90-100	85-100	80-100	65-80	25-40	5-15
	32-47	Loam, clay loam	CL	A-6, A-7, A-4	0	0	85-100	75-100	60-95	45-80	30-45	10-20
	47-61	Sandy clay loam, loam	CL, SC	A-6, A-2, A-7	0	0	80-100	75-100	55-95	30-75	30-45	10-20
Zeb, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	80-100	50-75	30-45	15-25	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-10	80-100	50-75	30-45	15-25	0-25	NP-5
	4-11	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-10	75-95	45-65	30-45	15-25	0-25	NP-5
	11-21	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	70-95	45-65	30-45	15-25	0-25	NP-5
	21-43	Very gravelly sandy loam	SP-SM, GP-GM	A-1	0	0-20	50-75	25-50	15-30	5-15	0-10	NP
	43-60	Very gravelly loamy sand	SP-SM, GP-GM	A-1	0	0-20	50-75	25-50	15-25	5-10	0-10	NP

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
419: Charters, fine gravelly sandy loam, dry-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-11	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	11-16	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	16-33	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	33-41	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	41-60	Fine gravelly sandy loam, fine gravelly loamy sand	SW-SM, SC-SM, SM	A-1, A-2	0	0-15	70-95	50-75	25-50	10-30	15-25	NP-5
Zeb, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	80-100	50-75	30-45	15-25	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-10	80-100	50-75	30-45	15-25	0-25	NP-5
	4-11	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-10	75-95	45-65	30-45	15-25	0-25	NP-5
	11-21	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	70-95	45-65	30-45	15-25	0-25	NP-5
	21-43	Very gravelly sandy loam	SP-SM, GP-GM	A-1	0	0-20	50-75	25-50	15-30	5-15	0-10	NP
	43-60	Very gravelly loamy sand	SP-SM, GP-GM	A-1	0	0-20	50-75	25-50	15-25	5-10	0-10	NP
420: Pioneervil-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	45-65	25-30	---	---
	1-6	Sandy loam	SC-SM, SC	A-2, A-1	0	0	85-100	75-100	45-65	25-30	20-30	5-10
	6-12	Fine gravelly sandy loam, sandy loam	SC-SM, SC	A-2, A-1	0	0	85-100	60-100	40-65	20-30	20-30	5-10
	12-19	Sandy loam, loam, fine gravelly sandy loam	SC-SM, SC	A-2, A-1	0	0	85-100	60-100	35-65	20-30	20-30	5-10
	19-25	Fine gravelly sandy loam, fine sandy loam	SC-SM, SC	A-2, A-1	0	0	85-100	60-100	35-65	20-30	20-30	5-10
	25-31	Very fine sandy loam, fine gravelly very fine sandy loam	SC-SM, SC	A-4	0	0	85-100	75-100	70-90	40-50	20-30	5-10
	31-35	Sandy loam, coarse sandy loam, loamy fine sand	SM, SC-SM, SC	A-2, A-1	0	0	80-100	75-100	50-65	25-30	0-30	NP-10
	35-75	Stratified fine sandy loam to fine gravelly coarse sand	SM, GP-GM	A-4, A-1	0	0-25	55-100	50-100	35-70	10-45	0-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
In					Pct	Pct					Pct	
420: Grimescreek-----	0-6	Sandy loam	SC-SM	A-2, A-1	0	0	85-100	75-100	45-65	25-35	20-30	NP-10
	6-11	Sandy loam	SC-SM	A-2, A-1	0	0	85-100	75-100	50-65	25-30	20-30	NP-10
	11-21	Sandy loam	SC-SM	A-2, A-1	0	0	85-100	75-100	45-65	25-35	20-30	NP-10
	21-23	Coarse sandy loam	SM	A-2, A-1	0	0	85-100	75-100	50-65	25-35	0-30	NP-10
	23-36	Coarse sandy loam, loamy sand, loamy fine sand	SM	A-2, A-1	0	0	85-100	75-100	50-65	25-30	0-30	NP-10
	36-58	Fine gravelly sandy loam	SM	A-2, A-1	0	0	85-100	65-100	45-65	25-30	0-30	NP-10
	58-72	Sand, sandy loam, loamy sand	SM, SP-SM	A-2, A-1	0	0	85-100	75-100	50-65	10-30	0-20	NP
421: Dumps, dredge tailings-----	0-60	Fragmental material			---	---	---	---	---	---	---	---
Oxyaquic Xerorthents, very stony surface-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	25-65	20-60	10-35	0-15	---	---
	1-11	Extremely cobbly loamy coarse sand	SC-SM, GP-GM, GP	A-1	0-15	10-55	25-65	20-60	10-35	0-15	10-20	NP-5
	11-22	Extremely cobbly loamy sand, very gravelly coarse sand, gravelly loamy sand	SC-SM, GP-GM, GP	A-1	0-15	15-55	25-70	15-65	5-35	0-20	10-20	NP-5
	22-60	Fragmental material, very gravelly sand, gravelly loamy fine sand	SC-SM, GP-GM, GP	A-1	0-25	15-65	25-70	15-60	5-30	0-15	0-20	NP-5
422: Lithic Xerorthents, very stony surface-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	35-60	25-50	10-25	0-10	---	---
	1-3	Extremely cobbly loamy coarse sand	SW-SC, GP, GP-GM	A-1	0-30	35-65	35-60	25-50	10-25	0-10	10-20	NP-5
	3-11	Fragmental material, extremely cobbly coarse sand, extremely cobbly loamy coarse sand	SM, GP-GM	A-1	0-40	35-65	45-70	35-60	20-35	10-20	10-20	NP-5
	11-24	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
422: Dumps, placer tailings-----	0-24	Fragmental material			---	---	---	---	---	---	---	---
	24-50	Weathered bedrock			---	---	---	---	---	---	---	---
	50-60	Unweathered bedrock			---	---	---	---	---	---	---	---
Dystric Xeropsamments, very stony surface-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	70-100	50-95	25-60	10-25	---	---
	1-4	Loamy sand	SM, SP-SM, SC-SM	A-1, A-2	0-10	0-10	70-100	50-95	25-60	10-25	10-20	NP-5
	4-15	Loamy coarse sand, gravelly loamy sand, gravelly loamy coarse sand	SM, SC-SM, SP-SM	A-1, A-2	0-10	0-10	65-100	50-95	30-60	10-25	10-20	NP-5
	15-24	Gravelly loamy coarse sand, very gravelly loamy sand, coarse sand	SC-SM, SP-SM	A-1, A-2	0-10	0-10	55-100	40-95	25-60	5-25	0-20	NP-5
	24-50	Weathered bedrock			---	---	---	---	---	---	---	---
	50-60	Unweathered bedrock			---	---	---	---	---	---	---	---
423: Dystric Xeropsamments, very stony surface-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	70-100	50-95	25-60	10-25	---	---
	1-4	Loamy sand	SM, SP-SM, SC-SM	A-1, A-2	0-10	0-10	70-100	50-95	25-60	10-25	10-20	NP-5
	4-15	Loamy coarse sand, gravelly loamy sand, gravelly loamy coarse sand	SM, SC-SM, SP-SM	A-1, A-2	0-10	0-10	65-100	50-95	30-60	10-25	10-20	NP-5
	15-24	Gravelly loamy coarse sand, very gravelly loamy sand, coarse sand	SC-SM, SP-SM	A-1, A-2	0-10	0-10	55-100	40-95	25-60	5-25	0-20	NP-5
	24-50	Weathered bedrock			---	---	---	---	---	---	---	---
	50-60	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
423: Ultic Haploxeralfs----	0-1	Slightly decomposed plant material	PT	A-8	0	0	60-95	50-85	45-75	35-50	---	---
	1-5	Gravelly loam	SC, GC-GM	A-6, A-4	0	0-10	60-95	50-85	45-75	35-50	25-35	5-15
	5-11	Gravelly loam, clay loam, gravelly sandy clay loam, gravelly clay loam	CL, SC, GC	A-6	0	0-10	60-95	50-85	45-75	35-60	30-40	10-20
	11-15	Gravelly loam, clay loam, gravelly sandy clay loam	CL, SC, GC	A-6	0	0-10	60-95	50-85	45-75	35-60	30-40	10-20
	15-25	Fine gravelly loam, clay loam, fine gravelly sandy clay loam	CL, SC, GC	A-6	0	0-10	60-95	50-85	45-75	35-60	30-40	10-20
	25-34	Sandy clay loam, gravelly clay loam, fine gravelly sandy clay loam	CL, SC, GC	A-7, A-6	0	0-10	70-100	60-100	50-85	35-60	30-45	10-20
	34-60	Stratified loam to fine gravelly sandy clay loam	GM, SC, CL	A-6, A-4, A-2	0	0-10	60-100	50-100	35-85	25-70	25-35	NP-15
Lithic Xerorthents----	0-1	Slightly decomposed plant material	PT	A-8	0	0	55-95	50-80	30-55	15-35	---	---
	1-5	Gravelly sandy loam	GM, SC-SM, SM	A-1, A-2	0-10	0-25	55-85	50-80	30-55	15-35	15-25	NP-5
	5-10	Very gravelly loamy sand, very cobbly loamy coarse sand, very gravelly loamy coarse sand	SC-SM, GP-GM	A-1	0-10	0-25	35-70	25-60	15-40	5-20	10-20	NP-5
	10-18	Very cobbly loamy sand, very gravelly coarse sand, extremely gravelly loamy coarse sand	GP, GP-GM	A-1	0-10	0-30	30-55	5-45	0-30	0-10	10-20	NP-5
	18-30	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
424: Middlefork-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	1-4	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	4-12	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	12-15	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	75-95	55-75	25-35	5-15
	15-32	Loam, clay loam	CL-ML, CL	A-6, A-4	0	0	90-100	85-100	80-100	65-80	25-40	5-15
	32-47	Loam, clay loam	CL	A-6, A-7, A-4	0	0	85-100	75-100	60-95	45-80	30-45	10-20
	47-61	Sandy clay loam, loam	CL, SC	A-6, A-2, A-7	0	0	80-100	75-100	55-95	30-75	30-45	10-20
Charters, coarse sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-90	45-60	25-35	---	---
	1-4	Coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	75-90	45-60	25-35	20-30	NP-5
	4-8	Coarse sandy loam	SM	A-2, A-1	0	0	85-100	75-90	45-60	25-35	20-30	NP-5
	8-15	Fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	15-32	Fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	32-48	Fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	48-60	Gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	80-95	50-75	30-50	15-30	15-25	NP-5
425: Middlefork-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	1-4	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	4-12	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	25-30	5-10
	12-15	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	75-95	55-75	25-35	5-15
	15-32	Loam, clay loam	CL, CL-ML	A-6, A-4	0	0	90-100	85-100	80-100	65-80	25-40	5-15
	32-47	Loam, clay loam	CL	A-6, A-7, A-4	0	0	85-100	75-100	60-95	45-80	30-45	10-20
	47-61	Sandy clay loam, loam	CL, SC	A-6, A-2, A-7	0	0	80-100	75-100	55-95	30-75	30-45	10-20

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
425: Brassey-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	65-75	60-70	55-70	40-50	---	---
	1-4	Gravelly loam	SM, GC-GM	A-4	0	0	65-75	60-70	55-70	40-50	25-35	5-10
	4-11	Gravelly loam	SM, GC-GM	A-4	0	0	65-75	60-70	55-70	40-50	25-35	5-10
	11-21	Gravelly loam, very gravelly loam	SC, GC	A-6, A-2	0	0-20	40-80	30-75	25-65	25-50	30-40	10-15
	21-37	Extremely gravelly loam, very gravelly sandy clay loam	GC	A-6, A-2	0-10	0-20	30-65	25-60	20-55	10-40	30-40	10-15
	37-49	Very gravelly sandy clay loam, extremely gravelly coarse sandy loam, extremely gravelly sandy loam	GC	A-2	0-20	0-35	30-55	25-50	15-40	10-25	30-40	10-15
	49-60	Extremely gravelly loamy sand, extremely gravelly sand, extremely gravelly coarse sand	GP, GW	A-1	0-15	0-30	25-60	20-55	10-25	0-5	10-20	NP-5
426: Middlefork, moist-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	2-5	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	20-30	5-10
	5-13	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	20-30	5-10
	13-28	Loam	CL-ML, ML, CL	A-4	0	0	90-100	85-100	75-90	55-75	25-35	5-10
	28-36	Loam, sandy clay loam	CL, SC, SC-SM	A-6, A-2	0	0	80-100	75-100	60-95	30-65	25-40	5-15
	36-47	Loam, sandy clay loam, gravelly sandy clay loam	SC	A-7, A-2, A-6	0	0	75-100	70-100	60-95	35-50	30-45	10-20
	47-62	Sandy clay loam, clay loam	CL	A-6, A-4, A-7	0	0	80-100	75-100	70-100	55-75	30-45	10-20

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
427: Middlefork, moist-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	2-5	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	20-30	5-10
	5-13	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	20-30	5-10
	13-28	Loam	CL-ML, ML, CL	A-4	0	0	90-100	85-100	75-90	55-75	25-35	5-10
	28-36	Loam, sandy clay loam	CL, SC, SC-SM	A-6, A-2	0	0	80-100	75-100	60-95	30-65	25-40	5-15
	36-47	Loam, sandy clay loam, gravelly sandy clay loam	SC	A-7, A-2, A-6	0	0	75-100	70-100	60-95	35-50	30-45	10-20
	47-62	Sandy clay loam, clay loam	CL	A-6, A-4, A-7	0	0	80-100	75-100	70-100	55-75	30-45	10-20
428: Zeb, gravelly sandy loam----	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	65-90	50-80	30-50	15-30	---	---
	1-8	Gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	65-90	50-80	30-50	15-30	15-25	NP-5
	8-13	Gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	65-90	50-75	30-50	15-30	15-25	NP-5
	13-23	Very gravelly coarse sandy loam, cobbly coarse sandy loam, extremely gravelly coarse sandy loam	SC-SM, GP-GM, GM	A-2, A-1	0	10-45	35-90	25-85	15-55	10-30	15-25	NP-5
	23-43	Extremely gravelly loamy coarse sand, very cobbly loamy coarse sand, very gravelly sandy loam	GC-GM, GP-GM	A-1	0	10-45	30-60	25-50	10-40	5-20	10-25	NP-5
	43-60	Extremely gravelly sand, very gravelly loamy coarse sand	SP-SC, GW, GP	A-1	0	0-45	25-60	20-50	10-30	0-5	10-20	NP-5
	Republic-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	80-100	50-65	25-35	---
2-7		Ashy sandy loam	SM	A-2, A-1	0	0	85-100	80-100	50-65	25-35	0-10	NP-5
7-14		Ashy sandy loam	SM, SC-SM	A-2, A-1	0	0	85-100	80-100	50-65	25-35	15-30	NP-5
14-23		Sandy loam, loam	SM, SC-SM	A-2, A-1, A-4	0	0	85-100	80-100	50-75	25-50	15-30	NP-5
23-42		Sandy loam, loam	SM, SC-SM	A-2, A-1, A-4	0	0	85-100	80-100	50-75	25-50	15-30	NP-5
42-60		Sandy loam	SM, SC-SM	A-2, A-1	0	0	85-100	80-100	50-65	25-35	15-30	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
429: Huston, very stony surface--	0-1	Slightly decomposed plant material	PT	A-8	0-15	10-15	65-90	65-85	35-55	15-30	---	---
	1-6	Gravelly coarse sandy loam	SC-SM, SM, SC	A-1, A-2	0-15	10-15	65-90	60-85	35-55	15-30	15-25	NP-10
	6-13	Gravelly coarse sandy loam	SC-SM, SM, SC	A-1, A-2	0-15	10-15	65-90	65-85	35-55	15-30	15-25	NP-10
	13-26	Very gravelly coarse sandy loam	GM, SC, SC-SM	A-1, A-2	0-15	10-50	55-80	50-75	30-45	20-30	15-25	NP-10
	26-46	Very gravelly sandy loam, very gravelly coarse sandy loam	GC-GM, SC, GM	A-2, A-1	0-15	10-50	55-80	50-75	30-45	15-30	15-25	NP-10
	46-60	Stratified very gravelly coarse sandy loam to very gravelly fine sandy loam	GM, GC-GM	A-1, A-2	0-15	15-50	40-70	35-65	25-40	15-30	15-25	NP-5
503: Cartwright, dry	0-5	Loam	CL-ML, ML	A-4	0	0	100	75-100	65-90	50-70	25-35	5-10
	5-20	Fine gravelly loam	SC-SM, ML, SM	A-4, A-2	0	0	100	60-100	50-90	35-65	25-35	5-10
	20-24	Fine gravelly sandy clay loam	SC	A-6, A-2	0	0	85-100	50-90	45-75	25-40	30-40	10-20
	24-60	Fine gravelly sandy clay loam	SC	A-6, A-2	0	0	85-100	50-90	45-75	25-40	30-40	10-20
504: Cartwright, dry	0-5	Loam	CL-ML, ML	A-4	0	0	100	75-100	65-90	50-70	25-35	5-10
	5-20	Fine gravelly loam	SC-SM, ML, SM	A-4, A-2	0	0	100	60-100	50-90	35-65	25-35	5-10
	20-24	Fine gravelly sandy clay loam	SC	A-6, A-2	0	0	85-100	50-90	45-75	25-40	30-40	10-20
	24-60	Fine gravelly sandy clay loam	SC	A-6, A-2	0	0	85-100	50-90	45-75	25-40	30-40	10-20

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
505: Brownlee-----	0-4	Loam	CL, CL-ML	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	4-9	Loam	CL, CL-ML	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	9-16	Clay loam, loam	CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	30-40	10-15
	16-21	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	90-100	75-100	65-90	45-70	30-40	10-15
	21-27	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	85-100	60-100	55-90	40-70	30-40	10-15
	27-45	Sandy loam, fine gravelly sandy loam	SC, SC-SM	A-2, A-1	0	0	75-100	60-100	40-65	20-35	20-30	5-10
	45-50	Weathered bedrock			---	---	---	---	---	---	---	---
	50-60	Unweathered bedrock			---	---	---	---	---	---	---	---
506: Brownlee-----	0-4	Loam	CL-ML, CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	4-9	Loam	CL-ML, CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	9-16	Clay loam, loam	CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	30-40	10-15
	16-21	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	90-100	75-100	65-90	45-70	30-40	10-15
	21-27	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	85-100	60-100	55-90	40-70	30-40	10-15
	27-45	Sandy loam, fine gravelly sandy loam	SC, SC-SM	A-2, A-1	0	0	75-100	60-100	40-65	20-35	20-30	5-10
	45-50	Weathered bedrock			---	---	---	---	---	---	---	---
	50-60	Unweathered bedrock			---	---	---	---	---	---	---	---
Robbscreek-----	0-2	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	60-75	40-50	25-30	25-35	5-10
	2-6	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	60-75	40-50	25-30	25-35	5-10
	6-13	Fine gravelly coarse sandy loam	SC-SM, SC	A-2, A-1	0	0	85-100	60-75	40-50	25-30	25-35	5-15
	13-19	Fine gravelly loam, fine gravelly sandy clay loam	SC, GC	A-6, A-2	0	0-10	65-100	55-75	50-65	30-50	30-40	10-15
	19-26	Fine gravelly loam, fine gravelly sandy clay loam	GC, SC	A-6, A-2	0	0-10	65-100	55-75	50-65	30-50	30-40	10-15
	26-30	Fine gravelly loam, fine gravelly sandy clay loam	GC, SC	A-6, A-2	0	0-10	65-100	55-75	50-65	30-50	30-40	10-15
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
506:												
Whisk-----	0-3	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0	80-100	50-75	30-50	15-25	20-30	NP-5
	3-11	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM, SC-SM	A-1	0	0-10	80-100	55-75	35-50	20-25	20-30	NP-5
	11-14	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	80-100	55-75	35-50	20-25	20-30	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
507:												
Shoebend-----	0-7	Loam	CL-ML, ML	A-4	0	0	100	75-100	65-90	50-70	25-35	5-10
	7-14	Loam	CL-ML, ML	A-4	0	0	100	75-100	65-90	50-70	25-35	5-10
	14-20	Loam, sandy clay loam, clay loam	CL, SC, SM	A-6, A-7	0	0	100	75-100	65-90	35-70	35-45	10-20
	20-28	Loam, sandy clay loam, clay loam	CL, SC, SM	A-7, A-6	0	0	100	75-100	65-90	35-70	35-45	10-20
	28-34	Weathered bedrock			---	---	---	---	---	---	---	---
	34-44	Unweathered bedrock			---	---	---	---	---	---	---	---
Dobson-----	0-2	Fine gravelly coarse sandy loam	SC-SM, SC, SM	A-2, A-1	0	0	85-100	55-75	35-55	20-30	20-30	NP-10
	2-12	Fine gravelly coarse sandy loam, fine gravelly sandy loam, fine gravelly loam	SC-SM, SC, SM	A-2, A-4, A-1	0	0-10	85-100	55-75	35-65	20-45	20-30	NP-10
	12-14	Fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM, SC-SM	A-1	0	0-10	85-100	55-75	35-45	15-20	15-20	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Jerusalem-----	0-3	Loam	CL-ML, ML	A-4	0	0	100	70-100	65-90	50-70	25-35	5-10
	3-12	Loam	ML, CL-ML	A-4	0	0	100	75-100	65-90	50-70	25-35	5-10
	12-23	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	100	75-100	65-85	40-70	30-45	15-20
	23-38	Clay loam, sandy clay loam	CL, SC	A-6, A-7	0	0	100	75-100	50-85	40-70	30-45	15-20
	38-60	Loam, sandy clay loam, fine gravelly sandy loam	SC	A-6, A-2	0	0	100	50-80	35-70	20-45	30-40	10-15

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
509:												
Arrowrock-----	0-2	Fine gravelly loamy sand	SM	A-1	0	0	85-100	50-75	30-45	15-20	15-25	NP
	2-7	Fine gravelly loamy sand	SM, SP-SM	A-1	0	0	85-100	50-75	35-50	10-20	15-25	NP
	7-12	Fine gravelly sand, fine gravelly loamy sand, fine gravelly coarse sand	SP-SM	A-1	0	0	85-100	50-75	35-50	5-10	15-25	NP
	12-15	Weathered bedrock			---	---	---	---	---	---	---	---
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Borid-----	0-3	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-30	75-100	55-75	35-50	20-25	20-30	NP-5
	3-7	Very gravelly coarse sandy loam, very gravelly sandy loam	SC-SM, GW-GM, SM	A-1	0	0-15	50-90	35-50	20-35	10-20	20-30	NP-5
	7-15	Very gravelly coarse sandy loam, very gravelly sandy loam	GW-GM, SM	A-1	0	0-15	50-90	35-50	20-35	10-20	20-30	NP-5
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---
511:												
Olaton, north slope, moist---	0-7	Coarse sandy loam	SM	A-2, A-1	0	0	90-100	75-100	50-65	25-35	20-30	NP-5
	7-29	Coarse sandy loam	SM	A-1, A-2	0	0	90-100	75-100	50-65	25-35	20-30	NP-5
	29-42	Coarse sandy loam	SM	A-1, A-2	0	0	85-100	50-100	30-65	15-35	20-30	NP-5
	42-60	Fine gravelly coarse sandy loam	SM	A-1	0	0-10	85-100	50-75	30-50	15-25	20-30	NP-5
Roney, moist----	0-5	Fine gravelly coarse sandy loam	SM	A-1, A-2	0	0	85-100	60-75	45-50	20-30	20-30	NP-5
	5-17	Fine gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0	0-10	85-100	60-75	45-50	20-30	20-30	NP-5
	17-32	Fine gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0	0-10	75-100	55-75	35-50	15-30	20-30	NP-5
	32-38	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-10	75-100	55-75	35-50	15-30	15-25	NP-5
	38-48	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
513: Shimo, fine gravelly loamy sand, north slope-----	0-7	Fine gravelly loamy sand	SM, SW-SM, SC-SM	A-1	0	0-10	75-100	50-75	25-45	10-20	15-25	NP-5
	7-14	Fine gravelly loamy sand	SM, SC-SM, SW-SM	A-1	0	0-15	75-100	50-75	25-45	10-20	15-25	NP-5
	14-30	Very cobbly loamy sand, very gravelly loamy sand, extremely gravelly loamy sand	SM, GP, SC-SM, GP-GM	A-1	0	0-65	45-100	20-75	10-50	0-20	15-25	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
Cartwright-----	0-2	Loam	CL-ML, ML	A-4	0	0	95-100	75-100	65-90	50-70	25-35	5-10
	2-8	Loam	ML, CL-ML	A-4	0	0	95-100	75-100	65-100	50-70	25-35	5-10
	8-21	Loam	CL-ML, CL, ML	A-4	0	0	95-100	75-100	65-100	50-70	25-35	5-10
	21-33	Coarse sandy loam, loam, sandy loam	SC-SM, ML, CL	A-2, A-4	0	0	85-100	60-100	50-85	30-60	25-35	5-10
	33-48	Clay loam, loam	SC, CL	A-6, A-4	0	0	85-100	50-90	45-90	35-70	30-40	10-15
	48-60	Loam, sandy clay loam	CL, SC	A-6, A-4	0	0	85-100	50-90	45-80	35-55	30-40	10-15
Robbscreek, moist-----	0-10	Fine gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	85-100	65-85	45-55	20-30	25-35	5-10
	10-22	Fine gravelly sandy clay loam	SC	A-6, A-2	0	0-10	80-100	55-75	50-70	25-40	30-40	10-15
	22-30	Fine gravelly sandy clay loam	SC	A-2, A-6	0	0-10	80-100	55-75	50-65	25-40	30-40	10-15
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
516: Shimo, extremely stony surface--	0-4	Very stony loamy sand	SM, GP-GM	A-1	20-30	0-30	55-95	45-85	25-50	10-20	15-25	NP-5
	4-12	Very gravelly loamy sand, cobbly loamy sand	GP-GM, SM	A-1	0-30	0-30	55-95	45-85	25-50	10-20	15-25	NP-5
	12-20	Extremely gravelly loamy sand, very gravelly loamy coarse sand, very cobbly loamy sand	SP-SM, GP, SC-SM	A-1	0	0-65	25-85	20-75	10-50	0-20	15-25	NP-5
	20-24	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP, SP-SM, SC-SM	A-1	0	0-65	25-85	20-75	10-50	0-15	15-25	NP-5
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
516: Olaton, south slope-----	0-9	Fine gravelly coarse sandy loam	SM	A-1	0	0	85-100	50-75	30-50	15-25	20-30	NP-5
	9-25	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	25-40	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-10	75-100	50-75	30-50	15-30	20-30	NP-5
	40-60	Fine gravelly coarse sandy loam	SM, SC-SM	A-2, A-1	0	0-10	75-100	50-75	30-50	15-30	20-30	NP-5
Schiller, south slope-----	0-6	Gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0-10	0-10	60-80	55-75	35-60	15-25	20-30	NP-5
	6-18	Gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0-10	0-10	60-80	55-75	35-60	15-25	20-30	NP-5
	18-30	Very gravelly coarse sandy loam	SC-SM, GP-GM, SM	A-1	0	0-15	40-60	35-55	25-35	10-15	20-30	NP-5
	30-45	Extremely cobbly coarse sandy loam, very cobbly coarse sandy loam, very gravelly coarse sandy loam	SM, GP-GM, SC-SM	A-1, A-2	0-10	0-75	30-80	25-75	15-60	10-25	20-30	NP-5
	45-60	Very cobbly coarse sandy loam, extremely gravelly coarse sandy loam	SC-SM, GP-GM	A-1, A-2	0-40	0-75	30-80	25-75	15-60	10-25	15-25	NP-5
525: Robbscreek-----	0-2	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	60-75	40-50	25-30	25-35	5-10
	2-6	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	60-75	40-50	25-30	25-35	5-10
	6-13	Fine gravelly coarse sandy loam	SC-SM, SC	A-2, A-1	0	0	85-100	60-75	40-50	25-30	25-35	5-15
	13-19	Fine gravelly loam, fine gravelly sandy clay loam	SC, GC	A-6, A-2	0	0-10	65-100	55-75	50-65	30-50	30-40	10-15
	19-26	Fine gravelly loam, fine gravelly sandy clay loam	GC, SC	A-6, A-2	0	0-10	65-100	55-75	50-65	30-50	30-40	10-15
	26-30	Fine gravelly loam, fine gravelly sandy clay loam	GC, SC	A-6, A-2	0	0-10	65-100	55-75	50-65	30-50	30-40	10-15
	30-40	Unweathered bedrock				---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
525: Dobson-----	0-2	Fine gravelly coarse sandy loam	SC-SM, SC, SM	A-2, A-1	0	0	85-100	55-75	35-55	20-30	20-30	NP-10
	2-12	Fine gravelly coarse sandy loam, fine gravelly sandy loam, fine gravelly loam	SC-SM, SC, SM	A-2, A-4, A-1	0	0-10	85-100	55-75	35-65	20-45	20-30	NP-10
	12-14	Fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM, SC-SM	A-1	0	0-10	85-100	55-75	35-45	15-20	15-20	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Brownlee-----	0-4	Loam	CL-ML, CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	4-9	Loam	CL-ML, CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	9-16	Clay loam, loam	CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	30-40	10-15
	16-21	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	90-100	75-100	65-90	45-70	30-40	10-15
	21-27	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	85-100	60-100	55-90	40-70	30-40	10-15
	27-45	Sandy loam, fine gravelly sandy loam	SC, SC-SM	A-2, A-1	0	0	75-100	60-100	40-65	20-35	20-30	5-10
	45-50	Weathered bedrock			---	---	---	---	---	---	---	---
	50-60	Unweathered bedrock			---	---	---	---	---	---	---	---
526: Cartwright-----	0-2	Loam	CL-ML, ML	A-4	0	0	95-100	75-100	65-90	50-70	25-35	5-10
	2-8	Loam	ML, CL-ML	A-4	0	0	95-100	75-100	65-100	50-70	25-35	5-10
	8-21	Loam	CL-ML, CL, ML	A-4	0	0	95-100	75-100	65-100	50-70	25-35	5-10
	21-33	Coarse sandy loam, sandy loam, loam	SC-SM, ML, CL	A-2, A-4	0	0	85-100	60-100	50-85	30-60	25-35	5-10
	33-48	Clay loam, loam	SC, CL	A-6, A-4	0	0	85-100	50-90	45-90	35-70	30-40	10-15
	48-60	Loam, sandy clay loam	CL, SC	A-6, A-4	0	0	85-100	50-90	45-80	35-55	30-40	10-15
Brownlee, moist	0-10	Loam	ML, CL-ML	A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-10
	10-31	Fine gravelly sandy clay loam, sandy clay loam	SC	A-6, A-4	0	0	90-100	75-100	65-85	40-45	30-40	10-15
	31-46	Fine gravelly sandy loam	SC, SC-SM	A-2, A-1	0	0	80-100	60-80	35-50	20-30	20-30	5-10
	46-60	Weathered bedrock	SM	A-1, A-2	---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
526: Robbscreek, moist-----	0-10	Fine gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	85-100	65-85	45-55	20-30	25-35	5-10
	10-22	Fine gravelly sandy clay loam	SC	A-6, A-2	0	0-10	80-100	55-75	50-70	25-40	30-40	10-15
	22-30	Fine gravelly sandy clay loam	SC	A-2, A-6	0	0-10	80-100	55-75	50-65	25-40	30-40	10-15
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
527: Dobson-----	0-2	Fine gravelly coarse sandy loam	SC-SM, SC, SM	A-2, A-1	0	0	85-100	55-75	35-55	20-30	20-30	NP-10
	2-12	Fine gravelly coarse sandy loam, fine gravelly sandy loam, fine gravelly loam	SC-SM, SC, SM	A-2, A-4, A-1	0	0-10	85-100	55-75	35-65	20-45	20-30	NP-10
	12-14	Fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM, SC-SM	A-1	0	0-10	85-100	55-75	35-45	15-20	15-20	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Roney, dry-----	0-2	Fine gravelly coarse sandy loam	SM	A-1	0	0	85-100	60-75	40-50	20-25	20-30	NP-5
	2-12	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1	0	0-10	85-100	60-75	40-50	20-25	20-30	NP-5
	12-17	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	85-100	60-75	35-50	20-25	20-30	NP-5
	17-30	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	80-100	55-75	35-50	20-25	20-30	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
528: Roney, dry-----	0-2	Fine gravelly coarse sandy loam	SM	A-1	0	0	85-100	60-75	40-50	20-25	20-30	NP-5
	2-12	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1	0	0-10	85-100	60-75	40-50	20-25	20-30	NP-5
	12-17	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	85-100	60-75	35-50	20-25	20-30	NP-5
	17-30	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	80-100	55-75	35-50	20-25	20-30	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
Dobson-----	0-2	Fine gravelly coarse sandy loam	SC-SM, SC, SM	A-2, A-1	0	0	85-100	55-75	35-55	20-30	20-30	NP-10
	2-12	Fine gravelly coarse sandy loam, fine gravelly sandy loam, fine gravelly loam	SC-SM, SC, SM	A-2, A-4, A-1	0	0-10	85-100	55-75	35-65	20-45	20-30	NP-10
	12-14	Fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM, SC-SM	A-1	0	0-10	85-100	55-75	35-45	15-20	15-20	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Olaton, south slope-----	0-9	Fine gravelly coarse sandy loam	SM	A-1	0	0	85-100	50-75	30-50	15-25	20-30	NP-5
	9-25	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	25-40	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-10	75-100	50-75	30-50	15-30	20-30	NP-5
	40-60	Fine gravelly coarse sandy loam	SM, SC-SM	A-2, A-1	0	0-10	75-100	50-75	30-50	15-30	20-30	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
529: Roney-----	0-10	Fine gravelly coarse sandy loam	SM	A-1, A-2	0	0	85-100	60-75	40-50	20-30	20-30	NP-5
	10-24	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1, A-2	0	0-10	80-100	55-75	40-50	15-30	20-30	NP-5
	24-30	Fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM, SC-SM, SP-SM	A-1	0	0-10	80-100	55-75	30-45	10-20	15-25	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
Kisky, fine gravelly sandy loam-----	0-7	Fine gravelly sandy loam	SM, SW-SM	A-1	0	0-25	75-100	50-75	25-45	10-25	0-20	NP
	7-12	Extremely gravelly loamy sand, very gravelly loamy sand	SP-SM, SP	A-1	0	0-40	55-100	15-50	5-30	0-10	0-10	NP
	12-22	Unweathered bedrock			---	---	---	---	---	---	---	---
Olaton, south slope-----	0-9	Fine gravelly coarse sandy loam	SM	A-1	0	0	85-100	50-75	30-50	15-25	20-30	NP-5
	9-25	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	25-40	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-10	75-100	50-75	30-50	15-30	20-30	NP-5
	40-60	Fine gravelly coarse sandy loam	SM, SC-SM	A-2, A-1	0	0-10	75-100	50-75	30-50	15-30	20-30	NP-5
532: Schiller, north slope-----	0-6	Gravelly coarse sandy loam	SC-SM, SM	A-1	0	0	75-95	55-75	35-50	15-25	20-30	NP-5
	6-18	Gravelly coarse sandy loam	SC-SM, SM	A-1	0	0	75-95	55-75	35-50	15-25	20-30	NP-5
	18-36	Very gravelly coarse sandy loam	SC-SM, SM, GP-GM	A-1	0	0-10	45-70	35-55	20-35	10-15	20-30	NP-5
	36-60	Very cobbly coarse sandy loam	GP-GM, SM, SC-SM	A-1	0	0-60	30-85	25-75	15-50	10-25	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
532: Shimo, fine gravelly loamy sand, north slope-----	0-7	Fine gravelly loamy sand	SM, SW-SM, SC-SM	A-1	0	0-10	75-100	50-75	25-45	10-20	15-25	NP-5
	7-14	Fine gravelly loamy sand	SM, SC-SM, SW-SM	A-1	0	0-15	75-100	50-75	25-45	10-20	15-25	NP-5
	14-30	Very cobbly loamy sand, very gravelly loamy sand, extremely gravelly loamy sand	SM, GP, SC-SM, GP-GM	A-1	0	0-65	45-100	20-75	10-50	0-20	15-25	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
533: Olaton, north slope, dry-----	0-5	Fine gravelly coarse sandy loam	SM	A-1	0	0	85-100	50-75	30-50	15-25	20-30	NP-5
	5-22	Fine gravelly coarse sandy loam	SM	A-1	0	0	85-100	50-75	30-50	15-25	20-30	NP-5
	22-38	Fine gravelly coarse sandy loam	SM	A-1	0-10	0-10	75-100	50-75	30-50	15-25	20-30	NP-5
	38-55	Fine gravelly loamy coarse sand	SM, SW-SM	A-1	0-10	0-10	75-100	50-75	25-45	10-20	20-30	NP-5
	55-65	Very gravelly sandy loam, fine gravelly sandy loam, very gravelly loamy coarse sand	SM, SW-SM	A-1	0-10	0-25	75-100	50-75	25-45	10-20	20-30	NP-5
Roney, moist----	0-5	Fine gravelly coarse sandy loam	SM	A-1, A-2	0	0	85-100	60-75	45-50	20-30	20-30	NP-5
	5-17	Fine gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0	0-10	85-100	60-75	45-50	20-30	20-30	NP-5
	17-32	Fine gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0	0-10	75-100	55-75	35-50	15-30	20-30	NP-5
	32-38	Fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-10	75-100	55-75	35-50	15-30	15-25	NP-5
	38-48	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
534: Shimo, fine gravelly loamy sand-----	0-3	Fine gravelly loamy sand	SC-SM, SP-SM	A-1	0-10	0-10	60-95	50-75	25-45	10-15	15-25	NP-5
	3-12	Fine gravelly loamy sand	SM, SP-SM, SC-SM	A-1	0	0-10	60-95	50-75	25-45	10-15	15-25	NP-5
	12-25	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	SC-SM, SP, SP-SM	A-1	0	0-65	50-90	20-75	10-45	0-15	15-25	NP-5
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
Kisky, fine gravelly sandy loam-----	0-7	Fine gravelly sandy loam	SM, SW-SM	A-1	0	0-25	75-100	50-75	25-45	10-25	0-20	NP
	7-12	Extremely gravelly loamy sand, very gravelly loamy sand	SP-SM, SP	A-1	0	0-40	55-100	15-50	5-30	0-10	0-10	NP
	12-22	Unweathered bedrock			---	---	---	---	---	---	---	---
Schiller-----	0-3	Gravelly coarse sandy loam	SC-SM, SM	A-1	0-10	0-10	65-90	55-75	35-50	15-25	20-30	NP-5
	3-13	Gravelly coarse sandy loam	SM, SC-SM	A-1	0-10	0-10	65-90	50-75	35-50	15-25	20-30	NP-5
	13-21	Very gravelly coarse sandy loam	SM, SC-SM, GW-GM	A-1	0	0-15	45-90	35-55	25-35	10-15	20-30	NP-5
	21-27	Very gravelly coarse sandy loam	GW-GM, SC-SM, SM	A-1	0	0-15	40-90	35-55	25-35	10-15	20-30	NP-5
	27-46	Extremely cobbly coarse sandy loam, very gravelly coarse sandy loam	GW-GM, SC-SM, SM	A-1	0	0-75	30-85	25-75	15-50	10-25	15-25	NP-5
	46-60	Extremely cobbly loamy coarse sand, extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, SP-SM, SC-SM	A-1	0-40	0-75	30-85	25-75	20-45	5-20	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
538: Borid-----	0-3	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-30	75-100	55-75	35-50	20-25	20-30	NP-5
	3-7	Very gravelly coarse sandy loam, very gravelly sandy loam	SC-SM, GW-GM, SM	A-1	0	0-15	50-90	35-50	20-35	10-20	20-30	NP-5
	7-15	Very gravelly coarse sandy loam, very gravelly sandy loam	GW-GM, SM	A-1	0	0-15	50-90	35-50	20-35	10-20	20-30	NP-5
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Shimo, fine gravelly loamy sand-----	0-3	Fine gravelly loamy sand	SC-SM, SP-SM	A-1	0-10	0-10	60-95	50-75	25-45	10-15	15-25	NP-5
	3-12	Fine gravelly loamy sand	SM, SP-SM, SC-SM	A-1	0	0-10	60-95	50-75	25-45	10-15	15-25	NP-5
	12-25	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	SC-SM, SP, SP-SM	A-1	0	0-65	50-90	20-75	10-45	0-15	15-25	NP-5
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
541: Roney-----	0-10	Fine gravelly coarse sandy loam	SM	A-1, A-2	0	0	85-100	60-75	40-50	20-30	20-30	NP-5
	10-24	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1, A-2	0	0-10	80-100	55-75	40-50	15-30	20-30	NP-5
	24-30	Fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM, SC-SM, SP-SM	A-1	0	0-10	80-100	55-75	30-45	10-20	15-25	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
Kisky, fine gravelly sandy loam-----	0-7	Fine gravelly sandy loam	SM, SW-SM	A-1	0	0-25	75-100	50-75	25-45	10-25	0-20	NP
	7-12	Extremely gravelly loamy sand, very gravelly loamy sand	SP-SM, SP	A-1	0	0-40	55-100	15-50	5-30	0-10	0-10	NP
	12-22	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
544: Arrowrock-----	0-2	Fine gravelly loamy sand	SM	A-1	0	0	85-100	50-75	30-45	15-20	15-25	NP
	2-7	Fine gravelly loamy sand	SM, SP-SM	A-1	0	0	85-100	50-75	35-50	10-20	15-25	NP
	7-12	Fine gravelly sand, fine gravelly loamy sand, fine gravelly coarse sand	SP-SM	A-1	0	0	85-100	50-75	35-50	5-10	15-25	NP
	12-15	Weathered bedrock			---	---	---	---	---	---	---	---
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Borid-----	0-3	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-30	75-100	55-75	35-50	20-25	20-30	NP-5
	3-7	Very gravelly coarse sandy loam, very gravelly sandy loam	SC-SM, GW-GM, SM	A-1	0	0-15	50-90	35-50	20-35	10-20	20-30	NP-5
	7-15	Very gravelly coarse sandy loam, very gravelly sandy loam	GW-GM, SM	A-1	0	0-15	50-90	35-50	20-35	10-20	20-30	NP-5
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Painter-----	0-2	Sandy loam	SM	A-2, A-1	0	0	90-100	75-100	50-65	25-35	15-25	NP
	2-18	Fine gravelly sand, loamy sand	SM, SP-SM	A-1, A-2	0	0	85-100	50-100	30-70	10-25	15-25	NP
	18-24	Fine gravelly sand, loamy sand	SM, SP-SM	A-1, A-2	0	0	85-100	50-100	30-60	5-20	15-25	NP
	24-36	Weathered bedrock			---	---	---	---	---	---	---	---
	36-46	Unweathered bedrock			---	---	---	---	---	---	---	---
551: Shimo, fine gravelly loamy sand, north slope-----	0-7	Fine gravelly loamy sand	SM, SW-SM, SC-SM	A-1	0	0-10	75-100	50-75	25-45	10-20	15-25	NP-5
	7-14	Fine gravelly loamy sand	SM, SC-SM, SW-SM	A-1	0	0-15	75-100	50-75	25-45	10-20	15-25	NP-5
	14-30	Very cobbly loamy sand, extremely gravelly loamy sand, very gravelly loamy sand	SM, GP, SC- SM, GP-GM	A-1	0	0-65	45-100	20-75	10-50	0-20	15-25	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
551: Kisky, fine gravelly loamy sand-----	0-10	Fine gravelly loamy sand	SM, SW-SM, SC-SM	A-1	0	0-10	75-100	50-75	25-50	10-20	15-25	NP-5
	10-16	Very gravelly loamy sand	SP-SM, SP	A-1	0	0-10	65-100	15-50	10-40	0-10	15-25	NP-5
	16-26	Unweathered bedrock			---	---	---	---	---	---	---	---
555: Brownlee-----	0-4	Loam	CL-ML, CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	4-9	Loam	CL-ML, CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	9-16	Clay loam, loam	CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	30-40	10-15
	16-21	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	90-100	75-100	65-90	45-70	30-40	10-15
	21-27	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	85-100	60-100	55-90	40-70	30-40	10-15
	27-45	Sandy loam, fine gravelly sandy loam	SC, SC-SM	A-2, A-1	0	0	75-100	60-100	40-65	20-35	20-30	5-10
	45-50	Weathered bedrock			---	---	---	---	---	---	---	---
	50-60	Unweathered bedrock			---	---	---	---	---	---	---	---
Schiller-----	0-3	Gravelly coarse sandy loam	SC-SM, SM	A-1	0-10	0-10	65-90	55-75	35-50	15-25	20-30	NP-5
	3-13	Gravelly coarse sandy loam	SM, SC-SM	A-1	0-10	0-10	65-90	50-75	35-50	15-25	20-30	NP-5
	13-21	Very gravelly coarse sandy loam	SM, SC-SM, GW-GM	A-1	0	0-15	45-90	35-55	25-35	10-15	20-30	NP-5
	21-27	Very gravelly coarse sandy loam	GW-GM, SC-SM, SM	A-1	0	0-15	40-90	35-55	25-35	10-15	20-30	NP-5
	27-46	Extremely cobbly coarse sandy loam, very gravelly coarse sandy loam	GW-GM, SC-SM, SM	A-1	0	0-75	30-85	25-75	15-50	10-25	15-25	NP-5
	46-60	Extremely cobbly loamy coarse sand, extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, SC-SM, SP-SM	A-1	0-40	0-75	30-85	25-75	20-45	5-20	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
556: Kisky, fine gravelly sandy loam-----	0-7	Fine gravelly sandy loam	SM, SW-SM	A-1	0	0-25	75-100	50-75	25-45	10-25	0-20	NP
	7-12	Extremely gravelly loamy sand, very gravelly loamy sand	SP-SM, SP	A-1	0	0-40	55-100	15-50	5-30	0-10	0-10	NP
	12-22	Unweathered bedrock			---	---	---	---	---	---	---	---
Shimo, fine gravelly loamy sand-----	0-3	Fine gravelly loamy sand	SC-SM, SP-SM	A-1	0-10	0-10	60-95	50-75	25-45	10-15	15-25	NP-5
	3-12	Fine gravelly loamy sand	SM, SP-SM, SC-SM	A-1	0	0-10	60-95	50-75	25-45	10-15	15-25	NP-5
	12-25	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	SC-SM, SP-SM, SP	A-1	0	0-65	50-90	20-75	10-45	0-15	15-25	NP-5
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
Brownlee-----	0-4	Loam	CL-ML, CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	4-9	Loam	CL-ML, CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	25-35	5-15
	9-16	Clay loam, loam	CL	A-6, A-4	0	0	90-100	75-100	65-90	50-70	30-40	10-15
	16-21	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	90-100	75-100	65-90	45-70	30-40	10-15
	21-27	Clay loam, sandy clay loam	SC, CL	A-6, A-4	0	0	85-100	60-100	55-90	40-70	30-40	10-15
	27-45	Sandy loam, fine gravelly sandy loam	SC, SC-SM	A-2, A-1	0	0	75-100	60-100	40-65	20-35	20-30	5-10
	45-50	Weathered bedrock			---	---	---	---	---	---	---	---
50-60	Unweathered bedrock			---	---	---	---	---	---	---	---	
558: Kisky, fine gravelly sandy loam-----	0-7	Fine gravelly sandy loam	SM, SW-SM	A-1	0	0-25	75-100	50-75	25-45	10-25	0-20	NP
	7-12	Extremely gravelly loamy sand, very gravelly loamy sand	SP-SM, SP	A-1	0	0-40	55-100	15-50	5-30	0-10	0-10	NP
	12-22	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
558: Whisk-----	0-3	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0	80-100	50-75	30-50	15-25	20-30	NP-5
	3-11	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM, SC-SM	A-1	0	0-10	80-100	55-75	35-50	20-25	20-30	NP-5
	11-14	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	80-100	55-75	35-50	20-25	20-30	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Roney, dry-----	0-2	Fine gravelly coarse sandy loam	SM	A-1	0	0	85-100	60-75	40-50	20-25	20-30	NP-5
	2-12	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1	0	0-10	85-100	60-75	40-50	20-25	20-30	NP-5
	12-17	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	85-100	60-75	35-50	20-25	20-30	NP-5
	17-30	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	80-100	55-75	35-50	20-25	20-30	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
560: Robbscreek, moist-----	0-10	Fine gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	85-100	65-85	45-55	20-30	25-35	5-10
	10-22	Fine gravelly sandy clay loam	SC	A-6, A-2	0	0-10	80-100	55-75	50-70	25-40	30-40	10-15
	22-30	Fine gravelly sandy clay loam	SC	A-2, A-6	0	0-10	80-100	55-75	50-65	25-40	30-40	10-15
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
560: Hellake-----	0-3	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	3-10	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	10-22	Clay loam, loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	22-36	Clay loam, loam	CL	A-6, A-4	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	36-43	Clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-75	35-45	15-20
	43-53	Very gravelly loam, very gravelly sandy loam	GC-GM, GC	A-1, A-2	0	0-25	30-60	25-60	15-40	10-25	25-40	5-15
	53-60	Very gravelly sandy loam, very gravelly loamy sand	GC-GM, GP-GM, GC	A-4, A-1	0	0-25	30-60	25-60	15-55	10-40	15-30	NP-10
	60-66	Extremely gravelly loamy sand, very gravelly sandy loam	GC, GP-GM	A-4, A-1	0	0-25	30-65	25-60	15-55	10-40	15-30	NP-10
Shimo, fine gravelly loamy sand, north slope-----	0-7	Fine gravelly loamy sand	SM, SW-SM, SC-SM	A-1	0	0-10	75-100	50-75	25-45	10-20	15-25	NP-5
	7-14	Fine gravelly loamy sand	SM, SC-SM, SW-SM	A-1	0	0-15	75-100	50-75	25-45	10-20	15-25	NP-5
	14-30	Very cobbly loamy sand, very gravelly loamy sand, extremely gravelly loamy sand	SM, GP, SC- SM, GP-GM	A-1	0	0-65	45-100	20-75	10-50	0-20	15-25	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
561: Shimo, fine gravelly sandy loam, north slope-----	0-11	Fine gravelly sandy loam	SM, SW-SM, SC-SM	A-1	0	0-10	75-95	50-75	25-50	10-15	15-25	NP-5
	11-16	Extremely gravelly loamy sand, very gravelly loamy sand, very cobbly loamy sand	SP-SM, SP	A-1	0	0-55	55-90	20-50	10-25	0-10	15-25	NP-5
	16-32	Very cobbly loamy sand, very gravelly loamy sand, extremely cobbly loamy sand	SP, SP-SM, SW-SM	A-1	0	0-55	55-90	20-50	10-25	0-10	15-25	NP-5
	32-42	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
561: Kisky, fine gravelly loamy sand-----	0-10	Fine gravelly loamy sand	SM, SW-SM, SC-SM	A-1	0	0-10	75-100	50-75	25-50	10-20	15-25	NP-5
	10-16	Very gravelly loamy sand	SP-SM, SP	A-1	0	0-10	65-100	15-50	10-40	0-10	15-25	NP-5
	16-26	Unweathered bedrock			---	---	---	---	---	---	---	---
Olaton, north slope, moist---	0-7	Coarse sandy loam	SM	A-2, A-1	0	0	90-100	75-100	50-65	25-35	20-30	NP-5
	7-29	Coarse sandy loam	SM	A-1, A-2	0	0	90-100	75-100	50-65	25-35	20-30	NP-5
	29-42	Coarse sandy loam	SM	A-1, A-2	0	0	85-100	50-100	30-65	15-35	20-30	NP-5
	42-60	Fine gravelly coarse sandy loam	SM	A-1	0	0-10	85-100	50-75	30-50	15-25	20-30	NP-5
562: Kisky, fine gravelly sandy loam-----	0-7	Fine gravelly sandy loam	SM, SW-SM	A-1	0	0-25	75-100	50-75	25-45	10-25	0-20	NP
	7-12	Extremely gravelly loamy sand, very gravelly loamy sand	SP-SM, SP	A-1	0	0-40	55-100	15-50	5-30	0-10	0-10	NP
	12-22	Unweathered bedrock			---	---	---	---	---	---	---	---
Shimo, fine gravelly sandy loam-----	0-8	Fine gravelly sandy loam	SM	A-1	0	0	70-95	50-75	30-45	15-25	0-10	NP
	8-32	Extremely gravelly loamy sand, very gravelly loamy sand, extremely cobblely loamy sand	SM, GP	A-1	0	0-65	45-90	20-75	10-50	0-20	0-10	NP
	32-42	Unweathered bedrock			---	---	---	---	---	---	---	---
Roney-----	0-10	Fine gravelly coarse sandy loam	SM	A-1, A-2	0	0	85-100	60-75	40-50	20-30	20-30	NP-5
	10-24	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1, A-2	0	0-10	80-100	55-75	40-50	15-30	20-30	NP-5
	24-30	Fine gravelly coarse sandy loam, fine gravelly loamy coarse sand	SM, SC-SM, SP-SM	A-1	0	0-10	80-100	55-75	30-45	10-20	15-25	NP-5
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In			Pct	Pct					Pct	
600:												
McDesh-----	0-3	Loam	CL	A-6	0	0	95-100	90-100	85-90	65-75	30-40	10-15
	3-11	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	90-100	70-80	35-45	15-20
	11-21	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	21-24	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Immig, rubbly surface-----	0-4	Very stony loam	CL, ML, GM	A-6, A-4	30-45	10-45	70-95	65-90	55-80	45-65	30-40	5-15
	4-7	Very cobbly clay loam	CL	A-7, A-6	0-15	20-45	65-95	60-90	55-85	50-65	35-45	15-20
	7-17	Very cobbly silty clay	CH, GC	A-7	0-15	20-55	55-85	50-80	45-80	45-75	50-85	25-50
	17-25	Extremely cobbly silty clay	GC, CH	A-7	0-15	10-75	50-90	45-85	45-85	40-75	50-85	25-50
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
Gwin, very stony loam, extremely stony surface--	0-4	Very stony loam	GC-GM, SC	A-4, A-6	15-25	15-50	60-85	55-80	50-75	35-50	25-35	5-15
	4-7	Very stony loam	GC-GM, SC	A-6, A-4	15-25	25-50	60-85	55-80	50-75	35-50	25-35	5-15
	7-13	Extremely cobbly clay loam	GC, SC	A-7, A-6	0-15	25-55	55-80	50-75	45-70	35-50	35-45	15-20
	13-22	Unweathered bedrock			---	---	---	---	---	---	---	---
601:												
Hann-----	0-3	Silt loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	10-20
	3-6	Silt loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-45	15-25
	6-13	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	70-90	45-55	25-35
	13-25	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	65-90	45-55	25-35
	25-44	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
	44-72	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
Gwin, very stony loam, extremely stony surface--	0-4	Very stony loam	SC, GC-GM	A-6, A-4	15-25	15-50	60-85	55-80	50-75	35-50	25-35	5-15
	4-7	Very stony loam	SC, GC-GM	A-4, A-6	15-25	25-50	60-85	55-80	50-75	35-50	25-35	5-15
	7-13	Extremely cobbly clay loam	GC, SC	A-7, A-6	0-15	25-55	55-80	50-75	45-70	35-50	35-45	15-20
	13-22	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
601: Shafer-----	0-1	Clay loam	CH, CL	A-7	0	0	95-100	90-100	85-95	70-75	40-50	15-25
	1-7	Silty clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	85-95	80-90	45-65	20-35
	7-18	Clay, silty clay	CH	A-7	0	0	95-100	90-100	85-95	80-90	60-85	30-50
	18-22	Silty clay, clay loam	CL	A-7	0	0	80-100	75-100	65-95	55-80	40-50	20-25
	22-25	Weathered bedrock			---	---	---	---	---	---	---	---
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
602: Hillcreek-----	0-2	Ashy loam	CL	A-6, A-4	0	0	95-100	90-100	85-90	65-70	30-40	10-15
	2-10	Ashy loam	CL	A-6, A-4	0	0	95-100	90-100	85-90	65-70	30-40	10-15
	10-27	Ashy silt loam, ashy loam	CL	A-6, A-4	0	0	95-100	90-100	85-90	70-75	30-40	10-15
	27-43	Silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	90-95	75-80	35-45	15-20
	43-59	Silty clay loam, clay loam	CL	A-7, A-6	0	0-20	80-95	75-90	70-90	55-80	35-45	15-20
	59-66	Gravelly loam, gravelly clay loam	CL	A-7, A-6	0	0-20	65-95	60-90	60-85	50-70	35-45	15-20
Hovelton, cobbly ashy loam, moist, very stony surface--	0-12	Cobbly ashy loam	GC-GM, CL, SC	A-4, A-2	0-20	10-40	55-85	50-80	45-70	35-55	25-30	5-10
	12-22	Very gravelly loam, very cobbly clay loam	GC, CL	A-7, A-6, A-2	0-20	35-60	45-85	40-80	35-70	30-55	35-45	15-20
	22-32	Unweathered bedrock			---	---	---	---	---	---	---	---
Hann-----	0-3	Silt loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	10-20
	3-6	Silt loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-45	15-25
	6-13	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	70-90	45-55	25-35
	13-25	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	65-90	45-55	25-35
	25-44	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
	44-72	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
604: Shafer-----	0-1	Clay loam	CH, CL	A-7	0	0	95-100	90-100	85-95	70-75	40-50	15-25
	1-7	Silty clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	85-95	80-90	45-65	20-35
	7-18	Clay, silty clay	CH	A-7	0	0	95-100	90-100	85-95	80-90	60-85	30-50
	18-22	Silty clay, clay loam	CL	A-7	0	0	80-100	75-100	65-95	55-80	40-50	20-25
	22-25	Weathered bedrock			---	---	---	---	---	---	---	---
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
604:												
Hann-----	0-3	Silt loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	10-20
	3-6	Silt loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-45	15-25
	6-13	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	70-90	45-55	25-35
	13-25	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	65-90	45-55	25-35
	25-44	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
	44-72	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
605:												
Gwin, very stony loam, extremely stony surface--	0-4	Very stony loam	SC, GC-GM	A-6, A-4	15-25	15-50	60-85	55-80	50-75	35-50	25-35	5-15
	4-7	Very stony loam	SC, GC-GM	A-4, A-6	15-25	25-50	60-85	55-80	50-75	35-50	25-35	5-15
	7-13	Extremely cobbly clay loam	GC, SC	A-7, A-6	0-15	25-55	55-80	50-75	45-70	35-50	35-45	15-20
	13-22	Unweathered bedrock			---	---	---	---	---	---	---	---
Flybow-----	0-3	Very gravelly loam	GM	A-1, A-2	0	0-15	35-55	30-50	25-50	20-35	20-30	NP-5
	3-8	Extremely gravelly loam	GM, GP-GM	A-1	0	0-15	20-30	15-25	10-20	5-20	20-30	NP-5
	8-18	Unweathered bedrock			---	---	---	---	---	---	---	---
606:												
Hillcreek-----	0-2	Ashy loam	CL	A-6, A-4	0	0	95-100	90-100	85-90	65-70	30-40	10-15
	2-10	Ashy loam	CL	A-6, A-4	0	0	95-100	90-100	85-90	65-70	30-40	10-15
	10-27	Ashy silt loam, ashy loam	CL	A-6, A-4	0	0	95-100	90-100	85-90	70-75	30-40	10-15
	27-43	Silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	90-100	90-95	75-80	35-45	15-20
	43-59	Silty clay loam, clay loam	CL	A-7, A-6	0	0-20	80-95	75-90	70-90	55-80	35-45	15-20
	59-66	Gravelly loam, gravelly clay loam	CL	A-7, A-6	0	0-20	65-95	60-90	60-85	50-70	35-45	15-20
Hovelton, cobbly ashy loam, moist, very stony surface--	0-12	Cobbly ashy loam	SC, GC-GM, CL	A-4, A-2	0-20	10-40	55-85	50-80	45-70	35-55	25-30	5-10
	12-22	Very cobbly clay loam, very gravelly loam	GC, CL	A-7, A-6, A-2	0-20	35-60	45-85	40-80	35-70	30-55	35-45	15-20
	22-32	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
607: Duco, stony loam, very stony surface--	0-3	Stony loam	ML, CL	A-4, A-6	10-20	0-25	80-95	75-90	65-80	50-65	30-40	5-15
	3-15	Extremely stony clay loam	CL	A-7, A-6	40-65	10-45	70-95	65-90	60-85	50-70	35-45	15-20
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Immig, very stony surface--	0-4	Extremely cobbly loam	CL, GM	A-6, A-2	0-15	30-60	55-90	50-85	40-75	30-55	30-40	5-15
	4-10	Very gravelly silty clay loam	CL	A-7, A-6	0-10	10-40	60-90	55-85	50-80	50-75	40-50	15-25
	10-14	Very cobbly silty clay, very gravelly clay	CH	A-7	0-10	10-45	60-90	55-85	50-80	50-75	50-85	25-50
	14-25	Very gravelly clay, extremely gravelly silty clay	GC, CH	A-7, A-2	0-10	10-45	30-65	25-60	20-55	20-55	50-85	25-50
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
Rubble land-----	0-20	Fragmental material			---	---	---	---	---	---	---	---
	20-30	Unweathered bedrock			---	---	---	---	---	---	---	---
608: Duco, very gravelly loam, stony surface--	0-4	Very gravelly loam	GM, GC	A-6, A-2, A-1	0-10	0-10	40-55	35-50	35-45	25-40	30-40	5-15
	4-13	Very gravelly loam	GC, GM	A-2, A-1	0	0-15	45-55	40-50	35-45	25-35	30-40	5-15
	13-19	Very gravelly loam, extremely gravelly clay loam	GC, GP-GC	A-2	0	0-15	15-45	15-45	10-40	10-30	35-45	15-20
	19-29	Unweathered bedrock			---	---	---	---	---	---	---	---
Hovelton, gravelly ashy loam-----	0-7	Gravelly ashy loam	GC-GM, ML, SM, SC-SM	A-4	0	0-30	60-90	55-85	50-75	35-55	25-35	5-10
	7-17	Very cobbly ashy loam	GC-GM, ML, SC-SM, SM	A-4	0	10-55	60-90	55-85	50-75	35-55	25-35	5-10
	17-38	Extremely gravelly loam, extremely cobbly clay loam	GC	A-2, A-6, A-7	0-10	10-65	50-75	45-70	40-65	30-50	35-45	15-20
	38-48	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
608: McDesh, south slope-----	0-3	Loam	CL	A-6	0	0	95-100	90-100	85-90	65-75	30-40	10-15
	3-8	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	8-37	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	37-47	Unweathered bedrock			---	---	---	---	---	---	---	---
610: Hovelton, cobbly ashy loam, very stony surface--	0-2	Cobbly ashy loam	GC-GM, CL	A-4, A-2	10-20	10-40	55-85	50-80	45-70	35-55	25-30	5-10
	2-6	Cobbly ashy loam	GC-GM, ML	A-4, A-2	10-20	10-40	55-85	50-80	45-75	35-60	25-35	5-10
	6-13	Very cobbly ashy loam	GC	A-2, A-6, A-4	0-20	10-60	45-70	40-65	35-60	25-40	30-40	10-15
	13-24	Extremely stony loam, extremely cobbly clay loam	GC	A-2, A-6, A-4	0-45	20-60	45-75	35-65	30-60	30-50	30-40	10-15
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Duco, stony loam, very stony surface--	0-3	Stony loam	ML, CL	A-4, A-6	10-20	0-25	80-95	75-90	65-80	50-65	30-40	5-15
	3-15	Extremely stony clay loam	CL	A-7, A-6	40-65	10-45	70-95	65-90	60-85	50-70	35-45	15-20
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
McDesh, south slope-----	0-3	Loam	CL	A-6	0	0	95-100	90-100	85-90	65-75	30-40	10-15
	3-8	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	8-37	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	37-47	Unweathered bedrock			---	---	---	---	---	---	---	---
612: Hann-----	0-3	Silt loam	CL	A-6	0	0	95-100	90-100	85-100	80-90	30-40	10-20
	3-6	Silt loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	85-100	80-90	35-45	15-25
	6-13	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	70-90	45-55	25-35
	13-25	Silty clay, clay	CH, CL	A-7	0	0	85-100	75-100	70-100	65-90	45-55	25-35
	25-44	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20
	44-72	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	70-100	65-90	30-40	10-20

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
612: Hillcreek, dry--	0-6	Ashy loam	CL	A-6, A-4	0	0	95-100	90-100	80-90	60-70	30-40	10-15
	6-12	Ashy loam	CL	A-7, A-6	0	0	95-100	90-100	80-90	60-75	35-45	15-20
	12-22	Ashy loam	CL	A-7, A-6	0	0	80-95	75-90	70-85	50-70	35-45	15-20
	22-36	Clay loam	CL	A-7, A-6	0	0	80-95	75-90	70-85	50-70	35-45	15-20
	36-60	Gravelly loam	GC, SC	A-7, A-6	0	0-20	65-80	60-75	50-65	40-50	35-45	15-20
613: Duco, stony loam, very stony surface--	0-3	Stony loam	ML, CL	A-4, A-6	10-20	0-25	80-95	75-90	65-80	50-65	30-40	5-15
	3-15	Extremely stony clay loam	CL	A-7, A-6	40-65	10-45	70-95	65-90	60-85	50-70	35-45	15-20
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
Searles, very stony surface--	0-3	Cobbly loam	CL, SC, GC	A-6	0-10	10-25	65-90	60-85	50-75	40-60	30-40	10-15
	3-8	Very gravelly clay loam	GC	A-2	0-10	0-25	40-55	35-50	30-45	30-35	35-45	15-20
	8-15	Extremely gravelly clay loam	GC	A-2	0-15	0-25	30-55	25-50	25-45	20-35	35-45	15-20
	15-25	Very cobbly clay loam, extremely gravelly loam	GC	A-2	0-15	0-45	25-55	20-50	20-40	15-35	35-45	15-20
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
McDesh, south slope-----	0-3	Loam	CL	A-6	0	0	95-100	90-100	85-90	65-75	30-40	10-15
	3-8	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	8-37	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	37-47	Unweathered bedrock			---	---	---	---	---	---	---	---
618: McDesh, south slope-----	0-3	Loam	CL	A-6	0	0	95-100	90-100	85-90	65-75	30-40	10-15
	3-8	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	8-37	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	37-47	Unweathered bedrock			---	---	---	---	---	---	---	---
Duco, very gravelly loam, stony surface--	0-4	Very gravelly loam	GC, GM	A-6, A-2, A-1	0-10	0-10	40-55	35-50	35-45	25-40	30-40	5-15
	4-13	Very gravelly loam	GC, GM	A-2, A-1	0	0-15	45-55	40-50	35-45	25-35	30-40	5-15
	13-19	Very gravelly loam, extremely gravelly clay loam	GC, GP-GC	A-2	0	0-15	15-45	15-45	10-40	10-30	35-45	15-20
	19-29	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
618: Shafer-----	0-1	Clay loam	CH, CL	A-7	0	0	95-100	90-100	85-95	70-75	40-50	15-25
	1-7	Silty clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	85-95	80-90	45-65	20-35
	7-18	Clay, silty clay	CH	A-7	0	0	95-100	90-100	85-95	80-90	60-85	30-50
	18-22	Silty clay, clay loam	CL	A-7	0	0	80-100	75-100	65-95	55-80	40-50	20-25
	22-25	Weathered bedrock			---	---	---	---	---	---	---	---
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
619: McDesh-----	0-3	Loam	CL	A-6	0	0	95-100	90-100	85-90	65-75	30-40	10-15
	3-11	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	90-100	70-80	35-45	15-20
	11-21	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	21-24	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Gwin, gravelly loam, stony surface-----	0-2	Gravelly loam	ML, GC-GM	A-4	0-10	0-10	60-90	55-85	50-75	40-60	25-35	5-10
	2-7	Very gravelly loam	GC, GC-GM	A-1, A-2	0-10	0-25	40-60	35-55	35-50	20-35	25-35	5-15
	7-15	Very gravelly clay loam, extremely gravelly clay loam	GC	A-2	0-10	0-25	35-55	30-50	25-45	15-35	35-45	15-20
	15-23	Unweathered bedrock			---	---	---	---	---	---	---	---
Shafer-----	0-1	Clay loam	CH, CL	A-7	0	0	95-100	90-100	85-95	70-75	40-50	15-25
	1-7	Silty clay loam, clay	CH, CL	A-7	0	0	95-100	90-100	85-95	80-90	45-65	20-35
	7-18	Clay, silty clay	CH	A-7	0	0	95-100	90-100	85-95	80-90	60-85	30-50
	18-22	Silty clay, clay loam	CL	A-7	0	0	80-100	75-100	65-95	55-80	40-50	20-25
	22-25	Weathered bedrock			---	---	---	---	---	---	---	---
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
620: Immig, very stony surface--	0-4	Extremely cobbly loam	CL, GM	A-6, A-2	0-15	30-60	55-90	50-85	40-75	30-55	30-40	5-15
	4-10	Very gravelly silty clay loam	CL	A-7, A-6	0-10	10-40	60-90	55-85	50-80	50-75	40-50	15-25
	10-14	Very cobbly silty clay, very gravelly clay	CH	A-7	0-10	10-45	60-90	55-85	50-80	50-75	50-85	25-50
	14-25	Very gravelly clay, extremely gravelly silty clay	GC, CH	A-7, A-2	0-10	10-45	30-65	25-60	20-55	20-55	50-85	25-50
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
620: McDesh, south slope-----	0-3	Loam	CL	A-6	0	0	95-100	90-100	85-90	65-75	30-40	10-15
	3-8	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	8-37	Clay	CH	A-7	0	0	95-100	90-100	85-95	75-85	50-65	25-35
	37-47	Unweathered bedrock			---	---	---	---	---	---	---	---
Duco, stony loam, very stony surface--	0-3	Stony loam	ML, CL	A-4, A-6	10-20	0-25	80-95	75-90	65-80	50-65	30-40	5-15
	3-15	Extremely stony clay loam	CL	A-7, A-6	40-65	10-45	70-95	65-90	60-85	50-70	35-45	15-20
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
621: McDaniel-----	0-4	Very gravelly ashy loam	GC	A-6, A-2	0	0-15	40-55	35-50	30-45	25-40	30-40	10-15
	4-14	Very gravelly ashy loam	GC	A-6, A-2	0	0-15	40-55	35-50	30-45	25-40	30-40	10-15
	14-23	Very gravelly silt loam	GC	A-6, A-2	0	0-15	40-60	35-55	30-50	25-40	30-40	10-15
	23-34	Very gravelly silt loam	GC	A-6, A-2	0	0-15	40-60	35-55	30-50	25-40	30-40	10-15
	34-60	Very gravelly clay loam	GC	A-7, A-2	0	0-15	40-60	35-55	30-55	30-40	35-45	15-20
Hovelton, gravelly ashy loam-----	0-7	Gravelly ashy loam	GC-GM, ML, SM, SC-SM	A-4	0	0-30	60-90	55-85	50-75	35-55	25-35	5-10
	7-17	Very cobbly ashy loam	GC-GM, ML, SC-SM, SM	A-4	0	10-55	60-90	55-85	50-75	35-55	25-35	5-10
	17-38	Extremely gravelly loam, extremely cobbly clay loam	GC	A-2, A-6, A-7	0-10	10-65	50-75	45-70	40-65	30-50	35-45	15-20
	38-48	Unweathered bedrock			---	---	---	---	---	---	---	---
622: Hovelton, gravelly ashy loam-----	0-7	Gravelly ashy loam	GC-GM, ML, SM, SC-SM	A-4	0	0-30	60-90	55-85	50-75	35-55	25-35	5-10
	7-17	Very cobbly ashy loam	GC-GM, ML, SC-SM, SM	A-4	0	10-55	60-90	55-85	50-75	35-55	25-35	5-10
	17-38	Extremely gravelly loam, extremely cobbly clay loam	GC	A-2, A-6, A-7	0-10	10-65	50-75	45-70	40-65	30-50	35-45	15-20
	38-48	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
622: Gwin, very stony loam, extremely stony surface--	0-4	Very stony loam	SC, GC-GM	A-6, A-4	15-25	15-50	60-85	55-80	50-75	35-50	25-35	5-15
	4-7	Very stony loam	SC, GC-GM	A-4, A-6	15-25	25-50	60-85	55-80	50-75	35-50	25-35	5-15
	7-13	Extremely cobbly clay loam	GC, SC	A-7, A-6	0-15	25-55	55-80	50-75	45-70	35-50	35-45	15-20
	13-22	Unweathered bedrock			---	---	---	---	---	---	---	---
630: Gwin, very gravelly loam--	0-5	Very gravelly loam	GM, GC	A-6, A-2, A-1	0-10	0-15	40-60	35-55	35-50	25-40	30-40	5-15
	5-15	Very gravelly clay loam	GC, GM	A-2, A-7	0-10	0-15	40-60	35-55	35-55	30-40	40-50	15-20
	15-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Flybow-----	0-3	Very gravelly loam	GM	A-1, A-2	0	0-15	35-55	30-50	25-50	20-35	20-30	NP-5
	3-8	Extremely gravelly loam	GM, GP-GM	A-1	0	0-15	20-30	15-25	10-20	5-20	20-30	NP-5
	8-18	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---
631: Flybow-----	0-3	Very gravelly loam	GM	A-1, A-2	0	0-15	35-55	30-50	25-50	20-35	20-30	NP-5
	3-8	Extremely gravelly loam	GM, GP-GM	A-1	0	0-15	20-30	15-25	10-20	5-20	20-30	NP-5
	8-18	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---
Rubble land-----	0-20	Fragmental material			---	---	---	---	---	---	---	---
	20-30	Unweathered bedrock			---	---	---	---	---	---	---	---
634: Gwin, very stony loam, extremely stony surface--	0-4	Very stony loam	SC, GC-GM	A-6, A-4	15-25	15-50	60-85	55-80	50-75	35-50	25-35	5-15
	4-7	Very stony loam	SC, GC-GM	A-4, A-6	15-25	25-50	60-85	55-80	50-75	35-50	25-35	5-15
	7-13	Extremely cobbly clay loam	GC, SC	A-7, A-6	0-15	25-55	55-80	50-75	45-70	35-50	35-45	15-20
	13-22	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
634: McDesh, very stony loam, very stony surface-----	0-3	Very stony loam	CL	A-6	10-40	15-30	80-95	75-90	65-85	50-70	30-40	10-15
	3-7	Very stony loam	CL	A-6	10-40	15-30	80-95	75-90	65-85	50-70	30-40	10-15
	7-12	Silty clay loam, clay loam	CL	A-7, A-6	0	0-10	80-100	75-100	70-90	55-85	35-45	15-20
	12-20	Silty clay, clay	CH	A-7	0	0-10	80-100	75-100	70-85	60-80	50-85	25-50
	20-24	Clay, silty clay, gravelly clay	CH	A-7	0	0-10	60-95	55-90	50-85	50-80	50-85	25-50
	24-34	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---
635: Shafer, very stony surface--	0-2	Very stony clay loam	CL	A-7, A-6	10-25	10-45	80-100	75-100	70-90	55-70	35-45	15-20
	2-6	Silty clay loam, cobbly clay loam	CL	A-7, A-6	0	0-25	80-100	75-100	70-90	55-70	35-45	15-20
	6-9	Silty clay, clay	CL, CH	A-7	0	0-25	80-100	75-100	70-100	65-95	45-65	25-45
	9-19	Silty clay, clay	CL, CH	A-7	0	0-25	80-100	75-100	70-100	65-95	45-65	25-45
	19-22	Silty clay loam, cobbly clay loam	CL	A-7, A-6	0	0-25	80-100	75-100	70-90	55-70	35-45	15-20
	22-32	Unweathered bedrock			---	---	---	---	---	---	---	---
Karney-----	0-3	Loam	CL	A-6	0	0-10	90-100	85-100	75-90	60-70	30-40	10-15
	3-6	Clay, clay loam	CH	A-7	0	0-10	90-100	85-100	80-95	65-80	50-75	30-50
	6-12	Clay loam, clay	CH	A-7	0	0-10	90-100	85-100	80-95	70-80	50-75	30-50
	12-20	Sandy clay, clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	75-95	50-80	45-65	20-35
	20-31	Sandy clay, clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	75-95	50-80	45-65	20-35
	31-55	Weathered bedrock			---	---	---	---	---	---	---	---
	55-65	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
635: Yad-----	0-2	Clay loam	CL	A-6	0	0-10	100	100	85-90	75-80	30-40	15-20
	2-6	Clay loam	CL	A-6	0	0-10	100	100	85-90	75-80	30-40	15-20
	6-14	Clay loam, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-90	75-80	40-60	25-40
	14-25	Clay loam, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-90	75-80	40-60	25-40
	25-41	Clay loam, gravelly clay loam, sandy clay loam	CL	A-7, A-6	0	0	75-100	70-90	60-85	50-75	35-50	20-30
	41-52	Gravelly sandy clay loam, clay loam	CL	A-6, A-7	0	0	75-100	70-90	60-85	50-75	35-50	20-30
	52-60	Clay loam, gravelly sandy clay loam	CL	A-6, A-7	0	0	75-100	70-90	60-85	50-75	35-50	20-30
636: Hann, stony surface-----	0-4	Cobbly silt loam	CL	A-6	0-10	0-30	95-100	90-100	85-100	75-90	30-40	10-15
	4-11	Cobbly silty clay loam	CL	A-7, A-6	0-10	0-20	95-100	90-100	85-100	80-95	35-45	15-20
	11-20	Cobbly silty clay loam	CL	A-7, A-6	0-10	0-20	95-100	90-100	85-100	80-95	35-45	15-20
	20-27	Silty clay	CH	A-7	0	0	95-100	90-100	85-100	80-95	50-65	25-35
	27-38	Silty clay	CH	A-7	0	0	95-100	90-100	85-100	80-95	50-85	25-50
	38-41	Silty clay	CH	A-7	0	0	95-100	90-100	85-100	80-95	50-85	25-50
	41-52	Silty clay	CH	A-7	0	0	95-100	90-100	85-100	80-95	50-85	25-50
	52-60	Clay	CH	A-7	0	0	95-100	90-100	85-100	80-85	50-85	25-50
McDesh, very stony loam, extremely bouldery surface-----	0-3	Very stony loam	CL	A-6	10-40	0-30	80-100	75-100	65-85	50-65	30-40	10-15
	3-12	Cobbly silty clay loam, very stony clay loam	CL	A-7, A-6	10-40	0-30	80-100	75-100	70-95	60-90	35-45	15-20
	12-17	Gravelly clay loam, silty clay loam	CL	A-7, A-6	0	0-10	80-100	75-100	70-95	60-90	35-45	15-20
	17-21	Silty clay, gravelly clay	CH	A-7	0	0-10	80-100	75-100	75-95	70-90	50-65	25-45
	21-32	Clay, silty clay	CH	A-7	0	0-10	90-100	85-100	65-95	60-90	50-65	25-45
	32-37	Clay, silty clay	CH	A-7	0	0-10	90-100	85-100	65-95	60-90	50-65	25-45
	37-39	Silty clay loam, clay loam	CL	A-7, A-6	0	0	90-100	85-100	80-95	70-90	35-45	15-20
	39-41	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
636: Robbscreek, moist-----	0-10	Fine gravelly coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	85-100	65-85	45-55	20-30	25-35	5-10
	10-22	Fine gravelly sandy clay loam	SC	A-6, A-2	0	0-10	80-100	55-75	50-70	25-40	30-40	10-15
	22-30	Fine gravelly sandy clay loam	SC	A-2, A-6	0	0-10	80-100	55-75	50-65	25-40	30-40	10-15
	30-40	Unweathered bedrock			---	---	---	---	---	---	---	---
638: Yad-----	0-2	Clay loam	CL	A-6	0	0-10	100	100	85-90	75-80	30-40	15-20
	2-6	Clay loam	CL	A-6	0	0-10	100	100	85-90	75-80	30-40	15-20
	6-14	Clay loam, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-90	75-80	40-60	25-40
	14-25	Clay loam, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-90	75-80	40-60	25-40
	25-41	Clay loam, gravelly clay loam, sandy clay loam	CL	A-7, A-6	0	0	75-100	70-90	60-85	50-75	35-50	20-30
	41-52	Gravelly sandy clay loam, clay loam	CL	A-6, A-7	0	0	75-100	70-90	60-85	50-75	35-50	20-30
	52-60	Clay loam, gravelly sandy clay loam	CL	A-6, A-7	0	0	75-100	70-90	60-85	50-75	35-50	20-30
Cranegulch-----	0-3	Loam	ML, CL-ML	A-4	0	0	95-100	75-100	65-90	50-70	25-35	5-10
	3-10	Loam	CL, CL-ML, ML	A-4	0	0	95-100	75-100	65-90	50-70	25-35	5-10
	10-14	Clay loam, sandy clay loam	ML, SC	A-7, A-6	0	0	95-100	75-100	65-90	40-55	30-45	10-15
	14-21	Clay loam, clay, sandy clay	CH, SC	A-7	0	0	95-100	75-100	65-95	40-60	45-65	20-35
	21-33	Clay loam, sandy clay, clay	CH	A-7	0	0	95-100	75-100	70-95	65-85	45-65	20-35
	33-50	Clay loam, clay, sandy clay	CH, SC	A-7	0	0	95-100	75-100	65-95	40-60	45-65	20-35
	50-60	Clay loam	CL, SC, CH	A-7	0	0	95-100	75-100	65-90	45-75	45-65	20-35
Duco, stony loam, very stony surface--	0-3	Stony loam	ML, CL	A-4, A-6	10-20	0-25	80-95	75-90	65-80	50-65	30-40	5-15
	3-15	Extremely stony clay loam	CL	A-7, A-6	40-65	10-45	70-95	65-90	60-85	50-70	35-45	15-20
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
640: Timberbutte-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	30-55	25-50	25-45	20-35	---	---
	2-12	Very gravelly ashy silt loam	GM	A-1, A-2	0	0	30-55	25-50	25-45	20-35	25-35	NP-5
	12-21	Very gravelly ashy loam, very gravelly ashy silt loam	GM	A-4, A-2	0	10-15	40-60	35-55	30-50	25-40	25-35	NP-5
	21-29	Very gravelly ashy loam, very gravelly ashy silt loam	GM	A-4, A-2	0	10-15	40-60	35-55	30-50	25-40	25-35	NP-5
	29-39	Extremely gravelly loam, extremely gravelly sandy loam	GM, GP-GM	A-1	0	10-25	25-40	20-35	15-25	10-15	20-30	NP-5
	39-60	Extremely gravelly sandy loam, extremely gravelly loam	GM, GP-GM	A-1	0	10-25	25-35	20-30	15-20	10-15	20-30	NP-5
641: Aradaran-----	0-3	Loam	CL	A-6, A-4	0	0	85-100	75-100	65-90	50-75	30-40	10-15
	3-9	Loam	CL	A-6, A-4	0	0	85-100	75-100	65-90	50-75	30-40	10-15
	9-14	Loam	CL	A-6, A-4	0	0	85-100	75-100	65-90	50-70	30-40	10-15
	14-23	Clay loam	CL	A-7	0	0	85-100	75-100	70-95	55-75	40-50	20-25
	23-29	Clay loam, clay	CH, CL	A-7	0	0	85-100	75-100	70-95	60-75	45-65	20-35
	29-42	Clay, clay loam	CL, CH	A-7	0	0	85-100	75-100	70-95	60-80	45-65	20-35
	42-55	Fine gravelly clay loam, sandy clay loam	CL, CH, MH	A-7	0	0-15	80-95	70-85	65-80	50-65	35-55	15-25
	55-60	Fine gravelly sandy clay loam, clay loam	CL	A-6, A-7	0	0-20	75-90	65-80	60-80	50-65	35-50	15-25
Yad-----	0-2	Clay loam	CL	A-6	0	0-10	100	100	85-90	75-80	30-40	15-20
	2-6	Clay loam	CL	A-6	0	0-10	100	100	85-90	75-80	30-40	15-20
	6-14	Clay loam, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-90	75-80	40-60	25-40
	14-25	Clay loam, clay	CH, CL	A-7, A-6	0	0	95-100	90-100	85-90	75-80	40-60	25-40
	25-41	Clay loam, gravelly clay loam, sandy clay loam	CL	A-7, A-6	0	0	75-100	70-90	60-85	50-75	35-50	20-30
	41-52	Gravelly sandy clay loam, clay loam	CL	A-6, A-7	0	0	75-100	70-90	60-85	50-75	35-50	20-30
	52-60	Clay loam, gravelly sandy clay loam	CL	A-6, A-7	0	0	75-100	70-90	60-85	50-75	35-50	20-30

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
650: Longs-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-9	Ashy loam	CL-ML, CL	A-4	0	0	80-100	75-100	65-90	50-70	20-30	5-10
	9-29	Gravelly ashy loam, ashy loam	ML, GM, CL	A-6, A-4	0	0-10	60-90	55-85	50-75	40-60	30-40	5-15
	29-44	Very gravelly loam, extremely gravelly loam	GC	A-2	0	10-40	40-60	35-55	30-50	25-35	30-40	10-15
	44-49	Extremely gravelly loam, very gravelly loam	GC	A-2	0	10-40	40-60	35-55	30-50	25-35	30-40	10-15
	49-59	Unweathered bedrock			---	---	---	---	---	---	---	---
Highvalley-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	70-100	65-90	50-70	---	---
	1-5	Ashy loam	CL-ML, ML	A-4	0	0	95-100	70-100	65-90	50-70	25-35	5-10
	5-10	Ashy loam	CL, ML	A-6, A-4	0	0	95-100	70-100	65-90	50-70	30-40	5-15
	10-24	Ashy loam	CL	A-6, A-4	0	0	90-100	70-100	65-90	50-70	30-40	10-15
	24-48	Ashy loam	CL	A-4, A-6	0	0	90-100	70-100	65-90	50-70	30-40	10-15
	48-66	Cobbly ashy loam, ashy loam	CL, CL-ML	A-4, A-6	0	0-50	90-100	70-100	65-90	50-70	25-35	5-15
Hoff-----	0-6	Gravelly ashy loam	GM, GC-GM, GC	A-4, A-2	0	0-10	55-80	50-75	45-65	35-50	20-30	NP-10
	6-11	Very cobbly ashy loam, very gravelly ashy loam	GM, GC	A-4, A-2	0	0-25	40-60	35-55	35-50	25-40	20-30	NP-10
	11-19	Extremely cobbly ashy clay loam, very gravelly ashy loam	GC	A-2, A-7	0	10-60	40-60	30-55	25-50	20-40	35-45	15-20
	19-29	Unweathered bedrock			---	---	---	---	---	---	---	---
651: Hess-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-4	Ashy loam	CL	A-4, A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	4-10	Paragravelly ashy loam	CL	A-4, A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	10-15	Paragravelly ashy loam	CL	A-6, A-4	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	15-20	Paragravelly clay loam, paragravelly loam	ML	A-4, A-7	0	0	80-100	75-100	70-95	55-75	35-45	10-15
	20-29	Paragravelly clay loam	CL	A-6, A-7	0	0	80-100	75-100	70-95	55-75	35-45	15-20
	29-38	Very paragravelly clay loam	CL	A-6, A-7	0	0	80-100	75-100	70-80	55-75	35-45	15-20
	38-44	Very paragravelly clay loam	CL	A-6, A-7	0	0	80-100	75-100	70-95	55-75	35-45	15-20
	44-54	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
651: Lidos-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-9	Ashy loam	CL, CL-ML	A-4	0	0	80-100	75-100	65-90	50-70	20-30	5-10
	9-16	Gravelly ashly silty clay loam	CL	A-7, A-6	0	0-20	65-80	60-75	55-75	55-65	35-45	15-20
	16-22	Gravelly silty clay loam	CL, GC	A-7, A-6	0	0-20	55-65	50-60	45-60	45-60	35-45	15-20
	22-40	Gravelly silty clay loam, very gravelly silty clay loam	CL, GC	A-7, A-6	0	0-20	40-65	35-60	35-55	35-55	35-45	15-20
	40-47	Gravelly silty clay loam, very gravelly silty clay loam	CL, GC	A-7, A-6, A-2	0	0-20	40-65	35-60	35-55	30-55	35-45	15-20
	47-53	Gravelly sandy loam	SC, GM, SC-SM	A-1	0	0	55-80	50-75	30-50	20-25	20-30	NP-10
	53-60	Silty clay	CH	A-7	0	0	100	100	95-100	90-95	50-65	25-35
Cleymor-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	90-100	70-100	---	---
	1-4	Silt loam	CL	A-6	0	0	100	100	90-100	70-100	30-40	10-15
	4-7	Silt loam, silty clay loam	CL, ML	A-7, A-6	0	0	100	100	95-100	80-100	35-45	10-20
	7-11	Silty clay, silty clay loam	CL, CH	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	11-18	Silty clay, silty clay loam	CH, CL	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	18-31	Silty clay loam, silty clay	CL, CH	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	31-37	Silty clay loam, silty clay	CL, CH	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	37-45	Cobbly silty clay	CH	A-7	0	0-45	80-100	75-100	75-95	70-90	50-65	25-35
	45-60	Cobbly silty clay, silty clay	CH	A-7	0	0-45	80-100	75-100	75-95	70-90	50-65	25-35

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
652: Hess-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-4	Ashy loam	CL	A-4, A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	4-10	Paragravelly ash loam	CL	A-4, A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	10-15	Paragravelly ash loam	CL	A-6, A-4	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	15-20	Paragravelly clay loam, paragravelly loam	ML	A-4, A-7	0	0	80-100	75-100	70-95	55-75	35-45	10-15
	20-29	Paragravelly clay loam	CL	A-6, A-7	0	0	80-100	75-100	70-95	55-75	35-45	15-20
	29-38	Very paragravelly clay loam	CL	A-6, A-7	0	0	80-100	75-100	70-80	55-75	35-45	15-20
	38-44	Very paragravelly clay loam	CL	A-6, A-7	0	0	80-100	75-100	70-95	55-75	35-45	15-20
	44-54	Unweathered bedrock			---	---	---	---	---	---	---	---
Lidos-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-9	Ashy loam	CL, CL-ML	A-4	0	0	80-100	75-100	65-90	50-70	20-30	5-10
	9-16	Gravelly ash silty clay loam	CL	A-7, A-6	0	0-20	65-80	60-75	55-75	55-65	35-45	15-20
	16-22	Gravelly silty clay loam	CL, GC	A-7, A-6	0	0-20	55-65	50-60	45-60	45-60	35-45	15-20
	22-40	Gravelly silty clay loam, very gravelly silty clay loam	CL, GC	A-7, A-6	0	0-20	40-65	35-60	35-55	35-55	35-45	15-20
	40-47	Gravelly silty clay loam, very gravelly silty clay loam	CL, GC	A-7, A-6, A-2	0	0-20	40-65	35-60	35-55	30-55	35-45	15-20
	47-53	Gravelly sandy loam	SC, GM, SC-SM	A-1	0	0	55-80	50-75	30-50	20-25	20-30	NP-10
	53-60	Silty clay	CH	A-7	0	0	100	100	95-100	90-95	50-65	25-35
Klicker-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-8	Ashy loam	ML	A-4	0	0	80-100	75-100	65-90	50-70	20-30	NP-5
	8-12	Ashy loam, gravelly ash loam	CL, CL-ML, GC-GM	A-4	0	0	70-90	65-85	55-75	45-60	20-30	5-10
	12-17	Very gravelly clay loam, gravelly clay loam	GC	A-6, A-2, A-7	0	0	40-65	35-60	35-55	30-45	35-45	15-20
	17-26	Very gravelly clay loam	GC	A-7, A-2	0	0-25	30-55	25-50	25-45	20-40	40-50	15-25
	26-36	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
653: Lidos-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-9	Ashy loam	CL, CL-ML	A-4	0	0	80-100	75-100	65-90	50-70	20-30	5-10
	9-16	Gravelly ashy silty clay loam	CL	A-7, A-6	0	0-20	65-80	60-75	55-75	55-65	35-45	15-20
	16-22	Gravelly silty clay loam	CL, GC	A-7, A-6	0	0-20	55-65	50-60	45-60	45-60	35-45	15-20
	22-40	Gravelly silty clay loam, very gravelly silty clay loam	CL, GC	A-7, A-6	0	0-20	40-65	35-60	35-55	35-55	35-45	15-20
	40-47	Gravelly silty clay loam, very gravelly silty clay loam	CL, GC	A-7, A-6, A-2	0	0-20	40-65	35-60	35-55	30-55	35-45	15-20
	47-53	Gravelly sandy loam	SC, GM, SC-SM	A-1	0	0	55-80	50-75	30-50	20-25	20-30	NP-10
	53-60	Silty clay	CH	A-7	0	0	100	100	95-100	90-95	50-65	25-35
Klicker-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-8	Ashy loam	ML	A-4	0	0	80-100	75-100	65-90	50-70	20-30	NP-5
	8-12	Ashy loam, gravelly ashy loam	CL, CL-ML, GC-GM	A-4	0	0	70-90	65-85	55-75	45-60	20-30	5-10
	12-17	Very gravelly clay loam, gravelly clay loam	GC	A-6, A-2, A-7	0	0	40-65	35-60	35-55	30-45	35-45	15-20
	17-26	Very gravelly clay loam	GC	A-7, A-2	0	0-25	30-55	25-50	25-45	20-40	40-50	15-25
	26-36	Unweathered bedrock			---	---	---	---	---	---	---	---
Hess-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-4	Ashy loam	CL	A-6, A-4	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	4-10	Paragravelly ashy loam	CL	A-6, A-4	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	10-15	Paragravelly ashy loam	CL	A-6, A-4	0	0	80-100	75-100	65-90	50-70	30-40	10-15
	15-20	Paragravelly clay loam, paragravelly loam	ML	A-4, A-7	0	0	80-100	75-100	70-95	55-75	35-45	10-15
	20-29	Paragravelly clay loam	CL	A-6, A-7	0	0	80-100	75-100	70-95	55-75	35-45	15-20
	29-38	Very paragravelly clay loam	CL	A-7, A-6	0	0	80-100	75-100	70-80	55-75	35-45	15-20
	38-44	Very paragravelly clay loam	CL	A-7, A-6	0	0	80-100	75-100	70-95	55-75	35-45	15-20
	44-54	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
654: Shilling-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	55-75	50-70	40-60	35-50	---	---
	1-5	Gravelly ashy loam	GM, GC-GM	A-4, A-2	0	0	55-75	50-70	40-60	35-50	20-30	5
	5-10	Gravelly ashy loam	GC-GM, GM	A-4, A-2	0	0	50-75	45-70	40-60	35-50	25-35	5-10
	10-19	Very gravelly loam	GC	A-6, A-2	0	0-10	35-60	30-55	25-50	20-40	30-40	10-15
	19-35	Very gravelly loam	GC	A-6, A-2	0	0-10	40-60	35-55	30-50	20-40	30-40	10-15
	35-54	Very gravelly loam, very cobbly loam	GC	A-6, A-2	0	0-55	35-60	30-55	25-50	20-40	30-40	10-15
	54-60	Very gravelly loam, extremely cobbly loam	GC	A-6, A-2, A-4	0	0-55	35-60	30-55	25-50	20-40	30-40	10-15
Highvalley-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	70-100	65-90	50-70	---	---
	1-5	Ashy loam	CL-ML, ML	A-4	0	0	95-100	70-100	65-90	50-70	25-35	5-10
	5-10	Ashy loam	CL, ML	A-6, A-4	0	0	95-100	70-100	65-90	50-70	30-40	5-15
	10-24	Ashy loam	CL	A-6, A-4	0	0	90-100	70-100	65-90	50-70	30-40	10-15
	24-48	Ashy loam	CL	A-4, A-6	0	0	90-100	70-100	65-90	50-70	30-40	10-15
	48-66	Cobbly ashy loam, ashy loam	CL, CL-ML	A-4, A-6	0	0-50	90-100	70-100	65-90	50-70	25-35	5-15
Hoff-----	0-6	Gravelly ashy loam	GM, GC-GM, GC	A-4, A-2	0	0-10	55-80	50-75	45-65	35-50	20-30	NP-10
	6-11	Very cobbly ashy loam, very gravelly ashy loam	GC, GM	A-4, A-2	0	0-25	40-60	35-55	35-50	25-40	20-30	NP-10
	11-19	Extremely cobbly ash clay loam, very gravelly ashy loam	GC	A-2, A-7	0	10-60	40-60	30-55	25-50	20-40	35-45	15-20
	19-29	Unweathered bedrock			---	---	---	---	---	---	---	---
655: Shilling, moist	0-2	Slightly decomposed plant material	PT	A-8	0	0	50-75	45-70	40-60	35-50	---	---
	2-9	Gravelly ashy loam	GC-GM, GM	A-4	0	0	50-75	45-70	40-60	35-50	20-30	5
	9-15	Gravelly ashy loam	GC-GM, GM	A-4	0	0	50-75	45-70	40-60	35-50	25-35	5-10
	15-25	Very gravelly loam	GC	A-6, A-2	0	0	35-60	30-55	25-50	20-40	30-40	10-15
	25-45	Very gravelly loam	GC	A-6, A-2	0	0-10	35-60	30-55	25-50	20-40	30-40	10-15
	45-60	Very gravelly loam	GC	A-6, A-2	0	0-10	35-60	30-55	25-50	20-40	30-40	10-15
Highvalley, moist-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	70-100	60-90	50-70	---	---
	1-10	Ashy loam	ML, CL-ML	A-4	0	0	95-100	70-100	60-90	50-70	25-35	5-10
	10-35	Ashy loam	CL	A-6, A-4	0	0	95-100	70-100	60-90	50-70	30-40	10-15
	35-60	Gravelly ashy loam	SC, SC-SM	A-6, A-4	0	0-30	85-100	70-100	60-90	45-70	25-35	5-15

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
656: Shilling, moist	0-2	Slightly decomposed plant material	PT	A-8	0	0	50-75	45-70	40-60	35-50	---	---
	2-9	Gravelly ashy loam	GC-GM, GM	A-4	0	0	50-75	45-70	40-60	35-50	20-30	5
	9-15	Gravelly ashy loam	GC-GM, GM	A-4	0	0	50-75	45-70	40-60	35-50	25-35	5-10
	15-25	Very gravelly loam	GC	A-6, A-2	0	0	35-60	30-55	25-50	20-40	30-40	10-15
	25-45	Very gravelly loam	GC	A-6, A-2	0	0-10	35-60	30-55	25-50	20-40	30-40	10-15
	45-60	Very gravelly loam	GC	A-6, A-2	0	0-10	35-60	30-55	25-50	20-40	30-40	10-15
Highvalley, moist-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	70-100	60-90	50-70	---	---
	1-10	Ashy loam	ML, CL-ML	A-4	0	0	95-100	70-100	60-90	50-70	25-35	5-10
	10-35	Ashy loam	CL	A-6, A-4	0	0	95-100	70-100	60-90	50-70	30-40	10-15
	35-60	Gravelly ashy loam	SC, SC-SM	A-6, A-4	0	0-30	85-100	70-100	60-90	45-70	25-35	5-15
657: Pumpkin, stony surface-----	0-1	Slightly decomposed plant material	PT	A-8	0-20	0-30	75-95	70-90	60-80	50-65	---	---
	1-3	Stony loam	CL	A-4, A-6	10-20	0-30	75-95	70-90	60-80	50-65	30-40	10-15
	3-9	Stony loam	CL	A-6, A-4	10-15	0-25	80-95	75-90	65-80	50-65	30-35	10-15
	9-14	Gravelly clay loam, gravelly loam	ML, CL, GC, SC	A-7, A-6	0-10	10-15	60-90	55-85	50-80	40-60	35-45	15
	14-22	Very gravelly clay loam, very gravelly loam	GC	A-7, A-2	0-10	10-40	40-75	35-70	30-65	25-50	35-45	15-20
	22-44	Extremely gravelly sandy loam	GP-GC, GM	A-1	0-10	10-25	25-45	20-40	10-25	10-15	20-30	NP-10
	44-60	Extremely gravelly sandy loam	GM, GP-GM, GP-GC	A-1	0-15	10-25	25-45	20-40	10-25	5-15	20-30	NP-10

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
658: Cleymor-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	90-100	70-100	---	---
	1-4	Silt loam	CL	A-6	0	0	100	100	90-100	70-100	30-40	10-15
	4-7	Silt loam, silty clay loam	ML, CL	A-7, A-6	0	0	100	100	95-100	80-100	35-45	10-20
	7-11	Silty clay, silty clay loam	CH, CL	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	11-18	Silty clay, silty clay loam	CH, CL	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	18-31	Silty clay loam, silty clay	CL, CH	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	31-37	Silty clay loam, silty clay	CL, CH	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	37-45	Cobbly silty clay	CH	A-7	0	0-45	80-100	75-100	75-95	70-90	50-65	25-35
45-60	Cobbly silty clay, silty clay	CH	A-7	0	0-45	80-100	75-100	75-95	70-90	50-65	25-35	
Pumpkin, stony surface-----	0-1	Slightly decomposed plant material	PT	A-8	0-20	0-30	75-95	70-90	60-80	50-65	---	---
	1-3	Stony loam	CL	A-4, A-6	10-20	0-30	75-95	70-90	60-80	50-65	30-40	10-15
	3-9	Stony loam	CL	A-6, A-4	10-15	0-25	80-95	75-90	65-80	50-65	30-35	10-15
	9-14	Gravelly clay loam, gravelly loam	CL, GC, SC, ML	A-7, A-6	0-10	10-15	60-90	55-85	50-80	40-60	35-45	15
	14-22	Very gravelly clay loam, very gravelly loam	GC	A-7, A-2	0-10	10-40	40-75	35-70	30-65	25-50	35-45	15-20
	22-44	Extremely gravelly sandy loam	GM, GP-GC	A-1	0-10	10-25	25-45	20-40	10-25	10-15	20-30	5-10
	44-60	Extremely gravelly sandy loam	GM, GP-GC, GP-GM	A-1	0-15	10-25	25-45	20-40	10-25	5-15	20-30	NP-10
659: Hoff, south slope-----	0-7	Gravelly ashy loam	GM, GC-GM, GC	A-4, A-2	0	0-10	55-80	50-75	45-65	35-50	20-30	NP-10
	7-12	Very gravelly ashy loam, extremely gravelly ashy clay loam	GP-GC, GC	A-2	0	0-30	30-55	20-50	15-45	10-35	35-45	15-20
	12-22	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In			Pct	Pct					Pct	
660: Longs-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	75-100	65-90	50-70	---	---
	1-9	Ashy loam	CL-ML, CL	A-4	0	0	80-100	75-100	65-90	50-70	20-30	5-10
	9-29	Gravelly ash loam, ash loam	ML, GM, CL	A-6, A-4	0	0-10	60-90	55-85	50-75	40-60	30-40	5-15
	29-44	Very gravelly loam, extremely gravelly loam	GC	A-2	0	10-40	40-60	35-55	30-50	25-35	30-40	10-15
	44-49	Extremely gravelly loam, very gravelly loam	GC	A-2	0	10-40	40-60	35-55	30-50	25-35	30-40	10-15
	49-59	Unweathered bedrock			---	---	---	---	---	---	---	---
Highvalley-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	70-100	65-90	50-70	---	---
	1-5	Ashy loam	CL-ML, ML	A-4	0	0	95-100	70-100	65-90	50-70	25-35	5-10
	5-10	Ashy loam	CL, ML	A-6, A-4	0	0	95-100	70-100	65-90	50-70	30-40	5-15
	10-24	Ashy loam	CL	A-6, A-4	0	0	90-100	70-100	65-90	50-70	30-40	10-15
	24-48	Ashy loam	CL	A-4, A-6	0	0	90-100	70-100	65-90	50-70	30-40	10-15
	48-66	Cobbly ash loam, ash loam	CL, CL-ML	A-4, A-6	0	0-50	90-100	70-100	65-90	50-70	25-35	5-15
661: Awley-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	70-100	65-100	60-90	50-70	---	---
	1-8	Ashy loam	CL-ML, SC-SM, ML	A-4	0	0	70-100	65-100	55-90	40-70	25-35	5-10
	8-18	Gravelly ash loam, ash loam	CL-ML, ML	A-4	0	0	80-90	75-85	60-75	50-60	25-35	5-10
	18-25	Gravelly ash sandy loam, gravelly ash loam	GM, SM	A-1, A-2	0	0	45-70	40-65	30-50	20-35	20-30	NP-5
	25-37	Very gravelly loam, very gravelly sandy loam	GP-GM, SM, GM	A-2, A-1	0	0-60	30-75	25-65	15-50	10-35	20-30	NP-5
	37-45	Extremely gravelly loam, extremely gravelly sandy loam	GP-GM	A-2, A-1	0	10-65	15-65	10-60	5-50	5-30	15-25	NP-5
	45-60	Extremely gravelly loam, extremely gravelly sandy loam	GP-GM	A-2, A-1	0	10-65	15-65	10-60	5-50	5-30	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
661: Bo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	70-100	65-100	60-90	45-70	---	---
	1-4	Ashy loam	ML, SM, GC-GM	A-4	0	0	70-100	65-100	60-90	45-70	25-35	5-10
	4-10	Ashy loam	ML, SM, GC-GM	A-4	0	0	70-100	65-100	60-90	45-70	25-35	5-10
	10-16	Gravelly sandy loam, loam	ML, SM, SC-SM	A-2, A-4	0	0	65-95	60-90	40-80	25-55	25-35	5-10
	16-25	Gravelly sandy loam, loam	ML, SM, SC-SM	A-2, A-4	0	0	65-95	60-90	40-80	25-55	25-35	5-10
	25-51	Gravelly sandy loam, loam	ML, SM, SC-SM	A-2, A-4	0	0	65-95	60-90	40-80	25-55	25-35	5-10
	51-60	Very cobbly loam, very gravelly sandy loam	SC-SM, SM, GM	A-1, A-2, A-4	0	0-60	30-80	25-75	15-65	15-50	20-30	NP-5
662: Awley-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	70-100	65-100	60-90	50-70	---	---
	1-8	Ashy loam	CL-ML, ML, SC-SM	A-4	0	0	70-100	65-100	55-90	40-70	25-35	5-10
	8-18	Gravelly ashly loam, ashly loam	CL-ML, ML	A-4	0	0	80-90	75-85	60-75	50-60	25-35	5-10
	18-25	Gravelly ashly sandy loam, gravelly ashly loam	GM, SM	A-1, A-2	0	0	45-70	40-65	30-50	20-35	20-30	NP-5
	25-37	Very gravelly loam, very gravelly sandy loam	SM, GM, GP-GM	A-2, A-1	0	0-60	30-75	25-65	15-50	10-35	20-30	NP-5
	37-45	Extremely gravelly loam, extremely gravelly sandy loam	GP-GM	A-2, A-1	0	10-65	15-65	10-60	5-50	5-30	15-25	NP-5
	45-60	Extremely gravelly loam, extremely gravelly sandy loam	GP-GM	A-2, A-1	0	10-65	15-65	10-60	5-50	5-30	15-25	NP-5
Bo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	70-100	65-100	60-90	45-70	---	---
	1-4	Ashy loam	GC-GM, SM, ML	A-4	0	0	70-100	65-100	60-90	45-70	25-35	5-10
	4-10	Ashy loam	SM, GC-GM, ML	A-4	0	0	70-100	65-100	60-90	45-70	25-35	5-10
	10-16	Gravelly sandy loam, loam	SM, ML, SC-SM	A-2, A-4	0	0	65-95	60-90	40-80	25-55	25-35	5-10
	16-25	Gravelly sandy loam, loam	SC-SM, ML, SM	A-2, A-4	0	0	65-95	60-90	40-80	25-55	25-35	5-10
	25-51	Gravelly sandy loam, loam	SC-SM, ML, SM	A-2, A-4	0	0	65-95	60-90	40-80	25-55	25-35	5-10
	51-60	Very gravelly sandy loam, very cobbly loam	SC-SM, SM, GM	A-1, A-2, A-4	0	0-60	30-80	25-75	15-65	15-50	20-30	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
663: Cleymor-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	90-100	70-100	---	---
	1-4	Silt loam	CL	A-6	0	0	100	100	90-100	70-100	30-40	10-15
	4-7	Silt loam, silty clay loam	ML, CL	A-7, A-6	0	0	100	100	95-100	80-100	35-45	10-20
	7-11	Silty clay, silty clay loam	CH, CL	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	11-18	Silty clay, silty clay loam	CH, CL	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	18-31	Silty clay loam, silty clay	CL, CH	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	31-37	Silty clay loam, silty clay	CL, CH	A-7	0	0	80-100	75-100	75-100	70-90	45-65	20-35
	37-45	Cobbly silty clay	CH	A-7	0	0-45	80-100	75-100	75-95	70-90	50-65	25-35
	45-60	Cobbly silty clay, silty clay	CH	A-7	0	0-45	80-100	75-100	75-95	70-90	50-65	25-35
Hoff-----	0-6	Gravelly ashy loam	GM, GC-GM, GC	A-4, A-2	0	0-10	55-80	50-75	45-65	35-50	20-30	NP-10
	6-11	Very cobbly ashy loam, very gravelly ashy loam	GC, GM	A-4, A-2	0	0-25	40-60	35-55	35-50	25-40	20-30	NP-10
	11-19	Extremely cobbly ashy clay loam, very gravelly ashy loam	GC	A-2, A-7	0	10-60	40-60	30-55	25-50	20-40	35-45	15-20
	19-29	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
666: Pachic Argixerolls, very stony surface-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	65-100	60-95	50-90	40-70	---	---
	1-11	Gravelly loam	CL, GC-GM, SC	A-6, A-4	0-15	0-30	65-100	60-95	50-90	40-70	25-40	5-15
	11-18	Stony loam, gravelly loam, cobbly loam	CL, SC-SM	A-6, A-4	0-10	0-25	80-100	75-95	65-90	45-70	25-40	5-15
	18-24	Gravelly clay loam, gravelly loam, very cobbly loam	CL, GC-GM, SC	A-7, A-6, A-4	0-10	5-25	60-95	55-85	50-80	40-60	25-50	5-25
	24-30	Gravelly loam, very cobbly loam, gravelly clay loam	CL, GC-GM, GC	A-7, A-4, A-6	0-10	5-25	60-95	55-85	50-80	40-60	25-50	5-25
	30-48	Gravelly loam, very cobbly loam, very cobbly clay loam	CL, GC, GC-GM	A-2, A-4, A-7, A-6	0-25	5-65	40-95	35-85	35-80	25-60	25-50	5-25
	48-60	Gravelly loam, extremely cobbly loam, extremely stony clay loam	CL, GC, GC-GM	A-7, A-6, A-4, A-2	0-30	5-65	40-95	35-85	35-80	25-60	25-50	5-25
Rubble land-----	0-60	Fragmental material			---	---	---	---	---	---	---	---
Typic Haploxerolls, extremely stony surface-----	0-8	Cobbly sandy loam	SM	A-2, A-1	0-15	5-30	60-90	55-85	35-55	20-30	25-35	5-10
	8-18	Cobbly sandy loam, gravelly sandy loam, gravelly loam	GC-GM, ML, SM	A-4, A-2, A-1	0-15	5-30	60-90	55-85	40-65	25-50	25-35	5-10
	18-26	Very gravelly sandy loam, very cobbly loam, very cobbly sandy loam	GC-GM, SM, GM	A-4, A-2, A-1	0-25	5-55	50-75	45-70	35-60	25-50	25-35	5-10
	26-60	Extremely cobbly sandy loam, extremely gravelly sandy loam, extremely cobbly loam	GM, GC-GM	A-1, A-4, A-2	0-25	30-55	50-75	45-70	35-50	25-50	25-35	5-10

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
700: Drybuck-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	70-100	45-65	25-35	---	---
	1-7	Sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	7-15	Sandy loam, coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	15-31	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	31-43	Fine gravelly sandy loam, coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	75-100	50-100	30-65	15-35	15-25	NP-5
	43-53	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	75-100	50-100	30-65	15-35	15-25	NP-5
	53-63	Unweathered bedrock			---	---	---	---	---	---	---	---
Whisk, moist----	0-7	Fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0	80-100	50-70	35-50	15-30	15-25	NP-5
	7-15	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	80-100	55-75	35-50	15-30	15-25	NP-5
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
701: Drybuck-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	70-100	45-65	25-35	---	---
	1-7	Sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	7-15	Sandy loam, coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	15-31	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	31-43	Fine gravelly sandy loam, coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	75-100	50-100	30-65	15-35	15-25	NP-5
	43-53	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	75-100	50-100	30-65	15-35	15-25	NP-5
	53-63	Unweathered bedrock			---	---	---	---	---	---	---	---
Whisk, moist----	0-7	Fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0	80-100	50-70	35-50	15-30	15-25	NP-5
	7-15	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	80-100	55-75	35-50	15-30	15-25	NP-5
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
702: Deerrun-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-30	---	---
	1-11	Sandy loam	SC-SM, SM	A-1, A-2	0	0	95-100	75-100	40-70	20-30	15-25	NP-5
	11-19	Coarse sandy loam, sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	50-90	35-60	15-35	15-25	NP-5
	19-33	Fine gravelly coarse sandy loam, loamy coarse sand	SC-SM, SM	A-2, A-1	0	0	80-100	50-90	35-60	15-35	15-25	NP-5
	33-43	Unweathered bedrock			---	---	---	---	---	---	---	---
Kisky, fine gravelly sandy loam, moist----	0-1	Slightly decomposed plant material	PT	A-8	0	0-25	75-100	50-75	25-45	10-25	---	---
	1-8	Fine gravelly sandy loam	SM, SW-SM	A-1	0	0-25	75-100	50-75	25-45	10-25	0-20	NP
	8-14	Very gravelly loamy coarse sand	SW-SM, SM, SP	A-1	0	0-25	55-100	15-50	10-30	0-15	0-10	NP
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Drybuck, dry----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-40	---	---
	1-6	Sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	6-25	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	25-45	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	50-100	35-70	20-40	15-25	NP-5
	45-57	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	50-100	35-70	20-40	15-25	NP-5
	57-67	Unweathered bedrock			---	---	---	---	---	---	---	---
704: Drybuck-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	70-100	45-65	25-35	---	---
	1-7	Sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	7-15	Sandy loam, coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	15-31	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2	0	0	90-100	70-100	45-65	25-35	15-25	NP-5
	31-43	Fine gravelly sandy loam, coarse sandy loam	SM, SC-SM	A-1, A-2	0	0	75-100	50-100	30-65	15-35	15-25	NP-5
	43-53	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	75-100	50-100	30-65	15-35	15-25	NP-5
	53-63	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
704: Northfork, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-80	30-45	15-25	---	---
	1-4	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0	85-100	50-80	30-45	15-25	15-25	NP-5
	4-14	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	85-100	50-85	30-50	15-30	15-25	NP-5
	14-44	Coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0-20	85-100	50-90	30-65	15-35	15-25	NP-5
	44-56	Fine gravelly sandy loam, very gravelly loamy coarse sand	SP-SM, SC-SM	A-2, A-1	0	0-20	70-100	30-75	15-50	10-30	15-25	NP-5
	56-60	Very gravelly sandy loam, fine gravelly loamy coarse sand	SP-SM, SC-SM	A-2, A-1	0	0-20	70-100	30-75	15-50	10-30	15-25	NP-5
Whisk, moist----	0-7	Fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0	80-100	50-70	35-50	15-30	15-25	NP-5
	7-15	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	80-100	55-75	35-50	15-30	15-25	NP-5
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---
705: Northfork, sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	70-80	45-55	25-30	---	---
	1-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0	95-100	70-80	45-55	25-30	15-25	NP-5
	7-18	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-15	85-100	50-90	30-55	15-30	15-25	NP-5
	18-34	Fine gravelly loamy coarse sand, fine gravelly sandy loam	SW-SM, SC-SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5
	34-39	Fine gravelly loamy coarse sand, fine gravelly sandy loam	SW-SM, SC-SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5
	39-60	Fine gravelly sandy loam, fine gravelly loamy coarse sand	SW-SM, SM	A-2, A-1	0	0-15	75-100	50-75	25-50	10-30	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
705: Shirts, sandy loam, dry-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	5-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-21	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	80-100	50-100	30-70	15-40	15-25	NP-5
	21-33	Fine gravelly sandy loam, coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	75-100	50-100	30-70	15-35	15-25	NP-5
	33-39	Gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	60-90	50-75	30-45	15-35	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
706: Northfork, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-80	30-45	15-25	---	---
	1-4	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0	85-100	50-80	30-45	15-25	15-25	NP-5
	4-14	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	85-100	50-85	30-50	15-30	15-25	NP-5
	14-44	Coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0-20	85-100	50-90	30-65	15-35	15-25	NP-5
	44-56	Fine gravelly sandy loam, very gravelly loamy coarse sand	SP-SM, SC-SM	A-2, A-1	0	0-20	70-100	30-75	15-50	10-30	15-25	NP-5
	56-60	Very gravelly sandy loam, fine gravelly loamy coarse sand	SP-SM, SC-SM	A-2, A-1	0	0-20	70-100	30-75	15-50	10-30	15-25	NP-5
Shirts, coarse sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-40	---	---
	1-3	Coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	3-10	Sandy loam, coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	10-15	Fine gravelly coarse sandy loam, sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	15-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	25-29	Fine gravelly coarse sand, fine gravelly loamy coarse sand	SC-SM, SP-SM, SM	A-1	0	0-10	85-100	50-75	30-50	10-20	10-20	NP-5
	29-39	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
706: Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
707: Packerjohn, ashy coarse sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	50-70	20-40	---	---
	2-10	Ashy coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	50-70	20-40	10-20	NP-5
	10-19	Ashy coarse sandy loam, fine gravelly ashy coarse sandy loam	SC-SM, SM	A-4, A-2, A-1	0	0	90-100	70-100	40-70	20-40	10-20	NP-5
	19-33	Ashy sandy loam, fine gravelly ashy loamy coarse sand	SW-SM, SC-SM, SM	A-2, A-1	0	0	85-100	50-85	25-55	10-30	10-20	NP-5
	33-44	Fine gravelly loamy coarse sand, loamy sand	SC-SM, SW-SM, SM	A-1	0	0	85-100	50-85	25-50	10-25	10-20	NP-5
	44-60	Very gravelly loamy coarse sand, loamy sand	SC-SM, SW-SM, SM	A-1	0	0	75-100	50-85	25-50	10-25	10-20	NP-5
Shirts, coarse sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-40	---	---
	1-3	Coarse sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	3-10	Sandy loam, coarse sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	10-15	Fine gravelly coarse sandy loam, sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	15-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	25-29	Fine gravelly coarse sand, fine gravelly loamy coarse sand	SP-SM, SM, SC-SM	A-1	0	0-10	85-100	50-75	30-50	10-20	10-20	NP-5
	29-39	Unweathered bedrock			---	---	---	---	---	---	---	---
Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
708: Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Northfork, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-80	30-45	15-25	---	---
	1-4	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0	85-100	50-80	30-45	15-25	15-25	NP-5
	4-14	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	85-100	50-85	30-50	15-30	15-25	NP-5
	14-44	Coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0-20	85-100	50-90	30-65	15-35	15-25	NP-5
	44-56	Fine gravelly sandy loam, very gravelly loamy coarse sand	SP-SM, SC-SM	A-2, A-1	0	0-20	70-100	30-75	15-50	10-30	15-25	NP-5
	56-60	Very gravelly sandy loam, fine gravelly loamy coarse sand	SP-SM, SC-SM	A-2, A-1	0	0-20	70-100	30-75	15-50	10-30	15-25	NP-5
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---
709: Shirts, sandy loam, south slope-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	40-70	20-40	---	---
	1-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	40-70	20-40	15-25	NP-5
	5-11	Coarse sandy loam, sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	40-70	20-40	15-25	NP-5
	11-23	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1, A-4	0	0	75-100	50-100	30-70	15-40	15-25	NP-5
	23-35	Gravelly sandy loam, loamy coarse sand	SM	A-2, A-1	0	0	65-100	50-100	30-70	15-35	10-20	NP-5
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
709: Charters, sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	45-90	30-60	15-30	---	---
	2-7	Sandy loam	SM	A-1, A-2	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	7-16	Sandy loam	SM	A-2, A-1	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	16-29	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	15-25	NP-5
	29-39	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1, A-2	0	0-15	85-100	50-75	30-50	15-30	15-25	NP-5
	39-50	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	15-25	NP-5
	50-60	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	10-20	NP-5
710: Charters, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	4-13	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	13-19	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	19-34	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	15-30	15-25	NP-5
	34-52	Fine gravelly coarse sandy loam, fine gravelly loamy sand	SC-SM, SW-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	10-30	15-25	NP-5
	52-60	Fine gravelly loamy coarse sand, fine gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
710: Northfork, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-80	30-45	15-25	---	---
	1-4	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0	85-100	50-80	30-45	15-25	15-25	NP-5
	4-14	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	85-100	50-85	30-50	15-30	15-25	NP-5
	14-44	Coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0-20	85-100	50-90	30-65	15-35	15-25	NP-5
	44-56	Fine gravelly sandy loam, very gravelly loamy coarse sand	SP-SM, SC-SM	A-2, A-1	0	0-20	70-100	30-75	15-50	10-30	15-25	NP-5
	56-60	Very gravelly sandy loam, fine gravelly loamy coarse sand	SP-SM, SC-SM	A-2, A-1	0	0-20	70-100	30-75	15-50	10-30	15-25	NP-5
Shirts, coarse sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-40	---	---
	1-3	Coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	3-10	Sandy loam, coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	10-15	Fine gravelly coarse sandy loam, sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	15-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	25-29	Fine gravelly coarse sand, fine gravelly loamy coarse sand	SC-SM, SP-SM, SM	A-1	0	0-10	85-100	50-75	30-50	10-20	10-20	NP-5
	29-39	Unweathered bedrock				---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
711: Charters, fine gravelly sandy loam, dry-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-11	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	11-16	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	16-33	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	33-41	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	41-60	Fine gravelly sandy loam, fine gravelly loamy sand	SW-SM, SC-SM, SM	A-1, A-2	0	0-15	70-95	50-75	25-50	10-30	15-25	NP-5
Shirts, sandy loam, dry-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	5-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-21	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	80-100	50-100	30-70	15-40	15-25	NP-5
	21-33	Fine gravelly sandy loam, coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	75-100	50-100	30-70	15-35	15-25	NP-5
	33-39	Gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	60-90	50-75	30-45	15-35	10-20	NP-5
39-49	Unweathered bedrock			---	---	---	---	---	---	---	---	
Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
712: Charters, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	4-13	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	13-19	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	19-34	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	15-30	15-25	NP-5
	34-52	Fine gravelly coarse sandy loam, fine gravelly loamy sand	SC-SM, SW-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	10-30	15-25	NP-5
	52-60	Fine gravelly loamy coarse sand, fine gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5
Shirts, coarse sandy loam----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-40	---	---
	1-3	Coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	3-10	Sandy loam, coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	10-15	Fine gravelly coarse sandy loam, sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	15-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	25-29	Fine gravelly coarse sand, fine gravelly loamy coarse sand	SC-SM, SP-SM, SM	A-1	0	0-10	85-100	50-75	30-50	10-20	10-20	NP-5
	29-39	Unweathered bedrock			---	---	---	---	---	---	---	---
Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
714: Shirts, sandy loam, south slope-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	40-70	20-40	---	---
	1-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	40-70	20-40	15-25	NP-5
	5-11	Coarse sandy loam, sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	40-70	20-40	15-25	NP-5
	11-23	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1, A-4	0	0	75-100	50-100	30-70	15-40	15-25	NP-5
	23-35	Gravelly sandy loam, loamy coarse sand	SM	A-2, A-1	0	0	65-100	50-100	30-70	15-35	10-20	NP-5
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Eagleson, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	50-90	30-50	15-30	---	---
	1-12	Fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0	80-100	50-90	30-50	15-30	15-25	NP-5
	12-17	Very gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM, SP-SM	A-1	0-10	0-20	60-75	30-50	15-45	10-15	15-25	NP-5
	17-25	Very gravelly sandy loam, extremely gravelly loamy sand	GP, SM, GP-GM	A-1	0-10	0-20	45-70	15-50	10-25	0-15	10-20	NP-5
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
Charters, sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	45-90	30-60	15-30	---	---
	2-7	Sandy loam	SM	A-1, A-2	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	7-16	Sandy loam	SM	A-2, A-1	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	16-29	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	15-25	NP-5
	29-39	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1, A-2	0	0-15	85-100	50-75	30-50	15-30	15-25	NP-5
	39-50	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	15-25	NP-5
	50-60	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
715: Eagleson, fine gravelly sandy loam, dry-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	75-100	50-85	30-50	15-30	---	---
	1-10	Fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	75-100	50-85	30-50	15-30	15-25	NP-5
	10-16	Very cobbly sandy loam	SM, SC-SM	A-2, A-1	0	20-55	80-100	60-85	35-50	15-30	15-25	NP-5
	16-27	Extremely cobbly sandy loam, very cobbly coarse sandy loam	SC-SM, SM	A-2, A-1	0-10	40-75	75-100	55-85	30-50	15-30	15-25	NP-5
	27-37	Unweathered bedrock			---	---	---	---	---	---	---	---
Kosh-----	0-10	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	10-18	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP, SM, GP-GM	A-1	0	0-65	35-85	15-60	5-40	0-20	10-20	NP-5
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---
716: Zan-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	35-50	15-30	---	---
	1-3	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	90-100	50-75	35-50	15-30	10-20	NP-5
	3-14	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	90-100	50-75	35-50	15-30	10-20	NP-5
	14-24	Fine gravelly ashy loamy coarse sand	SW-SM, SM	A-1	0	0	80-100	50-75	25-50	10-20	10-20	NP-5
	24-35	Fine gravelly ashy loamy coarse sand	SW-SM, SM	A-1	0	0	75-100	50-75	25-50	10-20	10-20	NP-5
	35-60	Very gravelly loamy coarse sand, gravelly coarse sand	GP-GM, SC-SM, SW-SM	A-1	0	0-25	45-90	35-70	15-50	5-20	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
716: Belsh-----	0-1	Slightly decomposed plant material	PT	A-8	0-15	0-15	55-90	50-85	35-55	15-30	---	---
	1-7	Fine gravelly ashy coarse sandy loam	SM, GM	A-2, A-1	0-20	0-15	55-90	50-85	35-55	15-30	15-20	NP-5
	7-15	Fine gravelly ashy coarse sandy loam	SM, GM	A-1, A-2	0-20	0-15	55-90	50-85	35-55	15-30	15-20	NP-5
	15-21	Very cobbly coarse sandy loam, very cobbly loamy coarse sand	SM, GM, GW-GM	A-2, A-1	0-45	0-50	40-80	35-75	20-55	10-25	15-20	NP-5
	21-37	Extremely cobbly coarse sand, very gravelly loamy coarse sand	SM, GM, GP-GM	A-1, A-2	0-25	0-65	40-80	35-75	20-55	5-30	10-15	NP-5
	37-60	Very cobbly loamy coarse sand, extremely gravelly coarse sand, very gravelly coarse sand	GM, SM, GP-GM	A-1	0-25	0-65	45-85	35-55	20-40	5-20	10-15	NP-5
Montchief-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-90	30-65	15-35	---	---
	1-11	Ashy sandy loam	SM	A-1, A-2	0	0	90-100	50-90	30-65	15-35	10-20	NP-5
	11-16	Very gravelly ashy sandy loam, gravelly ashy sandy loam	SM	A-1, A-2	0	0-15	65-100	35-85	20-55	10-25	10-20	NP-5
	16-25	Extremely cobbly ashy loamy sand, very gravelly ashy loamy coarse sand	GP-GM, SC-SM, SW-SM	A-1	0	0-55	50-95	35-60	15-40	5-15	10-20	NP-5
	25-33	Very gravelly ashy loamy coarse sand, extremely cobbly ashy loamy coarse sand, very gravelly ashy loamy sand	GP-GM, SC-SM, SP-SM	A-1	0-40	0-55	50-95	35-65	15-40	5-15	10-20	NP-5
	33-43	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
718: Charters, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	4-13	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	13-19	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	19-34	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	15-30	15-25	NP-5
	34-52	Fine gravelly coarse sandy loam, fine gravelly loamy sand	SC-SM, SW-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	10-30	15-25	NP-5
	52-60	Fine gravelly loamy coarse sand, fine gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5
Crumley-----	0-2	Slightly decomposed plant material	PT	A-8	0	0-10	75-100	50-75	30-45	15-25	---	---
	2-4	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	75-100	50-75	30-45	15-25	0-25	NP-5
	4-12	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	75-100	50-75	30-45	15-25	0-25	NP-5
	12-18	Fine gravelly coarse sandy loam, very gravelly sandy loam	GM, SC-SM	A-1	0	0-20	40-90	35-75	15-45	10-25	0-25	NP-5
	18-30	Extremely gravelly loamy coarse sand, extremely gravelly loamy sand	GW-GM, SM, GP	A-1	0	0-40	25-60	20-60	5-35	0-15	0-10	NP
	30-60	Extremely gravelly loamy coarse sand, extremely gravelly loamy sand	SM, GW-GM, GP	A-1	0	0-40	25-65	20-60	5-35	0-15	0-10	NP
Eagleson, sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	70-90	40-55	20-30	---	---
	1-4	Sandy loam	SC-SM, SM	A-1, A-2	0	0	85-100	70-90	45-60	25-30	15-25	NP-5
	4-15	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0-20	80-100	60-80	35-50	20-30	15-25	NP-5
	15-19	Very gravelly coarse sandy loam, fine gravelly sandy loam	SW-SM, SC-SM, SM	A-1	0-10	0-20	65-90	30-75	10-45	5-25	15-25	NP-5
	19-37	Very cobbly sandy loam, very cobbly loamy sand	SP-SM, SM	A-2, A-1	0-10	30-60	60-85	30-75	15-50	5-30	10-15	NP-5
	37-47	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
720: Drybuck, dry----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-40	---	---
	1-6	Sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	6-25	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	25-45	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	50-100	35-70	20-40	15-25	NP-5
	45-57	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	50-100	35-70	20-40	15-25	NP-5
	57-67	Unweathered bedrock			---	---	---	---	---	---	---	---
Deerrun-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-30	---	---
	1-11	Sandy loam	SC-SM, SM	A-1, A-2	0	0	95-100	75-100	40-70	20-30	15-25	NP-5
	11-19	Coarse sandy loam, sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	50-90	35-60	15-35	15-25	NP-5
	19-33	Fine gravelly coarse sandy loam, loamy coarse sand	SC-SM, SM	A-2, A-1	0	0	80-100	50-90	35-60	15-35	15-25	NP-5
	33-43	Unweathered bedrock			---	---	---	---	---	---	---	---
Kisky, fine gravelly sandy loam, moist----	0-1	Slightly decomposed plant material	PT	A-8	0	0-25	75-100	50-75	25-45	10-25	---	---
	1-8	Fine gravelly sandy loam	SM, SW-SM	A-1	0	0-25	75-100	50-75	25-45	10-25	0-20	NP
	8-14	Very gravelly loamy coarse sand	SW-SM, SM, SP	A-1	0	0-25	55-100	15-50	10-30	0-15	0-10	NP
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
721: Shirts, fine gravelly sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	80-100	65-100	40-70	20-40	---	---
	2-7	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	80-100	65-100	40-70	20-40	15-25	NP-5
	7-11	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-4, A-2	0	0	80-100	65-100	30-70	15-40	15-25	NP-5
	11-25	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1	0	0	75-100	50-100	30-70	15-40	15-25	NP-5
	25-29	Fine gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0-10	70-90	50-75	30-45	15-35	10-20	NP-5
	29-39	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
721: Kosh-----	0-10	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	10-18	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP, GP-GM, SM	A-1	0	0-65	35-85	15-60	5-40	0-20	10-20	NP-5
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---
Charters, fine gravelly sandy loam, dry-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-11	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	11-16	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	16-33	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	33-41	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	41-60	Fine gravelly sandy loam, fine gravelly loamy sand	SW-SM, SC-SM, SM	A-1, A-2	0	0-15	70-95	50-75	25-50	10-30	15-25	NP-5
726: Garval-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	75-100	50-75	25-50	10-20	---	---
	1-5	Fine gravelly loamy coarse sand	SM, SW-SM, SC-SM	A-1	0	0	75-100	50-75	25-50	10-20	10-20	NP-5
	5-13	Very gravelly loamy coarse sand, fine gravelly loamy coarse sand	SM, SW-SM, SC-SM	A-1	0	0	75-100	50-75	25-50	10-20	10-20	NP-5
	13-19	Gravelly coarse sand, very gravelly loamy coarse sand	SW-SM, SW	A-1	0	0	60-85	50-75	25-45	0-10	10-20	NP-5
	19-29	Extremely gravelly coarse sand, very gravelly loamy coarse sand	SP-SM, GP	A-1	0-25	10-50	30-85	25-75	10-40	0-5	10-20	NP-5
	29-39	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
726: Kisky, fine gravelly loamy coarse sand----	0-4	Fine gravelly loamy coarse sand	GP-GM, SM	A-1	0	0-25	55-100	50-75	25-50	10-20	10-20	NP
	4-10	Fine gravelly loamy coarse sand	GP-GM, SC-SM, SM	A-1	0	0-25	55-100	50-75	25-50	10-20	10-20	NP-5
	10-16	Extremely gravelly loamy coarse sand, very cobbly loamy sand	SP-SM	A-1	0	10-65	50-90	15-50	10-25	0-10	10-20	NP
	16-26	Unweathered bedrock			---	---	---	---	---	---	---	---
730: Hellake-----	0-3	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	3-10	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	10-22	Clay loam, loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	22-36	Clay loam, loam	CL	A-6, A-4	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	36-43	Clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-75	35-45	15-20
	43-53	Very gravelly loam, very gravelly sandy loam	GC-GM, GC	A-1, A-2	0	0-25	30-60	25-60	15-40	10-25	25-40	5-15
	53-60	Very gravelly sandy loam, very gravelly loamy sand	GC-GM, GP-GM, GC	A-4, A-1	0	0-25	30-60	25-60	15-55	10-40	15-30	NP-10
	60-66	Extremely gravelly loamy sand, very gravelly sandy loam	GC, GP-GM	A-4, A-1	0	0-25	30-65	25-60	15-55	10-40	15-30	NP-10
Stardust-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	60-90	50-85	40-70	---	---
	1-3	Fine gravelly loam	SC-SM, SC	A-6, A-4	0	0	85-100	60-70	50-60	40-45	25-35	5-15
	3-9	Fine gravelly loam, loam	SC-SM, SC, CL	A-6, A-4	0	0	85-100	60-90	50-80	40-65	25-35	5-15
	9-18	Fine gravelly loam, sandy clay loam	SC, CL	A-6, A-2	0	0	85-100	60-90	50-75	35-55	30-40	10-15
	18-38	Sandy clay loam, fine gravelly sandy clay loam, gravelly loam	SC, CL	A-2, A-6	0	0	75-100	50-90	40-85	20-60	30-40	10-15
	38-54	Gravelly sandy clay loam, sandy clay loam	SC, GC	A-2, A-6	0	0	55-95	50-90	40-80	20-50	25-35	10-15
	54-67	Gravelly sandy loam	SC-SM, SC, GM	A-1, A-2	0	0	55-80	50-75	30-45	15-30	15-30	NP-10

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
731: Shirts, sandy loam, dry-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	5-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-21	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	80-100	50-100	30-70	15-40	15-25	NP-5
	21-33	Fine gravelly sandy loam, coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	75-100	50-100	30-70	15-35	15-25	NP-5
	33-39	Gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	60-90	50-75	30-45	15-35	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
Charters, fine gravelly sandy loam, dry-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-11	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	11-16	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	16-33	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	33-41	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	41-60	Fine gravelly sandy loam, fine gravelly loamy sand	SW-SM, SC-SM, SM	A-1, A-2	0	0-15	70-95	50-75	25-50	10-30	15-25	NP-5
Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
733: Shirts, fine gravelly sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	80-100	65-100	40-70	20-40	---	---
	2-7	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	80-100	65-100	40-70	20-40	15-25	NP-5
	7-11	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-4, A-2	0	0	80-100	65-100	30-70	15-40	15-25	NP-5
	11-25	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1	0	0	75-100	50-100	30-70	15-40	15-25	NP-5
	25-29	Fine gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0-10	70-90	50-75	30-45	15-35	10-20	NP-5
	29-39	Unweathered bedrock			---	---	---	---	---	---	---	---
Kosh-----	0-10	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	10-18	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP, GP-GM, SM	A-1	0	0-65	35-85	15-60	5-40	0-20	10-20	NP-5
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---
734: Shirts, sandy loam, dry-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	5-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-21	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	80-100	50-100	30-70	15-40	15-25	NP-5
	21-33	Fine gravelly sandy loam, coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	75-100	50-100	30-70	15-35	15-25	NP-5
	33-39	Gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	60-90	50-75	30-45	15-35	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
Kosh-----	0-10	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	10-18	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP, GP-GM, SM	A-1	0	0-65	35-85	15-60	5-40	0-20	10-20	NP-5
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
735: Shirts, coarse sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-40	---	---
	1-3	Coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	3-10	Sandy loam, coarse sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	10-15	Fine gravelly coarse sandy loam, sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	15-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	90-100	50-100	30-70	15-35	15-25	NP-5
	25-29	Fine gravelly coarse sand, fine gravelly loamy coarse sand	SC-SM, SP-SM, SM	A-1	0	0-10	85-100	50-75	30-50	10-20	10-20	NP-5
	29-39	Unweathered bedrock			---	---	---	---	---	---	---	---
Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Charters, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	4-13	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	13-19	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	19-34	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	15-30	15-25	NP-5
	34-52	Fine gravelly coarse sandy loam, fine gravelly loamy sand	SC-SM, SW-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	10-30	15-25	NP-5
	52-60	Fine gravelly loamy coarse sand, fine gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
738: Tripod-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	50-75	30-50	15-30	---	---
	1-6	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	80-100	50-75	30-50	15-30	10-20	NP-5
	6-13	Fine gravelly ashy sandy loam, fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0-10	75-90	50-75	30-50	15-30	10-20	NP-5
	13-23	Extremely gravelly coarse sand, very cobble loamy coarse sand	SP-SM, SM	A-1	0-10	0-45	55-95	35-75	20-50	5-15	10-20	NP-5
	23-50	Extremely cobble loamy sand, very gravelly coarse sand, very stony coarse sand	SP, SP-SM	A-1	0-40	10-45	50-90	35-75	15-50	0-10	10-20	NP-5
	50-60	Very cobble coarse sand, extremely gravelly loamy coarse sand, very stony coarse sand	SP, SP-SM, SW-SM	A-1	0-40	10-45	50-90	35-75	15-50	0-10	10-20	NP-5
Packerjohn, ashy coarse sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	50-70	20-40	---	---
	2-10	Ashy coarse sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	75-100	50-70	20-40	10-20	NP-5
	10-19	Ashy coarse sandy loam, fine gravelly ashy coarse sandy loam	SM, SC-SM	A-2, A-1, A-4	0	0	90-100	70-100	40-70	20-40	10-20	NP-5
	19-33	Ashy sandy loam, fine gravelly ashy loamy coarse sand	SM, SW-SM, SC-SM	A-2, A-1	0	0	85-100	50-85	25-55	10-30	10-20	NP-5
	33-44	Fine gravelly loamy coarse sand, loamy sand	SW-SM, SM, SC-SM	A-1	0	0	85-100	50-85	25-50	10-25	10-20	NP-5
	44-60	Very gravelly loamy coarse sand, loamy sand	SC-SM, SM, SW-SM	A-1	0	0	75-100	50-85	25-50	10-25	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
738: Pajo, fine gravelly ashy coarse sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	75-100	50-75	30-50	15-30	---	---
	1-8	Fine gravelly ashy coarse sandy loam	SM	A-1, A-2	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	8-16	Fine gravelly ashy loamy sand, fine gravelly ashy loamy coarse sand	SP-SM, SM	A-1	0	0-15	75-100	50-75	30-50	10-20	10-20	NP-5
	16-27	Extremely gravelly coarse sand, extremely cobbly loamy sand, extremely stony coarse sand	GP-GM, SP-SM, SC-SM	A-1	0-40	0-65	50-85	35-60	15-40	5-20	10-20	NP-5
	27-37	Unweathered bedrock			---	---	---	---	---	---	---	---
739: Shirts, sandy loam, moist----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-4, A-2, A-1	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	25-34	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-4, A-2, A-1	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	34-39	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM, SC-SM	A-2, A-1	0	0-10	60-90	50-75	30-50	15-30	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
739: Packerjohn, ashy coarse sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	50-70	20-40	---	---
	2-10	Ashy coarse sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	75-100	50-70	20-40	10-20	NP-5
	10-19	Ashy coarse sandy loam, fine gravelly ashy coarse sandy loam	SM, SC-SM	A-2, A-1, A-4	0	0	90-100	70-100	40-70	20-40	10-20	NP-5
	19-33	Ashy sandy loam, fine gravelly ashy loamy coarse sand	SM, SW-SM, SC-SM	A-2, A-1	0	0	85-100	50-85	25-55	10-30	10-20	NP-5
	33-44	Fine gravelly loamy coarse sand, loamy sand	SW-SM, SM, SC-SM	A-1	0	0	85-100	50-85	25-50	10-25	10-20	NP-5
	44-60	Very gravelly loamy coarse sand, loamy sand	SC-SM, SM, SW-SM	A-1	0	0	75-100	50-85	25-50	10-25	10-20	NP-5
740: Charters, sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	45-90	30-60	15-30	---	---
	2-7	Sandy loam	SM	A-1, A-2	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	7-16	Sandy loam	SM	A-2, A-1	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	16-29	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	15-25	NP-5
	29-39	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1, A-2	0	0-15	85-100	50-75	30-50	15-30	15-25	NP-5
	39-50	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	15-25	NP-5
	50-60	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
740: Eagleson, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	50-90	30-50	15-30	---	---
	1-12	Fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0	80-100	50-90	30-50	15-30	15-25	NP-5
	12-17	Very gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM, SP-SM	A-1	0-10	0-20	60-75	30-50	15-45	10-15	15-25	NP-5
	17-25	Very gravelly sandy loam, extremely gravelly loamy sand	GP, SM, GP-GM	A-1	0-10	0-20	45-70	15-50	10-25	0-15	10-20	NP-5
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
741: Zan-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	35-50	15-30	---	---
	1-3	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	90-100	50-75	35-50	15-30	10-20	NP-5
	3-14	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	90-100	50-75	35-50	15-30	10-20	NP-5
	14-24	Fine gravelly ashy loamy coarse sand	SW-SM, SM	A-1	0	0	80-100	50-75	25-50	10-20	10-20	NP-5
	24-35	Fine gravelly ashy loamy coarse sand	SW-SM, SM	A-1	0	0	75-100	50-75	25-50	10-20	10-20	NP-5
	35-60	Very gravelly loamy coarse sand, gravelly coarse sand	GP-GM, SC-SM, SW-SM	A-1	0	0-25	45-90	35-70	15-50	5-20	10-20	NP-5
742: Crumley-----	0-2	Slightly decomposed plant material	PT	A-8	0	0-10	75-100	50-75	30-45	15-25	---	---
	2-4	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	75-100	50-75	30-45	15-25	0-25	NP-5
	4-12	Fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	75-100	50-75	30-45	15-25	0-25	NP-5
	12-18	Fine gravelly coarse sandy loam, very gravelly sandy loam	GM, SC-SM	A-1	0	0-20	40-90	35-75	15-45	10-25	0-25	NP-5
	18-30	Extremely gravelly loamy coarse sand, extremely gravelly loamy sand	GW-GM, SM, GP	A-1	0	0-40	25-60	20-60	5-35	0-15	0-10	NP
	30-60	Extremely gravelly loamy coarse sand, extremely gravelly loamy sand	SM, GW-GM, GP	A-1	0	0-40	25-65	20-60	5-35	0-15	0-10	NP

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
742: Eagleson, sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	70-90	40-55	20-30	---	---
	1-4	Sandy loam	SC-SM, SM	A-1, A-2	0	0	85-100	70-90	45-60	25-30	15-25	NP-5
	4-15	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0-20	80-100	60-80	35-50	20-30	15-25	NP-5
	15-19	Very gravelly coarse sandy loam, fine gravelly sandy loam	SW-SM, SC-SM, SM	A-1	0-10	0-20	65-90	30-75	10-45	5-25	15-25	NP-5
	19-37	Very cobbly sandy loam, very cobbly loamy sand	SP-SM, SM	A-2, A-1	0-10	40-60	60-85	30-75	15-50	5-30	10-15	NP-5
	37-47	Unweathered bedrock			---	---	---	---	---	---	---	---
743: Packerjohn, ashy coarse sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	50-70	20-40	---	---
	2-10	Ashy coarse sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	75-100	50-70	20-40	10-20	NP-5
	10-19	Ashy coarse sandy loam, fine gravelly ashy coarse sandy loam	SM, SC-SM	A-2, A-1, A-4	0	0	90-100	70-100	40-70	20-40	10-20	NP-5
	19-33	Ashy sandy loam, fine gravelly ashy loamy coarse sand	SM, SW-SM, SC-SM	A-2, A-1	0	0	85-100	50-85	25-55	10-30	10-20	NP-5
	33-44	Fine gravelly loamy coarse sand, loamy sand	SW-SM, SM, SC-SM	A-1	0	0	85-100	50-85	25-50	10-25	10-20	NP-5
	44-60	Very gravelly loamy coarse sand, loamy sand	SC-SM, SM, SW-SM	A-1	0	0	75-100	50-85	25-50	10-25	10-20	NP-5
Shirts, sandy loam, moist----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-12	Sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1, A-4	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	25-34	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1, A-4	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	34-39	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM, SC-SM	A-2, A-1	0	0-10	60-90	50-75	30-50	15-30	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
744: Packerjohn, ashy sandy loam, cool-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	45-70	25-40	---	---
	1-9	Ashy sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	95-100	75-100	45-70	25-40	10-20	NP-5
	9-15	Ashy loamy sand, fine gravelly ashy sandy loam	SM, SC-SM	A-2, A-1	0	0	90-100	50-85	30-55	15-30	10-20	NP-5
	15-31	Ashy loamy sand, fine gravelly ashy sandy loam	SW-SM, SM	A-2, A-1	0	0	90-100	50-85	30-55	10-30	10-20	NP-5
	31-60	Fine gravelly loamy sand, loamy coarse sand	SP-SM, SM, SC-SM	A-1, A-2	0	0	75-100	50-85	25-55	10-25	10-20	NP-5
Shirts, sandy loam, moist----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-4, A-2, A-1	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	25-34	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-4, A-2, A-1	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	34-39	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM, SC-SM	A-2, A-1	0	0-10	60-90	50-75	30-50	15-30	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
Tripod, cool----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-75	35-50	15-30	---	---
	1-6	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	35-50	15-30	10-20	NP-5
	6-20	Fine gravelly ashy sandy loam, fine gravelly ashy coarse sandy loam	SM	A-1, A-2	0	0-10	75-100	50-75	35-50	15-30	10-20	NP-5
	20-60	Extremely gravelly coarse sand, very stony loamy sand, very cobbly coarse sand	GP-GM, SP-SM	A-1	0-40	10-45	45-90	35-75	25-50	5-20	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
745: Tripod, moist---	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-75	30-50	15-30	---	---
	1-4	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	10-20	NP-5
	4-16	Fine gravelly ashy coarse sandy loam, fine gravelly ashy sandy loam	SM	A-2, A-1	0	0-10	70-95	50-75	30-50	15-30	10-20	NP-5
	16-38	Extremely gravelly sand, very cobbly loamy sand	SP, SP-SM, SW-SM	A-1	0-10	10-45	50-90	35-75	15-50	0-10	10-20	NP-5
	38-60	Very gravelly sand, extremely cobbly loamy sand, very stony sand	SP, SP-SM, SW-SM	A-1	0-40	0-45	50-90	35-75	15-50	0-10	10-20	NP-5
Packerjohn, ashy sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	40-70	20-40	---	---
	2-5	Ashy sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	75-100	40-70	20-40	10-20	NP-5
	5-16	Fine gravelly ashy sandy loam, ashy sandy loam	SM, SC-SM	A-2, A-1, A-4	0	0	90-100	70-100	40-65	20-40	10-20	NP-5
	16-23	Loamy sand, fine gravelly coarse sandy loam	SW-SM, SM, SC-SM	A-1, A-2	0	0	90-100	50-85	25-55	10-25	10-20	NP-5
	23-39	Fine gravelly coarse sandy loam, loamy coarse sand	SW-SM, SM, SC-SM	A-2, A-1	0	0	90-100	50-85	25-55	10-25	10-20	NP-5
	39-60	Fine gravelly loamy sand	SW-SM, SM, SC-SM	A-2, A-1	0	0	75-100	50-85	25-55	10-25	10-20	NP-5
746: Packerjohn, ashy sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	40-70	20-40	---	---
	2-5	Ashy sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	40-70	20-40	10-20	NP-5
	5-16	Fine gravelly ashy sandy loam, ashy sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	70-100	40-65	20-40	10-20	NP-5
	16-23	Loamy sand, fine gravelly coarse sandy loam	SC-SM, SM, SW-SM	A-1, A-2	0	0	90-100	50-85	25-55	10-25	10-20	NP-5
	23-39	Fine gravelly coarse sandy loam, loamy coarse sand	SC-SM, SM, SW-SM	A-2, A-1	0	0	90-100	50-85	25-55	10-25	10-20	NP-5
	39-60	Fine gravelly loamy sand	SC-SM, SM, SW-SM	A-2, A-1	0	0	75-100	50-85	25-55	10-25	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
747: Pinney, moist---	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	90-100	80-100	65-90	---	---
	1-4	Ashy silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	80-100	65-90	25-35	5-10
	4-10	Ashy silt loam, ashy loam	ML, CL-ML	A-4	0	0	95-100	90-100	80-100	65-90	25-35	5-10
	10-21	Ashy silt loam, ashy loam	ML, CL-ML	A-4	0	0	95-100	90-100	80-100	65-90	25-35	5-10
	21-32	Sandy clay loam, loam	CL, SC	A-6, A-2, A-7	0	0	85-100	75-100	55-90	25-55	30-45	10-20
	32-45	Sandy clay loam, clay loam	CL, SC	A-6, A-2, A-7	0	0	75-100	50-100	40-90	20-55	30-45	10-20
	45-60	Gravelly clay loam, clay loam	CL, SC	A-2, A-7, A-6	0	0	65-100	50-100	45-90	20-70	30-45	10-20
Charters, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	4-13	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	13-19	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	19-34	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	15-30	15-25	NP-5
	34-52	Fine gravelly coarse sandy loam, fine gravelly loamy sand	SC-SM, SW-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	10-30	15-25	NP-5
	52-60	Fine gravelly loamy coarse sand, fine gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
747: Shirts, sandy loam, dry-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	5-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-21	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	80-100	50-100	30-70	15-40	15-25	NP-5
	21-33	Fine gravelly sandy loam, coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	75-100	50-100	30-70	15-35	15-25	NP-5
	33-39	Gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	60-90	50-75	30-45	15-35	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
748: Belsh, moist----	0-1	Slightly decomposed plant material	PT	A-8	0-20	0-20	75-100	50-80	30-50	15-30	---	---
	1-6	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0-20	0-20	75-100	50-80	30-50	15-30	15-25	NP-5
	6-20	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0-20	0-20	75-100	50-80	35-50	15-30	15-25	NP-5
	20-34	Very cobbly loamy coarse sand, extremely stony coarse sandy loam	SP-SM, SM	A-1	0-45	0-50	70-90	35-75	20-50	10-25	15-25	NP-5
	34-60	Very gravelly loamy coarse sand, extremely gravelly loamy coarse sand	SP-SM	A-1	0-25	0-65	70-90	35-75	15-40	5-10	10-20	NP-5
Zan, moist-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-75	30-50	15-30	---	---
	1-6	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	10-20	NP-5
	6-12	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	10-20	NP-5
	12-25	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	80-100	50-75	30-50	15-30	10-20	NP-5
	25-41	Fine gravelly ashy loamy coarse sand	SM	A-1, A-2	0	0	75-95	50-75	30-50	15-30	10-20	NP-5
	41-60	Fine gravelly loamy coarse sand, very gravelly coarse sand	SW-SM, SM	A-1	0	0-25	55-90	35-70	15-50	5-20	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
749: Quartzburg-----	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	75-100	50-75	25-50	10-20	---	---
	1-5	Fine gravelly loamy coarse sand	SW-SM, SM	A-1	0	0-10	75-100	50-75	25-50	10-20	10-20	NP-5
	5-10	Fine gravelly loamy coarse sand, fine gravelly loamy sand	SW-SM, SM	A-1	0	0-10	75-100	50-75	25-50	10-20	10-20	NP-5
	10-25	Very gravelly loamy coarse sand, extremely gravelly loamy sand	SM, SW-SM	A-1	0	0-10	55-100	15-50	10-30	0-15	10-20	NP-5
	25-37	Very gravelly loamy coarse sand, extremely gravelly loamy sand	SC-SM, GW, SP-SM, SW-SM	A-1	0	0-10	35-85	15-50	10-30	0-15	10-20	NP-5
	37-42	Weathered bedrock			---	---	---	---	---	---	---	---
	42-52	Unweathered bedrock			---	---	---	---	---	---	---	---
Charters, sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	45-90	30-60	15-30	---	---
	2-7	Sandy loam	SM	A-1, A-2	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	7-16	Sandy loam	SM	A-2, A-1	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	16-29	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	15-25	NP-5
	29-39	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-1, A-2	0	0-15	85-100	50-75	30-50	15-30	15-25	NP-5
	39-50	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	15-25	NP-5
	50-60	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
750: Garval-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	75-100	50-75	25-50	10-20	---	---
	1-5	Fine gravelly loamy coarse sand	SM, SW-SM, SC-SM	A-1	0	0	75-100	50-75	25-50	10-20	10-20	NP-5
	5-13	Very gravelly loamy coarse sand, fine gravelly loamy coarse sand	SM, SW-SM, SC-SM	A-1	0	0	75-100	50-75	25-50	10-20	10-20	NP-5
	13-19	Gravelly coarse sand, very gravelly loamy coarse sand	SW-SM, SW	A-1	0	0	60-85	50-75	25-45	0-10	10-20	NP-5
	19-29	Extremely gravelly coarse sand, very gravelly loamy coarse sand	SP-SM, GP	A-1	0-25	10-50	30-85	25-75	10-40	0-5	10-20	NP-5
	29-39	Unweathered bedrock			---	---	---	---	---	---	---	---
Kisky, fine gravelly loamy coarse sand----	0-4	Fine gravelly loamy coarse sand	GP-GM, SM	A-1	0	0-25	55-100	50-75	25-50	10-20	10-20	NP
	4-10	Fine gravelly loamy coarse sand	SW-SM, SC-SM, SM	A-1	0	0-25	55-100	50-75	25-50	10-20	10-20	NP-5
	10-16	Extremely gravelly loamy coarse sand, very cobble loamy sand	SP-SM	A-1	0	10-65	50-90	15-50	10-25	0-10	10-20	NP
	16-26	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---
751: Belsh, moist----	0-1	Slightly decomposed plant material	PT	A-8	0-20	0-20	75-100	50-80	30-50	15-30	---	---
	1-6	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0-20	0-20	75-100	50-80	30-50	15-30	15-25	NP-5
	6-20	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0-20	0-20	75-100	50-80	35-50	15-30	15-25	NP-5
	20-34	Very cobbly loamy coarse sand, extremely stony coarse sandy loam	SP-SM, SM	A-1	0-45	0-50	70-90	35-75	20-50	10-25	15-25	NP-5
	34-60	Extremely gravelly loamy coarse sand, very gravelly loamy coarse sand	SP-SM	A-1	0-25	0-65	70-90	35-75	15-40	5-10	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
751: Zan, moist-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-75	30-50	15-30	---	---
	1-6	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	10-20	NP-5
	6-12	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	10-20	NP-5
	12-25	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	80-100	50-75	30-50	15-30	10-20	NP-5
	25-41	Fine gravelly ashy loamy coarse sand	SM	A-1, A-2	0	0	75-95	50-75	30-50	15-30	10-20	NP-5
	41-60	Fine gravelly loamy coarse sand, very gravelly coarse sand	SW-SM, SM	A-1	0	0-25	55-90	35-70	15-50	5-20	10-20	NP-5
752: Josie-----	0-2	Ashy sandy loam	SM	A-2, A-1	0-10	0-15	85-100	60-90	35-65	15-35	10-20	NP-5
	2-12	Ashy sandy loam	SM	A-2, A-1	0-10	0-15	85-100	60-90	35-65	15-35	10-20	NP-5
	12-33	Ashy sandy loam	SM	A-2, A-1	0-10	0-15	90-100	60-90	35-65	15-35	10-20	NP-5
	33-44	Ashy loamy sand, ashy coarse sandy loam	SP-SM, SM	A-2, A-1	0-10	0-15	85-100	60-90	30-65	10-25	10-20	NP-5
	44-60	Ashy loamy coarse sand, ashy loamy sand, cobbly ashy loamy coarse sand, gravelly ashy loamy sand	SP-SM, SM	A-2, A-1	0-10	0-30	75-100	55-90	30-65	10-25	10-20	NP-5
Zimmer, fine gravelly sandy loam-----	0-7	Fine gravelly sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-70	30-45	15-25	15-25	NP-5
	7-12	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0-10	85-100	50-75	30-50	15-30	15-25	NP-5
	12-15	Fine gravelly sandy loam, gravelly loamy sand	SW-SM, SM	A-1	0	0-10	75-100	50-75	25-50	10-20	10-20	NP-5
	15-25	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
753: Tripod, cool----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	50-75	35-50	15-30	---	---
	1-6	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	35-50	15-30	10-20	NP-5
	6-20	Fine gravelly ashy sandy loam, fine gravelly ashy coarse sandy loam	SM	A-1, A-2	0	0-10	75-100	50-75	35-50	15-30	10-20	NP-5
	20-60	Extremely gravelly coarse sand, very stony loamy sand, very cobbly coarse sand	GP-GM, SP-SM	A-1	0-40	10-45	45-90	35-75	25-50	5-20	10-20	NP-5
Packerjohn, ashy sandy loam, cool-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	45-70	25-40	---	---
	1-9	Ashy sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	95-100	75-100	45-70	25-40	10-20	NP-5
	9-15	Ashy loamy sand, fine gravelly ashy sandy loam	SM, SC-SM	A-2, A-1	0	0	90-100	50-85	30-55	15-30	10-20	NP-5
	15-31	Ashy loamy sand, fine gravelly ashy sandy loam	SW-SM, SM	A-2, A-1	0	0	90-100	50-85	30-55	10-30	10-20	NP-5
	31-60	Fine gravelly loamy sand, loamy coarse sand	SP-SM, SM, SC-SM	A-1, A-2	0	0	75-100	50-85	25-55	10-25	10-20	NP-5
Shirts, sandy loam, moist----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	25-34	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-4, A-2, A-1	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	34-39	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM, SC-SM	A-2, A-1	0	0-10	60-90	50-75	30-50	15-30	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
754: Packerjohn, ashy sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	40-70	20-40	---	---
	2-5	Ashy sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	40-70	20-40	10-20	NP-5
	5-16	Fine gravelly ashy sandy loam, ashy sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	70-100	40-65	20-40	10-20	NP-5
	16-23	Loamy sand, fine gravelly coarse sandy loam	SC-SM, SM, SW-SM	A-1, A-2	0	0	90-100	50-85	25-55	10-25	10-20	NP-5
	23-39	Fine gravelly coarse sandy loam, loamy coarse sand	SC-SM, SM, SW-SM	A-2, A-1	0	0	90-100	50-85	25-55	10-25	10-20	NP-5
	39-60	Fine gravelly loamy sand	SC-SM, SM, SW-SM	A-2, A-1	0	0	75-100	50-85	25-55	10-25	10-20	NP-5
Shirts, sandy loam, moist----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-25	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-4, A-2, A-1	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	25-34	Sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-4, A-2, A-1	0	0	70-100	50-100	30-70	15-40	15-25	NP-5
	34-39	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM, SC-SM	A-2, A-1	0	0-10	60-90	50-75	30-50	15-30	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
755: Zimmer-----	0-7	Sandy loam	SC-SM, SM	A-2, A-1	0	0-10	90-100	70-90	45-60	25-30	15-25	NP-5
	7-14	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	85-100	50-75	30-50	15-25	15-25	NP-5
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
755: Quartzburg-----	0-1	Slightly decomposed plant material	PT	A-8	0	0-10	75-100	50-75	25-50	10-20	---	---
	1-5	Fine gravelly loamy coarse sand	SW-SM, SM	A-1	0	0-10	75-100	50-75	25-50	10-20	10-20	NP-5
	5-10	Fine gravelly loamy coarse sand, fine gravelly loamy sand	SW-SM, SM	A-1	0	0-10	75-100	50-75	25-50	10-20	10-20	NP-5
	10-25	Very gravelly loamy coarse sand, extremely gravelly loamy sand	SM, SW-SM	A-1	0	0-10	55-100	15-50	10-30	0-15	10-20	NP-5
	25-37	Very gravelly loamy coarse sand, extremely gravelly loamy sand	SW-SM, GW, SC-SM, SP-SM	A-1	0	0-10	35-85	15-50	10-30	0-15	10-20	NP-5
	37-42	Weathered bedrock			---	---	---	---	---	---	---	---
	42-52	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---
756: Pajo, fine gravelly ashy coarse sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	75-100	50-75	30-50	15-30	---	---
	1-8	Fine gravelly ashy coarse sandy loam	SM	A-1, A-2	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	8-16	Fine gravelly ashy loamy sand, fine gravelly ashy loamy coarse sand	SP-SM, SM	A-1	0	0-15	75-100	50-75	30-50	10-20	10-20	NP-5
	16-27	Extremely gravelly coarse sand, extremely cobble loamy sand, extremely stony coarse sand	GP-GM, SP-SM, SC-SM	A-1	0-40	0-65	50-85	35-60	15-40	5-20	10-20	NP-5
	27-37	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
756: Tripod-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	50-75	30-50	15-30	---	---
	1-6	Fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0	80-100	50-75	30-50	15-30	10-20	NP-5
	6-13	Fine gravelly ashy sandy loam, fine gravelly ashy coarse sandy loam	SM	A-2, A-1	0	0-10	75-90	50-75	30-50	15-30	10-20	NP-5
	13-23	Extremely gravelly coarse sand, very cobbly loamy coarse sand	SP-SM, SM	A-1	0-10	0-45	55-95	35-75	20-50	5-15	10-20	NP-5
	23-50	Extremely cobbly loamy sand, very gravelly coarse sand, very stony coarse sand	SP, SP-SM	A-1	0-40	10-45	50-90	35-75	15-50	0-10	10-20	NP-5
	50-60	Very cobbly coarse sand, extremely gravelly loamy coarse sand, very stony coarse sand	SW-SM, SP, SP-SM	A-1	0-40	10-45	50-90	35-75	15-50	0-10	10-20	NP-5
Kosh, moist----	0-4	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-50	15-25	0-10	NP
	4-9	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-45	15-25	0-10	NP
	9-18	Very gravelly loamy sand, extremely gravelly loamy sand	SP-SM, GW	A-1	0	0	50-90	15-50	10-25	0-10	0-10	NP
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---
758: Eagleson, sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	70-90	40-55	20-30	---	---
	1-4	Sandy loam	SC-SM, SM	A-1, A-2	0	0	85-100	70-90	45-60	25-30	15-25	NP-5
	4-15	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0-20	80-100	60-80	35-50	20-30	15-25	NP-5
	15-19	Very gravelly coarse sandy loam, fine gravelly sandy loam	SW-SM, SC-SM, SM	A-1	0-10	0-20	65-90	30-75	10-45	5-25	15-25	NP-5
	19-37	Very cobbly sandy loam, very cobbly loamy sand	SP-SM, SM	A-2, A-1	0-10	40-60	60-85	30-75	15-50	5-30	10-15	NP-5
	37-47	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
758: Kosh, moist-----	0-4	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-50	15-25	0-10	NP
	4-9	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-45	15-25	0-10	NP
	9-18	Very gravelly loamy sand, extremely gravelly loamy sand	SP-SM, GW	A-1	0	0	50-90	15-50	10-25	0-10	0-10	NP
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---
Charters, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	4-13	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	13-19	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	19-34	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	15-30	15-25	NP-5
	34-52	Fine gravelly coarse sandy loam, fine gravelly loamy sand	SC-SM, SW-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	10-30	15-25	NP-5
	52-60	Fine gravelly loamy coarse sand, fine gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5
759: Charters, sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	45-90	30-60	15-30	---	---
	2-7	Sandy loam	SM	A-1, A-2	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	7-16	Sandy loam	SM	A-2, A-1	0	0	85-100	45-90	30-60	15-30	15-25	NP-5
	16-29	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	15-25	NP-5
	29-39	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-2, A-1	0	0-15	85-100	50-75	30-50	15-30	15-25	NP-5
	39-50	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	15-25	NP-5
	50-60	Fine gravelly sandy loam, fine gravelly loamy sand	SM	A-1	0	0-15	80-100	50-75	25-50	10-25	10-20	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
759: Shirts, sandy loam, south slope-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	40-70	20-40	---	---
	1-5	Sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	90-100	75-100	40-70	20-40	15-25	NP-5
	5-11	Coarse sandy loam, sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	90-100	75-100	40-70	20-40	15-25	NP-5
	11-23	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1, A-4	0	0	75-100	50-100	30-70	15-40	15-25	NP-5
	23-35	Gravelly sandy loam, loamy coarse sand	SM	A-2, A-1	0	0	65-100	50-100	30-70	15-35	10-20	NP-5
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Kosh, moist-----	0-4	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-50	15-25	0-10	NP
	4-9	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-45	15-25	0-10	NP
	9-18	Very gravelly loamy sand, extremely gravelly loamy sand	SP-SM, GW	A-1	0	0	50-90	15-50	10-25	0-10	0-10	NP
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---
761: Charters, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-4	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	4-13	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	13-19	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	19-34	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	15-30	15-25	NP-5
	34-52	Fine gravelly coarse sandy loam, fine gravelly loamy sand	SC-SM, SW-SM, SM	A-2, A-1	0	0-15	90-100	50-75	30-50	10-30	15-25	NP-5
	52-60	Fine gravelly loamy coarse sand, fine gravelly coarse sandy loam	SC-SM, SP-SM, SM	A-2, A-1	0	0-15	85-100	50-75	25-50	10-30	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
761: Middlefork, moist-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	85-100	60-95	55-75	---	---
	2-5	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	20-30	5-10
	5-13	Loam	CL-ML, CL	A-4	0	0	90-100	85-100	60-95	55-75	20-30	5-10
	13-28	Loam	CL-ML, ML, CL	A-4	0	0	90-100	85-100	75-90	55-75	25-35	5-10
	28-36	Loam, sandy clay loam	CL, SC, SC-SM	A-6, A-2	0	0	80-100	75-100	60-95	30-65	25-40	5-15
	36-47	Loam, sandy clay loam, gravelly sandy clay loam	SC	A-7, A-2, A-6	0	0	75-100	70-100	60-95	35-50	30-45	10-20
	47-62	Sandy clay loam, clay loam	CL	A-6, A-4, A-7	0	0	80-100	75-100	70-100	55-75	30-45	10-20
762: Drybuck, dry----	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-40	---	---
	1-6	Sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	6-25	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	95-100	75-100	40-70	20-40	15-25	NP-5
	25-45	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	50-100	35-70	20-40	15-25	NP-5
	45-57	Coarse sandy loam, sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	50-100	35-70	20-40	15-25	NP-5
	57-67	Unweathered bedrock			---	---	---	---	---	---	---	---
Hellake-----	0-3	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	3-10	Loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	25-35	10-15
	10-22	Clay loam, loam	CL	A-4, A-6	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	22-36	Clay loam, loam	CL	A-6, A-4	0	0	90-100	85-100	65-90	50-75	30-40	10-15
	36-43	Clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-75	35-45	15-20
	43-53	Very gravelly loam, very gravelly sandy loam	GC-GM, GC	A-1, A-2	0	0-25	30-60	25-60	15-40	10-25	25-40	5-15
	53-60	Very gravelly sandy loam, very gravelly loamy sand	GC-GM, GP-GM, GC	A-4, A-1	0	0-25	30-60	25-60	15-55	10-40	15-30	NP-10
	60-66	Extremely gravelly loamy sand, very gravelly sandy loam	GC, GP-GM	A-4, A-1	0	0-25	30-65	25-60	15-55	10-40	15-30	NP-10

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
762: Deerrun-----	In				Pct	Pct					Pct	
	0-1	Slightly decomposed plant material	PT	A-8	0	0	95-100	75-100	40-70	20-30	---	---
	1-11	Sandy loam	SC-SM, SM	A-1, A-2	0	0	95-100	75-100	40-70	20-30	15-25	NP-5
	11-19	Coarse sandy loam, sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	50-90	35-60	15-35	15-25	NP-5
	19-33	Fine gravelly coarse sandy loam, loamy coarse sand	SC-SM, SM	A-2, A-1	0	0	80-100	50-90	35-60	15-35	15-25	NP-5
	33-43	Unweathered bedrock			---	---	---	---	---	---	---	---
763: Eagleson, fine gravelly sandy loam-----												
	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	50-90	30-50	15-30	---	---
	1-12	Fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0	80-100	50-90	30-50	15-30	15-25	NP-5
	12-17	Very gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM, SP-SM	A-1	0-10	0-20	60-75	30-50	15-45	10-15	15-25	NP-5
	17-25	Very gravelly sandy loam, extremely gravelly loamy sand	GP, SM, GP-GM	A-1	0-10	0-20	45-70	15-50	10-25	0-15	10-20	NP-5
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
Kosh-----												
	0-10	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	10-18	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP, GP-GM, SM	A-1	0	0-65	35-85	15-60	5-40	0-20	10-20	NP-5
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
765: Backswitch, coarse sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	45-65	25-30	---	---
	2-8	Coarse sandy loam	SM, SC-SM	A-2, A-1	0	0	90-100	75-100	45-65	25-30	0-25	NP-5
	8-14	Fine gravelly coarse sandy loam	SM, SC-SM	A-1	0	0	85-100	60-75	35-50	20-25	0-25	NP-5
	14-25	Fine gravelly coarse sandy loam	SM, SC-SM	A-1	0	0	85-100	60-75	35-50	20-25	0-25	NP-5
	25-35	Very gravelly loamy coarse sand	SC-SM, SW-SM	A-1	0	0-15	70-100	45-75	25-50	10-15	0-20	NP-5
	35-38	Weathered bedrock			---	---	---	---	---	---	---	---
	38-48	Unweathered bedrock			---	---	---	---	---	---	---	---
Zimmer, warm----	0-4	Sandy loam	SC-SM, SM	A-1, A-2	0	0-10	85-100	70-90	35-65	25-35	15-25	NP-5
	4-10	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-10	70-95	50-75	30-50	15-30	15-25	NP-5
	10-16	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM	A-2, A-1	0	0-10	65-90	50-75	30-50	15-30	10-20	NP-5
	16-26	Unweathered bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	0-60	Unweathered bedrock			---	---	---	---	---	---	---	---
766: Backswitch, coarse sandy loam-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	45-65	25-30	---	---
	2-8	Coarse sandy loam	SM, SC-SM	A-2, A-1	0	0	90-100	75-100	45-65	25-30	0-25	NP-5
	8-14	Fine gravelly coarse sandy loam	SM, SC-SM	A-1	0	0	85-100	60-75	35-50	20-25	0-25	NP-5
	14-25	Fine gravelly coarse sandy loam	SM, SC-SM	A-1	0	0	85-100	60-75	35-50	20-25	0-25	NP-5
	25-35	Very gravelly loamy coarse sand	SC-SM, SW-SM	A-1	0	0-15	70-100	45-75	25-50	10-15	0-20	NP-5
	35-38	Weathered bedrock			---	---	---	---	---	---	---	---
	38-48	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
766: Charters, coarse sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-90	45-60	25-35	---	---
	1-4	Coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	85-100	75-90	45-60	25-35	20-30	NP-5
	4-8	Coarse sandy loam	SM	A-2, A-1	0	0	85-100	75-90	45-60	25-35	20-30	NP-5
	8-15	Fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	15-32	Fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	32-48	Fine gravelly coarse sandy loam	SM	A-2, A-1	0	0	85-100	50-75	30-50	15-30	20-30	NP-5
	48-60	Gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	80-95	50-75	30-50	15-30	15-25	NP-5
Zimmer, dry-----	0-2	Sandy loam	SC-SM, SM	A-1, A-2	0	0-10	85-100	70-90	45-60	25-30	0-25	NP-5
	2-7	Sandy loam	SM, SC-SM	A-1, A-2	0	0-10	85-100	75-90	45-60	25-30	0-20	NP-5
	7-11	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1	0	0-10	60-95	45-75	30-45	15-25	0-20	NP-5
	11-16	Fine gravelly coarse sandy loam, fine gravelly sandy loam	SM, SC-SM	A-1	0	0-10	60-90	45-75	30-45	15-25	0-20	NP-5
	16-26	Unweathered bedrock			---	---	---	---	---	---	---	---
767: Shirts, sandy loam, dry-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	5-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-21	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	80-100	50-100	30-70	15-40	15-25	NP-5
	21-33	Fine gravelly sandy loam, coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	75-100	50-100	30-70	15-35	15-25	NP-5
	33-39	Gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	60-90	50-75	30-45	15-35	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
Kosh-----	0-10	Fine gravelly sandy loam	SM, SC-SM	A-2, A-1	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	10-18	Extremely gravelly loamy sand, very cobbly loamy sand, very gravelly loamy sand	GP, GP-GM, SM	A-1	0	0-65	35-85	15-60	5-40	0-20	10-20	NP-5
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
767: Charters, fine gravelly sandy loam, dry-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-11	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	11-16	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	16-33	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	33-41	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	41-60	Fine gravelly sandy loam, fine gravelly loamy sand	SW-SM, SC-SM, SM	A-1, A-2	0	0-15	70-95	50-75	25-50	10-30	15-25	NP-5
768: Shirts, sandy loam, south slope-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	40-70	20-40	---	---
	1-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	40-70	20-40	15-25	NP-5
	5-11	Coarse sandy loam, sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	90-100	75-100	40-70	20-40	15-25	NP-5
	11-23	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-2, A-1, A-4	0	0	75-100	50-100	30-70	15-40	15-25	NP-5
	23-35	Gravelly sandy loam, loamy coarse sand	SM	A-2, A-1	0	0	65-100	50-100	30-70	15-35	10-20	NP-5
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Kosh, moist-----	0-4	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-50	15-25	0-10	NP
	4-9	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-45	15-25	0-10	NP
	9-18	Very gravelly loamy sand, extremely gravelly loamy sand	SP-SM, GW	A-1	0	0	50-90	15-50	10-25	0-10	0-10	NP
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
768: Eagleson, fine gravelly sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	80-100	50-90	30-50	15-30	---	---
	1-12	Fine gravelly sandy loam	SC-SM, SM	A-2, A-1	0	0	80-100	50-90	30-50	15-30	15-25	NP-5
	12-17	Very gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM, SP-SM	A-1	0-10	0-20	60-75	30-50	15-45	10-15	15-25	NP-5
	17-25	Very gravelly sandy loam, extremely gravelly loamy sand	GP, SM, GP-GM	A-1	0-10	0-20	45-70	15-50	10-25	0-15	10-20	NP-5
	25-35	Unweathered bedrock			---	---	---	---	---	---	---	---
770: Shirts, sandy loam, dry-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-5	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	5-12	Sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-21	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-4, A-1, A-2	0	0	80-100	50-100	30-70	15-40	15-25	NP-5
	21-33	Fine gravelly sandy loam, coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	75-100	50-100	30-70	15-35	15-25	NP-5
	33-39	Gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	60-90	50-75	30-45	15-35	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---
Charters, fine gravelly sandy loam, dry-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	50-75	30-50	15-30	---	---
	1-11	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	11-16	Fine gravelly sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	16-33	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	33-41	Fine gravelly sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	50-75	30-50	15-30	15-25	NP-5
	41-60	Fine gravelly sandy loam, fine gravelly loamy sand	SW-SM, SC-SM, SM	A-1, A-2	0	0-15	70-95	50-75	25-50	10-30	15-25	NP-5

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
770: Kosh, moist-----	0-4	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-50	15-25	0-10	NP
	4-9	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-45	15-25	0-10	NP
	9-18	Very gravelly loamy sand, extremely gravelly loamy sand	SP-SM, GW	A-1	0	0	50-90	15-50	10-25	0-10	0-10	NP
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---
771: Backswitch, sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	50-70	25-35	---	---
	1-7	Sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	75-100	50-70	25-35	15-25	NP-5
	7-11	Sandy loam, coarse sandy loam	SC-SM, SM	A-1, A-2	0	0	90-100	75-100	50-70	25-35	15-25	NP-5
	11-21	Sandy loam, coarse sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-1, A-2	0	0-10	85-100	65-90	45-65	25-35	15-25	NP-5
	21-33	Sandy loam, coarse sandy loam, fine gravelly coarse sandy loam	SC-SM, SM	A-2, A-1	0	0-10	80-100	60-90	40-60	20-35	15-25	NP-5
	33-40	Very gravelly loamy coarse sand, fine gravelly loamy sand, very cobbly loamy coarse sand	SC-SM, SP-SM, SM	A-1	0-15	0-30	65-90	50-75	30-50	10-20	10-20	NP-5
	40-50	Weathered bedrock			---	---	---	---	---	---	---	---
	50-60	Unweathered bedrock			---	---	---	---	---	---	---	---
Shirts, sandy loam, dry-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	85-100	75-100	40-70	20-40	---	---
	2-5	Sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	5-12	Sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	85-100	75-100	40-70	20-40	15-25	NP-5
	12-21	Coarse sandy loam, fine gravelly sandy loam	SC-SM, SM	A-1, A-2, A-4	0	0	80-100	50-100	30-70	15-40	15-25	NP-5
	21-33	Fine gravelly sandy loam, coarse sandy loam	SC-SM, SM	A-2, A-1	0	0	75-100	50-100	30-70	15-35	15-25	NP-5
	33-39	Gravelly loamy coarse sand, fine gravelly sandy loam	SM, SC-SM	A-1, A-2	0	0	60-90	50-75	30-45	15-35	10-20	NP-5
	39-49	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
772: Pajo, fine gravelly ashy sandy loam-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	75-100	50-75	30-50	15-30	---	---
	1-12	Fine gravelly ashy sandy loam	SM, SC-SM	A-2, A-1	0	0	75-100	50-75	30-50	15-30	10-20	NP-5
	12-16	Very gravelly ashy loamy sand, fine gravelly ashy loamy sand	SM, SC-SM, SW-SM	A-1	0	0-15	75-95	50-75	25-50	10-20	10-20	NP-5
	16-28	Very gravelly coarse sand, extremely cobbly loamy coarse sand, extremely stony loamy coarse sand	SW-SM, SM, SC-SM	A-1	0-40	0-65	65-95	35-65	15-45	5-20	10-20	NP-5
	28-38	Very gravelly coarse sand, extremely cobbly loamy coarse sand, extremely stony loamy coarse sand	SC-SM, SP-SM, SW-SM	A-1	0-40	0-65	65-95	35-60	15-45	5-20	10-20	NP-5
	38-48	Unweathered bedrock			---	---	---	---	---	---	---	---
Packerjohn, ashy sandy loam, dry	0-2	Slightly decomposed plant material	PT	A-8	0	0	90-100	75-100	40-70	20-40	---	---
	2-10	Ashy sandy loam	SM, SC-SM	A-1, A-2, A-4	0	0	90-100	75-100	40-70	20-40	10-20	NP-5
	10-17	Fine gravelly ashy coarse sandy loam, ashy sandy loam	SM, SC-SM	A-2, A-1, A-4	0	0	90-100	70-100	40-70	20-40	10-20	NP-5
	17-34	Ashy loamy sand, fine gravelly ashy coarse sandy loam	SM, SC-SM	A-2, A-1	0	0	85-100	50-85	30-55	15-30	10-20	NP-5
	34-50	Loamy coarse sand, gravelly loamy sand	SW-SM, SM, SC-SM	A-2, A-1	0	0	75-95	50-85	25-55	10-25	10-20	NP-5
	50-60	Fine gravelly loamy coarse sand, loamy sand	SW-SM, SM, SC-SM	A-2, A-1	0	0	75-95	50-85	25-55	10-25	10-20	NP-5
Kosh, moist-----	0-4	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-50	15-25	0-10	NP
	4-9	Fine gravelly sandy loam	SM	A-1	0	0	75-100	50-75	30-45	15-25	0-10	NP
	9-18	Very gravelly loamy sand, extremely gravelly loamy sand	SP-SM, GW	A-1	0	0	50-90	15-50	10-25	0-10	0-10	NP
	18-28	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 18.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
900: Pits, gravel----	---	---	---	---	---	---	---	---	---	---	---	---
Dumps, gravel---	---	---	---	---	---	---	---	---	---	---	---	---
901: Dumps, landfill	---	---	---	---	---	---	---	---	---	---	---	---
999: Water-----	---	---	---	---	---	---	---	---	---	---	---	---

Table 19.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the upper mineral layer. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
220: Oxyaquic Xerofluvents	0-5	3-10	1.25-1.50	6-20	0.05-0.07	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	5-11	2-10	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.10	.10			
	11-18	2-10	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.2-1.0	.10	.10			
	18-39	0-7	1.35-1.60	6-101	0.01-0.04	0.0-2.9	0.2-1.0	.02	.05			
	39-60	0-10	1.35-1.60	6-101	0.00-0.05	0.0-2.9	0.0-1.0	.02	.05			
Cumulic Haploxerolls--	0-10	7-12	1.15-1.40	2-6	0.10-0.12	0.0-2.9	2.0-5.0	.17	.17	5	3	86
	10-26	7-12	1.15-1.40	2-6	0.10-0.12	0.0-2.9	2.0-5.0	.17	.17			
	26-36	7-14	1.25-1.50	2-20	0.07-0.12	0.0-2.9	0.5-1.0	.32	.32			
	36-50	7-14	1.25-1.50	2-20	0.07-0.12	0.0-2.9	0.5-1.0	.32	.32			
	50-60	2-10	1.25-1.60	6-101	0.04-0.07	0.0-2.9	0.0-0.5	.15	.15			
221: Bissell-----	0-7	17-25	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.32	.32	4	6	48
	7-10	17-25	1.10-1.35	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.37	.37			
	10-15	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.32	.32			
	15-26	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.2-1.0	.32	.32			
	26-41	25-30	1.20-1.40	0.6-2	0.14-0.16	3.0-5.9	0.0-0.5	.28	.28			
	41-60	5-15	1.30-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.05	.17			
222: Bissell-----	0-7	17-25	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.32	.32	4	6	48
	7-10	17-25	1.10-1.35	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.37	.37			
	10-15	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.32	.32			
	15-26	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.2-1.0	.32	.32			
	26-41	25-30	1.20-1.40	0.6-2	0.14-0.16	3.0-5.9	0.0-0.5	.28	.28			
	41-60	5-15	1.30-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.05	.17			
223: Staircase, dry-----	0-6	10-18	1.15-1.40	2-6	0.10-0.13	0.0-2.9	2.0-5.0	.10	.17	5	3	86
	6-20	10-18	1.20-1.40	2-6	0.10-0.14	0.0-2.9	1.0-4.0	.10	.32			
	20-27	6-16	1.25-1.55	2-6	0.09-0.11	0.0-2.9	0.5-1.0	.17	.24			
	27-42	5-12	1.25-1.60	6-20	0.07-0.10	0.0-2.9	0.2-1.0	.17	.24			
	42-60	4-8	1.35-1.60	6-20	0.05-0.07	0.0-2.9	0.0-0.5	.10	.15			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
224: Porter-----	0-4	10-18	1.15-1.35	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.17	.20	5	3	86
	4-11	10-18	1.20-1.40	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.17	.20			
	11-22	10-18	1.20-1.40	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.17	.20			
	22-34	10-18	1.20-1.50	2-6	0.08-0.14	0.0-2.9	0.5-2.0	.17	.24			
	34-48	4-12	1.30-1.60	6-20	0.05-0.10	0.0-2.9	0.2-1.0	.10	.15			
	48-72	4-12	1.30-1.60	6-20	0.05-0.10	0.0-2.9	0.0-1.0	.02	.02			
225: Boise-----	0-3	8-18	1.20-1.50	2-6	0.10-0.12	0.0-3.0	1.0-3.0	.10	.15	5	3	86
	3-7	8-18	1.20-1.50	2-6	0.10-0.12	0.0-3.0	1.0-3.0	.10	.15			
	7-15	8-18	1.20-1.55	2-6	0.09-0.12	0.0-3.0	1.0-3.0	.10	.15			
	15-28	8-18	1.25-1.60	2-6	0.09-0.12	0.0-3.0	1.0-3.0	.10	.15			
	28-36	3-10	1.30-1.60	6-20	0.02-0.12	0.0-3.0	0.5-1.0	.05	.15			
	36-53	3-10	1.35-1.60	6-20	0.02-0.08	0.0-3.0	0.2-1.0	.02	.02			
	53-60	3-10	1.35-1.60	6-20	0.02-0.08	0.0-3.0	0.0-1.0	.02	.02			
226: Flofeather, very rarely flooded-----	0-7	5-14	1.15-1.35	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.15	.20	5	3	86
	7-11	5-14	1.15-1.35	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.15	.20			
	11-17	7-14	1.20-1.45	2-6	0.08-0.11	0.0-2.9	1.0-2.0	.15	.24			
	17-32	7-14	1.25-1.55	2-6	0.08-0.11	0.0-2.9	0.5-1.5	.15	.24			
	32-52	5-12	1.35-1.60	6-20	0.06-0.10	0.0-2.9	0.1-0.5	.02	.02			
	52-60	4-10	1.35-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.2	.02	.02			
Shawmount, stony surface-----	0-4	16-24	1.10-1.30	0.6-2	0.10-0.15	0.0-2.9	1.0-3.0	.20	.37	5	6	48
	4-9	18-30	1.20-1.40	0.6-2	0.09-0.13	0.0-2.9	1.0-2.0	.10	.32			
	9-14	18-30	1.20-1.40	0.6-2	0.09-0.13	0.0-2.9	0.2-1.0	.10	.32			
	14-26	18-26	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	0.2-1.0	.10	.24			
	26-35	5-22	1.20-1.50	0.6-2	0.04-0.09	0.0-2.9	0.2-1.0	.10	.28			
	35-60	4-15	1.25-1.50	6-20	0.02-0.04	0.0-2.9	0.2-1.0	.05	.28			
227: Piercepark, loam-----	0-7	18-22	1.10-1.30	2-6	0.14-0.16	0.0-2.9	1.0-3.0	.24	.28	5	5	56
	7-12	18-22	1.10-1.30	2-6	0.14-0.16	0.0-2.9	1.0-3.0	.28	.32			
	12-22	18-24	1.20-1.45	2-6	0.14-0.16	0.0-2.9	1.0-2.0	.24	.32			
	22-28	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-2.9	1.0-2.0	.17	.24			
	28-37	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-2.9	0.5-1.0	.17	.24			
	37-50	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-2.9	0.5-1.0	.17	.24			
	50-60	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-2.9	0.2-1.0	.17	.28			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
228: Piercepark, loam-----	0-7	18-22	1.10-1.30	2-6	0.14-0.16	0.0-2.9	1.0-3.0	.24	.28	5	5	56
	7-12	18-22	1.10-1.30	2-6	0.14-0.16	0.0-2.9	1.0-3.0	.28	.32			
	12-22	18-24	1.20-1.45	2-6	0.14-0.16	0.0-2.9	1.0-2.0	.24	.32			
	22-28	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-2.9	1.0-2.0	.17	.24			
	28-37	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-2.9	0.5-1.0	.17	.24			
	37-50	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-2.9	0.5-1.0	.17	.24			
	50-60	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-2.9	0.2-1.0	.17	.28			
229: Piercepark, coarse sandy loam-----	0-2	10-14	1.20-1.50	2-6	0.14-0.16	0.0-2.9	1.0-3.0	.10	.10	5	3	86
	2-6	10-14	1.20-1.50	2-6	0.14-0.16	0.0-2.9	1.0-3.0	.10	.10			
	6-10	10-14	1.20-1.55	2-6	0.14-0.16	0.0-2.9	1.0-3.0	.10	.10			
	10-16	14-18	1.20-1.60	2-6	0.14-0.16	0.0-2.9	1.0-1.5	.10	.15			
	16-27	14-20	1.20-1.60	2-6	0.14-0.16	0.0-2.9	0.5-1.0	.10	.15			
	27-34	18-27	1.20-1.55	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.17	.24			
	34-60	18-27	1.20-1.55	0.6-2	0.12-0.14	0.0-2.9	0.2-1.0	.20	.28			
230: Hann-----	0-3	20-27	1.10-1.40	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.43	.43	5	6	48
	3-6	25-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-3.0	.37	.37			
	6-13	40-50	1.20-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-3.0	.37	.37			
	13-25	40-50	1.20-1.45	0.06-0.2	0.14-0.17	6.0-8.9	0.5-2.0	.37	.37			
	25-44	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.43	.43			
	44-72	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.49	.49			
Doubledia, silty clay loam-----	0-3	27-35	1.10-1.30	0.06-0.2	0.17-0.19	3.0-5.9	2.0-5.0	.37	.37	4	6	48
	3-6	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.32	.32			
	6-11	40-60	1.25-1.35	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	11-21	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	21-25	35-60	1.20-1.40	0.06-0.2	0.14-0.19	6.0-8.9	0.5-1.0	.32	.32			
	25-34	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	34-41	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	41-51	---	---	---	---	---	---	---	---			
232: Jasseek-----	0-7	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.32	.32	4	6	48
	7-10	20-27	1.10-1.30	0.6-2	0.16-0.18	3.0-5.9	1.0-2.0	.37	.37			
	10-18	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.32	.32			
	18-27	35-45	1.20-1.45	0.06-0.2	0.15-0.20	6.0-8.9	0.2-0.8	.32	.32			
	27-33	35-45	1.20-1.45	0.06-0.2	0.15-0.20	6.0-8.9	0.2-0.8	.32	.37			
	33-43	22-35	1.20-1.40	0.6-2	0.14-0.18	3.0-5.9	0.2-0.8	.24	.28			
	43-60	5-20	1.25-1.60	2-20	0.06-0.10	0.0-2.9	0.0-0.5	.10	.17			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
233: Jasseek-----	0-7	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.32	.32	4	6	48
	7-10	20-27	1.10-1.30	0.6-2	0.16-0.18	3.0-5.9	1.0-2.0	.37	.37			
	10-18	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.32	.32			
	18-27	35-45	1.20-1.45	0.06-0.2	0.15-0.20	6.0-8.9	0.2-0.8	.32	.32			
	27-33	35-45	1.20-1.45	0.06-0.2	0.15-0.20	6.0-8.9	0.2-0.8	.32	.37			
	33-43	22-35	1.20-1.40	0.6-2	0.14-0.18	3.0-5.9	0.2-0.8	.24	.28			
	43-60	5-20	1.25-1.60	2-20	0.06-0.10	0.0-2.9	0.0-0.5	.10	.17			
238: Adaboi-----	0-2	20-27	1.10-1.30	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.49	.49	5	6	48
	2-9	20-27	1.10-1.30	0.2-0.6	0.18-0.20	3.0-5.9	2.0-4.0	.49	.49			
	9-13	35-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43			
	13-20	35-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43			
	20-25	23-40	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.5-1.0	.49	.49			
	25-43	40-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	0.5-1.0	.43	.43			
	43-66	40-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	0.5-1.0	.43	.43			
240: Collister-----	0-4	18-25	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-10	18-25	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.28	.28			
	10-19	20-27	1.15-1.35	0.6-2	0.16-0.19	0.0-2.9	1.0-3.0	.32	.32			
	19-23	20-27	1.15-1.35	0.6-2	0.16-0.19	0.0-2.9	1.0-3.0	.32	.32			
	23-28	25-30	1.20-1.40	0.6-2	0.15-0.18	3.0-5.9	1.0-3.0	.28	.28			
	28-36	25-30	1.20-1.40	0.6-2	0.15-0.20	3.0-5.9	1.0-3.0	.37	.37			
	36-42	25-30	1.20-1.40	0.6-2	0.15-0.20	3.0-5.9	0.5-2.5	.55	.55			
	42-58	25-30	1.20-1.40	0.6-2	0.15-0.20	3.0-5.9	0.5-2.5	.24	.24			
	58-66	15-30	1.20-1.50	0.6-6	0.12-0.19	0.0-5.9	0.2-1.0	.24	.24			
Flofeather-----	0-7	7-18	1.15-1.40	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.17	.20	5	3	86
	7-22	7-18	1.15-1.40	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.17	.20			
	22-30	7-18	1.20-1.50	2-6	0.09-0.12	0.0-2.9	1.0-2.0	.17	.20			
	30-41	7-18	1.25-1.60	2-6	0.09-0.12	0.0-2.9	0.5-2.0	.17	.20			
	41-48	5-15	1.25-1.60	2-6	0.06-0.11	0.0-2.9	0.5-2.0	.15	.24			
	48-60	4-15	1.25-1.60	2-6	0.06-0.11	0.0-2.9	0.2-1.0	.17	.28			
300: Shawmount, stony surface-----	0-4	16-24	1.10-1.30	0.6-2	0.10-0.15	0.0-2.9	1.0-3.0	.20	.37	5	6	48
	4-9	18-30	1.20-1.40	0.6-2	0.09-0.13	0.0-2.9	1.0-2.0	.10	.32			
	9-14	18-30	1.20-1.40	0.6-2	0.09-0.13	0.0-2.9	0.2-1.0	.10	.32			
	14-26	18-26	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	0.2-1.0	.10	.24			
	26-35	5-22	1.20-1.50	0.6-2	0.04-0.09	0.0-2.9	0.2-1.0	.10	.28			
	35-60	4-15	1.25-1.50	6-20	0.02-0.04	0.0-2.9	0.2-1.0	.05	.28			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
301: Breadloaf-----	0-2	27-35	1.10-1.30	0.06-0.2	0.18-0.21	3.0-5.9	1.0-2.0	.28	.32	3	6	48
	2-6	40-60	1.20-1.40	0.0015-0.06	0.14-0.17	6.0-8.9	0.2-0.8	.28	.32			
	6-12	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.2-0.8	.28	.32			
	12-17	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.2-0.8	.28	.32			
	17-23	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.0-0.5	.28	.32			
	23-33	---	---	---	---	---	---	---	---			
Doubledia, silty clay loam-----	0-3	27-35	1.10-1.30	0.06-0.2	0.17-0.19	3.0-5.9	2.0-5.0	.37	.37	4	6	48
	3-6	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.32	.32			
	6-11	40-60	1.25-1.35	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	11-21	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	21-25	35-60	1.20-1.40	0.06-0.2	0.14-0.19	6.0-8.9	0.5-1.0	.32	.32			
	25-34	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	34-41	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	41-51	---	---	---	---	---	---	---	---			
302: Breadloaf-----	0-2	27-35	1.10-1.30	0.06-0.2	0.18-0.21	3.0-5.9	1.0-2.0	.28	.32	3	6	48
	2-6	40-60	1.20-1.40	0.0015-0.06	0.14-0.17	6.0-8.9	0.2-0.8	.28	.32			
	6-12	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.2-0.8	.28	.32			
	12-17	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.2-0.8	.28	.32			
	17-23	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.0-0.5	.28	.32			
	23-33	---	---	---	---	---	---	---	---			
Doubledia, silty clay loam-----	0-3	27-35	1.10-1.30	0.06-0.2	0.17-0.19	3.0-5.9	2.0-5.0	.37	.37	4	6	48
	3-6	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.32	.32			
	6-11	40-60	1.25-1.35	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	11-21	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	21-25	35-60	1.20-1.40	0.06-0.2	0.14-0.19	6.0-8.9	0.5-1.0	.32	.32			
	25-34	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	34-41	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	41-51	---	---	---	---	---	---	---	---			
Hann-----	0-3	20-27	1.10-1.40	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.43	.43	5	6	48
	3-6	25-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-3.0	.37	.37			
	6-13	40-50	1.20-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-3.0	.37	.37			
	13-25	40-50	1.20-1.45	0.06-0.2	0.14-0.17	6.0-8.9	0.5-2.0	.37	.37			
	25-44	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.43	.43			
	44-72	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.49	.49			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
303: Doubledia, silty clay loam-----	0-3	27-35	1.10-1.30	0.06-0.2	0.17-0.19	3.0-5.9	2.0-5.0	.37	.37	4	6	48
	3-6	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.32	.32			
	6-11	40-60	1.25-1.35	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	11-21	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	21-25	35-60	1.20-1.40	0.06-0.2	0.14-0.19	6.0-8.9	0.5-1.0	.32	.32			
	25-34	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	34-41	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	41-51	---	---	---	---	---	---	---	---			
Hann-----	0-3	20-27	1.10-1.40	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.43	.43	5	6	48
	3-6	25-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-3.0	.37	.37			
	6-13	40-50	1.20-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-3.0	.37	.37			
	13-25	40-50	1.20-1.45	0.06-0.2	0.14-0.17	6.0-8.9	0.5-2.0	.37	.37			
	25-44	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.43	.43			
	44-72	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.49	.49			
Breadloaf-----	0-2	27-35	1.10-1.30	0.06-0.2	0.18-0.21	3.0-5.9	1.0-2.0	.28	.32	3	6	48
	2-6	40-60	1.20-1.40	0.0015-0.06	0.14-0.17	6.0-8.9	0.2-0.8	.28	.32			
	6-12	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.2-0.8	.28	.32			
	12-17	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.2-0.8	.28	.32			
	17-23	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.0-0.5	.28	.32			
	23-33	---	---	---	---	---	---	---	---			
304: Breadloaf-----	0-2	27-35	1.10-1.30	0.06-0.2	0.18-0.21	3.0-5.9	1.0-2.0	.28	.32	3	6	48
	2-6	40-60	1.20-1.40	0.0015-0.06	0.14-0.17	6.0-8.9	0.2-0.8	.28	.32			
	6-12	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.2-0.8	.28	.32			
	12-17	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.2-0.8	.28	.32			
	17-23	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.0-0.5	.28	.32			
	23-33	---	---	---	---	---	---	---	---			
Doubledia, silty clay loam-----	0-3	27-35	1.10-1.30	0.06-0.2	0.17-0.19	3.0-5.9	2.0-5.0	.37	.37	4	6	48
	3-6	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.32	.32			
	6-11	40-60	1.25-1.35	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	11-21	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	21-25	35-60	1.20-1.40	0.06-0.2	0.14-0.19	6.0-8.9	0.5-1.0	.32	.32			
	25-34	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	34-41	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	41-51	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
304: Hullsgulch, loam-----	0-2	15-24	1.10-1.30	0.6-2	0.15-0.18	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	2-9	15-24	1.20-1.40	0.6-2	0.15-0.18	0.0-2.9	1.0-2.0	.32	.32			
	9-15	15-24	1.20-1.40	0.6-2	0.15-0.18	0.0-2.9	0.2-0.8	.28	.28			
	15-29	20-30	1.20-1.40	0.6-2	0.14-0.17	3.0-5.9	0.2-0.8	.24	.24			
	29-46	20-30	1.20-1.40	0.6-2	0.14-0.17	3.0-5.9	0.2-0.8	.28	.28			
	46-58	8-27	1.20-1.60	0.6-2	0.09-0.13	0.0-2.9	0.2-0.8	.15	.20			
	58-66	5-20	1.30-1.60	2-6	0.04-0.06	0.0-2.9	0.2-0.8	.02	.05			
305: Siphonlake, south slope-----	0-10	12-18	1.15-1.30	2-6	0.11-0.13	0.0-2.9	2.0-5.0	.15	.17	4	3	86
	10-19	10-18	1.20-1.40	2-6	0.12-0.14	0.0-2.9	0.5-1.0	.20	.24			
	19-22	10-18	1.25-1.50	2-6	0.12-0.14	0.0-2.9	0.5-1.0	.20	.24			
	22-46	7-15	1.25-1.50	2-6	0.11-0.13	0.0-2.9	0.2-0.8	.24	.28			
	46-56	7-15	1.30-1.60	6-20	0.11-0.13	0.0-2.9	0.0-0.5	.24	.28			
	56-66	---	---	---	---	---	---	---	---			
Solarview-----	0-2	7-12	1.20-1.50	6-20	0.09-0.12	0.0-2.9	1.0-2.0	.10	.15	2	3	86
	2-12	5-10	1.30-1.55	6-20	0.06-0.08	0.0-2.9	0.2-0.8	.02	.02			
	12-16	0-5	1.35-1.60	20-101	0.02-0.05	0.0-2.9	0.0-0.5	.02	.02			
	16-26	---	---	---	---	---	---	---	---			
306: Van Dusen-----	0-7	15-24	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	5	6	48
	7-23	18-25	1.20-1.40	0.6-2	0.16-0.18	0.0-2.9	1.0-4.0	.37	.37			
	23-39	18-27	1.20-1.40	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.37	.37			
	39-49	18-30	1.20-1.40	0.6-2	0.16-0.21	0.0-2.9	0.5-1.5	.32	.32			
	49-60	18-30	1.20-1.40	0.6-2	0.16-0.21	0.0-2.9	0.5-1.0	.28	.32			
Siphonlake-----	0-2	10-18	1.15-1.30	2-6	0.11-0.13	0.0-2.9	2.0-5.0	.15	.17	4	3	86
	2-6	10-18	1.15-1.30	2-6	0.11-0.13	0.0-2.9	2.0-4.0	.15	.17			
	6-19	8-18	1.20-1.40	2-6	0.11-0.13	0.0-2.9	1.0-2.0	.17	.20			
	19-31	10-18	1.20-1.40	2-6	0.12-0.14	0.0-2.9	0.5-1.0	.20	.24			
	31-42	7-15	1.25-1.50	2-6	0.11-0.16	0.0-2.9	0.2-0.8	.24	.28			
	42-47	4-15	1.30-1.60	6-20	0.10-0.12	0.0-2.9	0.0-0.5	.02	.05			
	47-57	---	---	---	---	---	---	---	---			
307: Adaboi-----	0-2	20-27	1.10-1.30	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.49	.49	5	6	48
	2-9	20-27	1.10-1.30	0.2-0.6	0.18-0.20	3.0-5.9	2.0-4.0	.49	.49			
	9-13	35-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43			
	13-20	35-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43			
	20-25	23-40	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.5-1.0	.49	.49			
	25-43	40-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	0.5-1.0	.43	.43			
	43-66	40-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	0.5-1.0	.43	.43			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
307: Meclo-----	0-4	20-27	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49	3	6	48
	4-8	22-30	1.10-1.30	0.2-0.6	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	8-13	35-45	1.20-1.40	0.06-0.2	0.15-0.19	6.0-8.9	0.8-1.5	.43	.43			
	13-22	35-45	1.20-1.40	0.06-0.2	0.15-0.19	6.0-8.9	0.5-1.0	.43	.43			
	22-31	27-35	1.20-1.40	0.2-0.6	0.16-0.19	3.0-5.9	0.2-0.8	.43	.49			
	31-41	---	---	---	---	---	---	---	---			
308: Breadloaf-----	0-2	27-35	1.10-1.30	0.06-0.2	0.18-0.21	3.0-5.9	1.0-2.0	.28	.32	3	6	48
	2-6	40-60	1.20-1.40	0.0015-0.06	0.14-0.17	6.0-8.9	0.2-0.8	.28	.32			
	6-12	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.2-0.8	.28	.32			
	12-17	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.2-0.8	.28	.32			
	17-23	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.0-0.5	.28	.32			
	23-33	---	---	---	---	---	---	---	---			
Crawley, silt loam----	0-4	18-25	1.10-1.30	0.6-2	0.18-0.21	0.0-2.9	1.0-3.0	.43	.49	2	6	48
	4-7	27-35	1.20-1.40	0.2-0.6	0.18-0.21	3.0-5.9	0.5-1.5	.43	.43			
	7-13	27-35	1.20-1.40	0.2-0.6	0.18-0.21	3.0-5.9	0.2-1.0	.49	.49			
	13-23	---	---	---	---	---	---	---	---			
Doubledia, clay loam--	0-3	27-35	1.10-1.30	0.06-0.2	0.19-0.21	3.0-5.9	1.0-3.0	.24	.28	4	6	48
	3-7	40-60	1.25-1.45	0.0015-0.06	0.14-0.16	6.0-8.9	0.5-1.0	.24	.28			
	7-12	40-60	1.25-1.45	0.0015-0.06	0.14-0.16	6.0-8.9	0.5-1.0	.24	.28			
	12-24	40-60	1.25-1.45	0.0015-0.06	0.14-0.16	6.0-8.9	0.5-1.0	.28	.28			
	24-37	40-60	1.25-1.45	0.0015-0.06	0.14-0.16	6.0-8.9	0.5-1.0	.28	.28			
	37-55	40-60	1.25-1.45	0.0015-0.06	0.14-0.16	6.0-8.9	0.5-1.0	.28	.28			
	55-65	---	---	---	---	---	---	---	---			
309: Hullsgulch, sandy loam	0-2	8-15	1.15-1.40	2-6	0.11-0.13	0.0-2.9	1.0-3.0	.17	.20	5	3	86
	2-11	8-15	1.25-1.50	2-6	0.11-0.13	0.0-2.9	1.0-3.0	.17	.20			
	11-18	18-30	1.30-1.60	0.6-2	0.08-0.11	0.0-4.5	0.2-0.8	.24	.28			
	18-32	18-30	1.20-1.40	0.6-2	0.13-0.15	0.0-4.5	0.2-0.8	.24	.28			
	32-48	8-27	1.20-1.60	0.6-2	0.09-0.13	0.0-2.9	0.2-0.8	.17	.28			
	48-60	5-22	1.20-1.60	0.6-2	0.09-0.13	0.0-2.9	0.2-0.8	.17	.28			
Solarview-----	0-2	7-12	1.20-1.50	6-20	0.09-0.12	0.0-2.9	1.0-2.0	.10	.15	2	3	86
	2-12	5-10	1.30-1.55	6-20	0.06-0.08	0.0-2.9	0.2-0.8	.02	.02			
	12-16	0-5	1.35-1.60	20-101	0.02-0.05	0.0-2.9	0.0-0.5	.02	.02			
	16-26	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
311: Meclo-----	0-4	20-27	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49	3	6	48
	4-8	22-30	1.10-1.30	0.2-0.6	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	8-13	35-45	1.20-1.40	0.06-0.2	0.15-0.19	6.0-8.9	0.8-1.5	.43	.43			
	13-22	35-45	1.20-1.40	0.06-0.2	0.15-0.19	6.0-8.9	0.5-1.0	.43	.43			
	22-31	27-35	1.20-1.40	0.2-0.6	0.16-0.19	3.0-5.9	0.2-0.8	.43	.49			
	31-41	---	---	---	---	---	---	---	---			
Crawley, silt loam----	0-4	18-25	1.10-1.30	0.6-2	0.18-0.21	0.0-2.9	1.0-3.0	.43	.49	2	6	48
	4-7	27-35	1.20-1.40	0.2-0.6	0.18-0.21	3.0-5.9	0.5-1.5	.43	.43			
	7-13	27-35	1.20-1.40	0.2-0.6	0.18-0.21	3.0-5.9	0.2-1.0	.49	.49			
	13-23	---	---	---	---	---	---	---	---			
Adaboi-----	0-2	20-27	1.10-1.30	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.49	.49	5	6	48
	2-9	20-27	1.10-1.30	0.2-0.6	0.18-0.20	3.0-5.9	2.0-4.0	.49	.49			
	9-13	35-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43			
	13-20	35-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-2.0	.43	.43			
	20-25	23-40	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.5-1.0	.49	.49			
	25-43	40-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	0.5-1.0	.43	.43			
	43-66	40-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	0.5-1.0	.43	.43			
328: Gacey, extremely stony surface-----	0-3	20-27	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	1.0-3.0	.15	.32	1	7	38
	3-7	27-35	1.20-1.40	0.2-0.6	0.12-0.17	3.0-5.9	1.0-3.0	.15	.32			
	7-10	35-40	1.20-1.40	0.2-0.6	0.08-0.14	6.0-8.9	0.8-2.0	.15	.32			
	10-15	35-50	1.25-1.45	0.06-0.2	0.07-0.13	6.0-8.9	0.2-0.8	.15	.32			
	15-20	---	---	0.0015-0.06	0.00-0.00	---	---	---	---			
	20-60	5-15	1.30-1.60	6-20	0.00-0.04	0.0-2.9	0.0-0.2	.02	.28			
329: Ayette-----	0-4	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37	4	6	48
	4-8	30-40	1.20-1.40	0.2-0.6	0.18-0.21	3.0-6.0	1.0-2.0	.32	.37			
	8-12	30-40	1.20-1.40	0.2-0.6	0.18-0.21	3.0-6.0	1.0-2.0	.32	.37			
	12-30	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	30-43	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	43-53	---	---	---	---	---	---	---	---			
Duco, stony loam, very stony surface-----	0-3	15-27	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	1.0-3.0	.20	.32	1	7	38
	3-15	27-35	1.20-1.40	0.2-0.6	0.05-0.07	3.0-5.9	0.2-1.0	.05	.32			
	15-25	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
330: Breadloaf-----	0-2	27-35	1.10-1.30	0.06-0.2	0.18-0.21	3.0-5.9	1.0-2.0	.28	.32	3	6	48
	2-6	40-60	1.20-1.40	0.0015-0.06	0.14-0.17	6.0-8.9	0.2-0.8	.28	.32			
	6-12	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.2-0.8	.28	.32			
	12-17	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.2-0.8	.28	.32			
	17-23	35-60	1.25-1.45	0.0015-0.06	0.14-0.19	6.0-8.9	0.0-0.5	.28	.32			
	23-33	---	---	---	---	---	---	---	---			
Ayette, moist-----	0-4	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37	4	6	48
	4-9	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37			
	9-15	30-40	1.20-1.40	0.2-0.6	0.18-0.21	3.0-6.0	1.0-2.0	.32	.37			
	15-27	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	27-36	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	36-55	35-40	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	55-65	---	---	---	---	---	---	---	---			
Immig, rubbly surface	0-4	15-27	1.10-1.30	0.6-2	0.05-0.12	0.0-2.9	2.0-5.0	.10	.28	2	8	0
	4-7	27-35	1.20-1.40	0.2-0.6	0.07-0.14	3.0-5.9	1.0-3.0	.10	.28			
	7-17	40-60	1.25-1.45	0.06-0.2	0.06-0.11	6.0-8.9	0.5-1.0	.10	.37			
	17-25	40-60	1.25-1.45	0.06-0.2	0.04-0.07	6.0-8.9	0.5-1.0	.05	.37			
	25-35	---	---	---	---	---	---	---	---			
331: Ayette, moist-----	0-4	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37	4	6	48
	4-9	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37			
	9-15	30-40	1.20-1.40	0.2-0.6	0.18-0.21	3.0-6.0	1.0-2.0	.32	.37			
	15-27	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	27-36	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	36-55	35-40	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	55-65	---	---	---	---	---	---	---	---			
Yad-----	0-2	27-35	1.10-1.30	0.06-0.2	0.16-0.19	3.0-5.9	2.0-5.0	.32	.32	5	6	48
	2-6	27-35	1.15-1.35	0.06-0.2	0.16-0.19	3.0-5.9	0.5-1.0	.32	.32			
	6-14	35-60	1.20-1.45	0.0016-0.06	0.16-0.19	6.0-8.9	0.5-1.0	.28	.28			
	14-25	35-60	1.20-1.45	0.0015-0.06	0.16-0.19	6.0-8.9	0.5-1.0	.28	.28			
	25-41	27-40	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
	41-52	25-35	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
	52-60	27-40	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
332: Hann-----	0-3	20-27	1.10-1.40	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.43	.43	5	6	48
	3-6	25-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-3.0	.37	.37			
	6-13	40-50	1.20-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-3.0	.37	.37			
	13-25	40-50	1.20-1.45	0.06-0.2	0.14-0.17	6.0-8.9	0.5-2.0	.37	.37			
	25-44	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.43	.43			
	44-72	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.49	.49			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
332: Ayette, moist-----	0-4	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37	4	6	48
	4-9	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37			
	9-15	30-40	1.20-1.40	0.2-0.6	0.18-0.21	3.0-6.0	1.0-2.0	.32	.37			
	15-27	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	27-36	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	36-55	35-40	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	55-65	---	---	---	---	---	---	---	---			
Picketpin-----	0-5	18-25	1.10-1.30	0.6-2	0.14-0.17	0.0-3.0	2.0-3.0	.28	.28	5	6	48
	5-11	25-35	1.15-1.35	0.6-2	0.14-0.17	3.0-6.0	1.0-3.0	.24	.24			
	11-17	25-35	1.20-1.40	0.6-2	0.14-0.17	3.0-6.0	1.0-2.0	.24	.24			
	17-35	25-35	1.20-1.40	0.6-2	0.14-0.17	3.0-6.0	0.5-1.0	.24	.24			
	35-60	10-24	1.30-1.60	2-6	0.10-0.12	0.0-3.0	0.0-0.5	.17	.20			
333: Ayette-----	0-4	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37	4	6	48
	4-8	30-40	1.20-1.40	0.2-0.6	0.18-0.21	3.0-6.0	1.0-2.0	.32	.37			
	8-12	30-40	1.20-1.40	0.2-0.6	0.18-0.21	3.0-6.0	1.0-2.0	.32	.37			
	12-30	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	30-43	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	43-53	---	---	---	---	---	---	---	---			
Crawley, loam-----	0-6	20-25	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	1.0-3.0	.32	.37	2	6	48
	6-14	27-35	1.20-1.40	0.2-0.6	0.15-0.18	3.0-6.0	0.5-2.0	.28	.32			
	14-24	---	---	---	---	---	---	---	---			
Hullsgulch, loam-----	0-2	15-24	1.10-1.30	0.6-2	0.15-0.18	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	2-9	15-24	1.20-1.40	0.6-2	0.15-0.18	0.0-2.9	1.0-2.0	.32	.32			
	9-15	15-24	1.20-1.40	0.6-2	0.15-0.18	0.0-2.9	0.2-0.8	.28	.28			
	15-29	20-30	1.20-1.40	0.6-2	0.14-0.17	3.0-5.9	0.2-0.8	.24	.24			
	29-46	20-30	1.20-1.40	0.6-2	0.14-0.17	3.0-5.9	0.2-0.8	.28	.28			
	46-58	8-27	1.20-1.60	0.6-2	0.09-0.13	0.0-2.9	0.2-0.8	.15	.20			
	58-66	5-20	1.30-1.60	2-6	0.04-0.06	0.0-2.9	0.2-0.8	.02	.05			
335: Gimmi, very stony surface-----	0-3	20-25	1.10-1.30	0.6-2	0.10-0.12	0.0-3.0	2.0-4.0	.17	.32	3	8	0
	3-6	20-25	1.15-1.35	0.6-2	0.10-0.12	0.0-3.0	2.0-3.0	.17	.32			
	6-10	27-35	1.20-1.40	0.2-0.6	0.12-0.14	3.0-6.0	1.0-2.0	.10	.24			
	10-15	35-50	1.20-1.45	0.06-0.2	0.12-0.14	6.0-9.0	0.7-2.0	.05	.24			
	15-23	35-50	1.20-1.45	0.06-0.2	0.12-0.14	6.0-9.0	0.5-1.0	.05	.24			
	23-31	27-35	1.20-1.40	0.2-0.6	0.05-0.08	3.0-5.9	0.5-1.0	.02	.24			
	31-41	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
335: Avette, moist-----	0-4	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37	4	6	48
	4-9	20-27	1.10-1.30	0.6-2	0.15-0.18	0.0-3.0	2.0-4.0	.32	.37			
	9-15	30-40	1.20-1.40	0.2-0.6	0.18-0.21	3.0-6.0	1.0-2.0	.32	.37			
	15-27	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	27-36	35-50	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	36-55	35-40	1.25-1.45	0.06-0.2	0.14-0.20	6.0-9.0	0.5-1.0	.24	.28			
	55-65	---	---	---	---	---	---	---	---			
Doubledia, silty clay loam-----	0-3	27-35	1.10-1.30	0.06-0.2	0.17-0.19	3.0-5.9	2.0-5.0	.37	.37	4	6	48
	3-6	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.32	.32			
	6-11	40-60	1.25-1.35	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	11-21	40-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	1.0-2.0	.37	.37			
	21-25	35-60	1.20-1.40	0.06-0.2	0.14-0.19	6.0-8.9	0.5-1.0	.32	.32			
	25-34	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	34-41	35-60	1.25-1.45	0.0015-0.06	0.14-0.18	6.0-8.9	0.5-1.0	.32	.32			
	41-51	---	---	---	---	---	---	---	---			
400: Ralsen-----	0-2	10-20	1.15-1.40	0.6-2	0.13-0.15	0.0-2.9	2.0-10	.17	.17	5	3	86
	2-10	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	2.0-10	.17	.17			
	10-17	8-15	1.25-1.50	2-6	0.12-0.15	0.0-2.9	1.0-3.0	.28	.28			
	17-19	6-12	1.25-1.50	2-6	0.08-0.11	0.0-2.9	0.5-1.0	.24	.24			
	19-24	6-12	1.25-1.50	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.32	.32			
	24-60	6-12	1.25-1.60	2-101	0.04-0.15	0.0-2.9	0.5-1.0	.32	.32			
Foxlane-----	0-1	10-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-4	10-18	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.15	.15			
	4-10	10-18	1.20-1.45	2-6	0.07-0.11	0.0-2.9	1.0-5.0	.15	.17			
	10-13	0-8	1.25-1.50	6-20	0.07-0.11	0.0-2.9	1.0-3.0	.10	.24			
	13-47	0-8	1.25-1.50	20-101	0.02-0.05	0.0-2.9	0.5-1.0	.02	.05			
	47-60	0-5	1.25-1.50	20-101	0.01-0.03	0.0-2.9	0.5-1.0	.02	.05			
Pay-----	0-3	5-10	1.15-1.40	6-20	0.09-0.11	0.0-2.9	2.0-10	.15	.15	5	2	134
	3-7	5-10	1.15-1.40	6-20	0.09-0.11	0.0-2.9	2.0-10	.15	.15			
	7-11	5-10	1.25-1.50	6-20	0.09-0.11	0.0-2.9	2.0-6.0	.15	.15			
	11-26	3-8	1.25-1.50	6-20	0.05-0.11	0.0-2.9	0.5-1.0	.24	.24			
	26-41	0-5	1.35-1.60	20-101	0.02-0.04	0.0-2.9	0.5-1.0	.02	.02			
	41-60	0-5	1.35-1.60	20-101	0.02-0.04	0.0-2.9	0.5-1.0	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
401: Staircase-----	0-4	8-18	1.15-1.40	2-6	0.09-0.12	0.0-2.9	2.0-6.0	.10	.15	5	3	86
	4-14	8-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	2.0-6.0	.10	.15			
	14-22	8-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	2.0-6.0	.10	.15			
	22-32	8-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	2.0-6.0	.10	.15			
	32-42	8-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.10	.24			
	42-50	8-16	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.10	.24			
	50-58	4-12	1.25-1.50	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.10	.24			
	58-72	4-12	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.10			
402: Crossbow-----	0-4	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	4.0-10	.17	.17	5	3	86
	4-11	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	3.0-9.0	.17	.17			
	11-21	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	3.0-8.0	.17	.17			
	21-36	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	3.0-7.0	.17	.17			
	36-42	3-8	1.35-1.60	6-20	0.07-0.10	0.0-2.9	0.5-1.0	.24	.24			
	42-60	0-5	1.35-1.60	20-101	0.03-0.05	0.0-2.9	0.5-1.0	.02	.05			
Foxlane-----	0-1	10-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-4	10-18	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.15	.15			
	4-10	10-18	1.20-1.45	2-6	0.07-0.11	0.0-2.9	1.0-5.0	.15	.17			
	10-13	0-8	1.25-1.50	6-20	0.07-0.11	0.0-2.9	1.0-3.0	.10	.24			
	13-47	0-8	1.25-1.50	20-101	0.02-0.05	0.0-2.9	0.5-1.0	.02	.05			
	47-60	0-5	1.25-1.50	20-101	0.01-0.03	0.0-2.9	0.5-1.0	.02	.05			
403: Ralsen-----	0-2	10-20	1.15-1.40	0.6-2	0.13-0.15	0.0-2.9	2.0-10	.17	.17	5	3	86
	2-10	8-15	1.15-1.40	2-6	0.13-0.15	0.0-2.9	2.0-10	.17	.17			
	10-17	8-14	1.25-1.50	2-6	0.12-0.15	0.0-2.9	1.0-3.0	.28	.28			
	17-19	6-12	1.25-1.50	2-6	0.08-0.11	0.0-2.9	0.5-1.0	.24	.24			
	19-24	6-12	1.25-1.50	2-6	0.12-0.15	0.0-2.9	0.5-1.0	.32	.32			
	24-60	6-12	1.25-1.60	2-101	0.04-0.15	0.0-2.9	0.5-1.0	.32	.32			
Pay-----	0-3	5-10	1.15-1.40	6-20	0.09-0.11	0.0-2.9	2.0-10	.15	.15	5	2	134
	3-7	5-10	1.15-1.40	6-20	0.09-0.11	0.0-2.9	2.0-10	.15	.15			
	7-11	5-10	1.25-1.50	6-20	0.09-0.11	0.0-2.9	2.0-6.0	.15	.15			
	11-26	3-8	1.25-1.50	6-20	0.05-0.11	0.0-2.9	0.5-1.0	.24	.24			
	26-41	0-5	1.35-1.60	20-101	0.02-0.04	0.0-2.9	0.5-1.0	.02	.02			
	41-60	0-5	1.35-1.60	20-101	0.02-0.04	0.0-2.9	0.5-1.0	.02	.02			
Crossbow-----	0-4	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	4.0-10	.17	.17	5	3	86
	4-11	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	3.0-9.0	.17	.17			
	11-21	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	3.0-8.0	.17	.17			
	21-36	8-18	1.15-1.40	2-6	0.13-0.15	0.0-2.9	3.0-7.0	.17	.17			
	36-42	3-8	1.35-1.60	6-20	0.07-0.10	0.0-2.9	0.5-1.0	.24	.24			
	42-60	0-5	1.35-1.60	20-101	0.03-0.05	0.0-2.9	0.5-1.0	.02	.05			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index				
								Kw	Kf	T						
	In	Pct	g/cc	In/hr	In/in	Pct	Pct									
404: Riverpoint-----	0-6	18-24	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.17	.24	3	6	48				
	6-11	18-27	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.20	.28							
	11-14	22-30	1.20-1.40	0.2-0.6	0.16-0.21	0.0-5.9	0.5-1.0	.24	.32							
	14-19	22-30	1.20-1.40	0.2-0.6	0.10-0.14	0.0-5.9	0.5-1.0	.10	.32							
	19-31	10-22	1.30-1.60	2-6	0.04-0.09	0.0-2.9	0.5-1.0	.02	.15							
	31-41	5-12	1.30-1.60	2-6	0.04-0.08	0.0-5.9	0.5-1.0	.02	.15							
	41-60	2-12	1.35-1.60	6-20	0.02-0.05	0.0-2.9	0.5-1.0	.02	.02							
Hellake-----	0-3	18-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.20	.24	4	6	48				
	3-10	18-25	1.10-1.35	0.6-2	0.14-0.18	0.0-2.9	1.5-4.5	.24	.28							
	10-22	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32							
	22-36	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32							
	36-43	27-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.28	.32							
	43-53	15-27	1.20-1.40	0.6-2	0.05-0.13	0.0-2.9	0.5-1.0	.10	.37							
	53-60	4-18	1.25-1.50	2-6	0.02-0.09	0.0-2.9	0.5-1.0	.05	.24							
	60-66	4-18	1.25-1.50	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10							
405: Hellake-----	0-3	18-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.20	.24	4	6	48				
	3-10	18-25	1.10-1.35	0.6-2	0.14-0.18	0.0-2.9	1.5-4.5	.24	.28							
	10-22	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32							
	22-36	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32							
	36-43	27-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.28	.32							
	43-53	15-27	1.20-1.40	0.6-2	0.05-0.13	0.0-2.9	0.5-1.0	.10	.37							
	53-60	4-18	1.25-1.50	2-6	0.02-0.09	0.0-2.9	0.5-1.0	.05	.24							
	60-66	4-18	1.25-1.50	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10							
Staircase-----	0-4	8-18	1.15-1.40	2-6	0.09-0.12	0.0-2.9	2.0-6.0	.10	.15	5	3	86				
	4-14	8-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	2.0-6.0	.10	.15							
	14-22	8-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	2.0-6.0	.10	.15							
	22-32	8-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	2.0-6.0	.10	.15							
	32-42	8-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.10	.24							
	42-50	8-16	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.10	.24							
	50-58	4-12	1.25-1.50	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.10	.24							
	58-72	4-12	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.10							
406: Hellake-----	0-3	18-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.20	.24	4	6	48				
	3-10	18-25	1.10-1.35	0.6-2	0.14-0.18	0.0-2.9	1.5-4.5	.24	.28							
	10-22	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32							
	22-36	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32							
	36-43	27-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.28	.32							
	43-53	15-27	1.20-1.40	0.6-2	0.05-0.13	0.0-2.9	0.5-1.0	.10	.37							
	53-60	4-18	1.25-1.50	2-6	0.02-0.09	0.0-2.9	0.5-1.0	.05	.24							
	60-66	4-18	1.25-1.50	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10							

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
407: Hellake-----	0-3	18-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.20	.24	4	6	48
	3-10	18-25	1.10-1.35	0.6-2	0.14-0.18	0.0-2.9	1.5-4.5	.24	.28			
	10-22	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	22-36	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	36-43	27-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.28	.32			
	43-53	15-27	1.20-1.40	0.6-2	0.05-0.13	0.0-2.9	0.5-1.0	.10	.37			
	53-60	4-18	1.25-1.50	2-6	0.02-0.09	0.0-2.9	0.5-1.0	.05	.24			
	60-66	4-18	1.25-1.50	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
408: Stardust-----	0-1	15-25	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-3	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	2.0-6.0	.17	.24			
	3-9	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	1.0-5.0	.20	.28			
	9-18	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-2.0	.24	.37			
	18-38	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.17	.24			
	38-54	20-25	1.20-1.40	0.6-2	0.09-0.14	0.0-2.9	0.5-1.0	.15	.24			
	54-67	8-19	1.20-1.40	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.24			
409: Stardust-----	0-1	15-25	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-3	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	2.0-6.0	.17	.24			
	3-9	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	1.0-5.0	.20	.28			
	9-18	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-2.0	.24	.37			
	18-38	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.17	.24			
	38-54	20-25	1.20-1.40	0.6-2	0.09-0.14	0.0-2.9	0.5-1.0	.15	.24			
	54-67	8-19	1.20-1.40	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.24			
410: Stardust-----	0-1	15-25	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-3	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	2.0-6.0	.17	.24			
	3-9	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	1.0-5.0	.20	.28			
	9-18	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-2.0	.24	.37			
	18-38	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.17	.24			
	38-54	20-25	1.20-1.40	0.6-2	0.09-0.14	0.0-2.9	0.5-1.0	.15	.24			
	54-67	8-19	1.20-1.40	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.24			
Riverpoint, very stony surface-----	0-1	18-24	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	7	38
	1-7	18-24	1.00-1.30	0.6-2	0.13-0.18	0.0-2.9	2.0-6.0	.15	.24			
	7-12	18-27	1.10-1.40	0.6-2	0.10-0.15	0.0-5.9	1.0-3.0	.17	.32			
	12-24	22-30	1.20-1.40	0.2-0.6	0.05-0.14	0.0-5.9	0.5-1.0	.10	.37			
	24-40	22-30	1.30-1.60	0.2-0.6	0.07-0.14	0.0-5.9	0.5-1.0	.05	.32			
	40-60	8-12	1.30-1.60	2-6	0.03-0.05	0.0-2.9	0.5-1.0	.02	.20			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
411: Huston, very stony surface-----	0-1	7-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-6	7-18	1.20-1.50	2-6	0.06-0.10	0.0-2.9	2.0-6.0	.02	.02			
	6-13	7-18	1.25-1.55	2-6	0.06-0.10	0.0-2.9	1.5-4.5	.02	.05			
	13-26	7-18	1.30-1.60	2-6	0.05-0.09	0.0-2.9	1.0-2.0	.05	.10			
	26-46	7-18	1.30-1.60	2-6	0.05-0.09	0.0-2.9	0.5-1.0	.05	.15			
	46-60	3-10	1.30-1.60	6-20	0.04-0.08	0.0-2.9	0.5-1.0	.05	.15			
Zeb, gravelly sandy loam-----	0-1	8-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-8	8-18	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	8-13	8-18	1.25-1.50	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.10	.20			
	13-23	7-14	1.25-1.50	2-6	0.03-0.11	0.0-2.9	0.5-1.0	.05	.15			
	23-43	2-10	1.25-1.50	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.02	.02			
	43-60	0-5	1.25-1.50	20-101	0.01-0.04	0.0-2.9	0.5-1.0	.02	.05			
412: Huston, very stony surface-----	0-1	7-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-6	7-18	1.20-1.50	2-6	0.06-0.10	0.0-2.9	2.0-6.0	.02	.02			
	6-13	7-18	1.25-1.55	2-6	0.06-0.10	0.0-2.9	1.5-4.5	.02	.05			
	13-26	7-18	1.30-1.60	2-6	0.05-0.09	0.0-2.9	1.0-2.0	.05	.10			
	26-46	7-18	1.30-1.60	2-6	0.05-0.09	0.0-2.9	0.5-1.0	.05	.15			
	46-60	3-10	1.30-1.60	6-20	0.04-0.08	0.0-2.9	0.5-1.0	.05	.15			
Stardust-----	0-1	15-25	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-3	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	2.0-6.0	.17	.24			
	3-9	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	1.0-5.0	.20	.28			
	9-18	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-2.0	.24	.37			
	18-38	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.17	.24			
	38-54	20-25	1.20-1.40	0.6-2	0.09-0.14	0.0-2.9	0.5-1.0	.15	.24			
	54-67	8-19	1.20-1.40	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.24			
413: Cloudyway-----	0-1	8-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	8-18	1.15-1.40	2-6	0.09-0.11	0.0-2.9	2.0-6.0	.10	.15			
	4-9	8-18	1.15-1.40	2-6	0.09-0.11	0.0-2.9	1.5-5.0	.10	.17			
	9-18	8-18	1.25-1.50	2-6	0.09-0.11	0.0-2.9	1.5-5.0	.10	.17			
	18-24	7-17	1.25-1.50	2-6	0.09-0.11	0.0-2.9	1.0-3.0	.10	.20			
	24-43	5-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	43-60	5-12	1.35-1.60	6-20	0.04-0.06	0.0-2.9	0.5-1.0	.05	.10			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
414: Hellake-----	0-3	18-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.20	.24	4	6	48
	3-10	18-25	1.10-1.35	0.6-2	0.14-0.18	0.0-2.9	1.5-4.5	.24	.28			
	10-22	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	22-36	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	36-43	27-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.28	.32			
	43-53	15-27	1.20-1.40	0.6-2	0.05-0.13	0.0-2.9	0.5-1.0	.10	.37			
	53-60	4-18	1.25-1.50	2-6	0.02-0.09	0.0-2.9	0.5-1.0	.05	.24			
	60-66	4-18	1.25-1.50	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
Middlefork-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-4	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	4-12	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.24	.24			
	12-15	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	15-32	20-27	1.20-1.40	0.6-2	0.14-0.21	0.0-5.9	0.5-1.0	.37	.37			
	32-47	20-32	1.20-1.40	0.2-0.6	0.14-0.21	0.0-5.9	0.5-1.0	.28	.32			
	47-61	20-32	1.20-1.40	0.2-0.6	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
415: Middlefork-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-4	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	4-12	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.24	.24			
	12-15	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	15-32	20-27	1.20-1.40	0.6-2	0.14-0.21	0.0-5.9	0.5-1.0	.37	.37			
	32-47	20-32	1.20-1.40	0.2-0.6	0.14-0.21	0.0-5.9	0.5-1.0	.28	.32			
	47-61	20-32	1.20-1.40	0.2-0.6	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
Pinney-----	0-2	15-24	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	2-5	15-24	1.00-1.20	0.2-0.6	0.21-0.23	0.0-2.9	3.0-8.0	.32	.37			
	5-13	15-24	1.00-1.20	0.2-0.6	0.18-0.23	0.0-2.9	2.0-7.0	.32	.37			
	13-23	20-27	1.20-1.40	0.6-2	0.13-0.21	0.0-5.9	0.5-1.0	.28	.37			
	23-30	20-32	1.20-1.40	0.2-0.6	0.13-0.21	0.0-5.9	0.5-1.0	.28	.32			
	30-49	20-32	1.20-1.40	0.2-0.6	0.13-0.21	0.0-5.9	0.5-1.0	.28	.32			
	49-60	20-32	1.20-1.40	0.2-0.6	0.13-0.18	0.0-5.9	0.5-1.0	.32	.37			
416: Pinney, moist-----	0-1	15-24	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-4	15-24	1.00-1.30	0.2-0.6	0.19-0.25	0.0-2.9	3.0-8.0	.28	.32			
	4-10	15-24	1.00-1.30	0.2-0.6	0.19-0.25	0.0-2.9	2.0-6.0	.32	.37			
	10-21	15-24	1.00-1.30	0.2-0.6	0.19-0.25	0.0-2.9	1.0-5.0	.37	.43			
	21-32	20-30	1.20-1.40	0.6-2	0.12-0.18	0.0-5.9	0.5-1.0	.20	.24			
	32-45	20-32	1.20-1.40	0.2-0.6	0.09-0.20	0.0-5.9	0.5-1.0	.20	.24			
	45-60	20-32	1.20-1.40	0.2-0.6	0.09-0.20	0.0-5.9	0.5-1.0	.15	.24			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
416: Middlefork, moist-----	0-2	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	2-5	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	5-13	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.28	.28			
	13-28	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	28-36	20-27	1.20-1.40	0.6-2	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
	36-47	20-32	1.20-1.40	0.2-0.6	0.09-0.18	0.0-5.9	0.5-1.0	.15	.24			
	47-62	20-32	1.20-1.40	0.2-0.6	0.12-0.21	0.0-5.9	0.5-1.0	.24	.32			
Zeb, gravelly sandy loam-----	0-1	8-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-8	8-18	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	8-13	8-18	1.25-1.50	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.10	.20			
	13-23	7-14	1.25-1.50	2-6	0.03-0.11	0.0-2.9	0.5-1.0	.05	.15			
	23-43	2-10	1.25-1.50	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.02	.02			
	43-60	0-5	1.25-1.50	20-101	0.01-0.04	0.0-2.9	0.5-1.0	.02	.05			
417: Middlefork-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-4	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	4-12	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.24	.24			
	12-15	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	15-32	20-27	1.20-1.40	0.6-2	0.14-0.21	0.0-5.9	0.5-1.0	.37	.37			
	32-47	20-32	1.20-1.40	0.2-0.6	0.14-0.21	0.0-5.9	0.5-1.0	.28	.32			
	47-61	20-32	1.20-1.40	0.2-0.6	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
Zeb, fine gravelly sandy loam-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15			
	4-11	7-14	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	11-21	7-12	1.25-1.50	2-6	0.07-0.09	0.0-2.9	0.5-1.0	.10	.24			
	21-43	5-8	1.25-1.50	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.24			
	43-60	0-5	1.35-1.60	20-101	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			
418: Middlefork-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-4	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	4-12	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.24	.24			
	12-15	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	15-32	20-27	1.20-1.40	0.6-2	0.14-0.21	0.0-5.9	0.5-1.0	.37	.37			
	32-47	20-32	1.20-1.40	0.2-0.6	0.14-0.21	0.0-5.9	0.5-1.0	.28	.32			
	47-61	20-32	1.20-1.40	0.2-0.6	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
418: Zeb, fine gravelly sandy loam-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15			
	4-11	7-14	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	11-21	7-12	1.25-1.50	2-6	0.07-0.09	0.0-2.9	0.5-1.0	.10	.24			
	21-43	5-8	1.25-1.50	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.24			
	43-60	0-5	1.35-1.60	20-101	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			
419: Charters, fine gravelly sandy loam, dry-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-11	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	11-16	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	16-33	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	33-41	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	41-60	6-12	1.25-1.60	2-6	0.04-0.10	0.0-2.9	0.5-1.0	.10	.24			
Zeb, fine gravelly sandy loam-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15			
	4-11	7-14	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	11-21	7-12	1.25-1.50	2-6	0.07-0.09	0.0-2.9	0.5-1.0	.10	.24			
	21-43	5-8	1.25-1.50	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.24			
	43-60	0-5	1.35-1.60	20-101	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			
420: Pioneervil-----	0-1	10-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	1-6	10-18	1.15-1.40	2-6	0.10-0.12	0.0-2.9	3.0-7.0	.10	.15			
	6-12	10-18	1.25-1.50	2-6	0.10-0.12	0.0-2.9	0.5-1.0	.20	.28			
	12-19	10-20	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.24	.28			
	19-25	10-20	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.17	.28			
	25-31	10-20	1.25-1.50	2-6	0.13-0.17	0.0-2.9	0.5-1.0	.28	.32			
	31-35	6-18	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.24	.28			
	35-75	0-12	1.25-1.60	2-6	0.04-0.08	0.0-2.9	0.5-1.0	.10	.10			
Grimescreek-----	0-6	8-18	1.15-1.40	2-6	0.10-0.12	0.0-2.9	3.0-7.0	.10	.15	5	3	86
	6-11	8-18	1.25-1.50	2-6	0.10-0.13	0.0-2.9	0.5-1.0	.17	.24			
	11-21	8-18	1.25-1.50	2-6	0.10-0.12	0.0-2.9	0.5-1.0	.24	.24			
	21-23	4-18	1.30-1.60	2-6	0.10-0.13	0.0-2.9	0.5-1.0	.10	.15			
	23-36	4-18	1.30-1.60	2-6	0.10-0.12	0.0-2.9	0.5-1.0	.10	.15			
	36-58	4-18	1.25-1.50	2-6	0.10-0.12	0.0-2.9	0.5-1.0	.15	.24			
	58-72	0-8	1.35-1.60	2-6	0.06-0.08	0.0-2.9	0.5-1.0	.10	.10			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
421: Dumps, dredge tailings	0-60	---	---	---	---	---	---	---	---	---	---	---
Oxyaquic Xerorthents, very stony surface---	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-11	2-7	1.25-1.50	6-20	0.01-0.03	0.0-2.9	0.5-2.0	.02	.02			
	11-22	2-7	1.35-1.60	6-20	0.00-0.03	0.0-2.9	0.2-0.8	.02	.15			
	22-60	0-7	1.35-1.60	20-101	0.00-0.02	0.0-2.9	0.0-0.0	.02	.02			
422: Lithic Xerorthents, very stony surface---	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	1	4	86
	1-3	2-7	1.25-1.50	6-20	0.01-0.03	0.0-2.9	0.8-1.5	.02	.02			
	3-11	0-7	1.35-1.60	6-101	0.00-0.03	0.0-2.9	0.0-0.5	.02	.02			
	11-24	---	---	---	---	---	---	---	---			
Dumps, placer tailings	0-24	---	---	---	---	---	---	---	---	3	---	---
	24-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			
Dystric Xeropsamments, very stony surface---	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	2	134
	1-4	2-7	1.25-1.50	6-20	0.05-0.07	0.0-2.9	0.8-2.0	.10	.10			
	4-15	2-7	1.35-1.60	6-20	0.05-0.07	0.0-2.9	0.2-0.8	.02	.02			
	15-24	0-7	1.35-1.60	6-101	0.02-0.07	0.0-2.9	0.0-0.2	.02	.02			
	24-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			
423: Dystric Xeropsamments, very stony surface---	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	2	134
	1-4	2-7	1.25-1.50	6-20	0.05-0.07	0.0-2.9	0.8-2.0	.10	.10			
	4-15	2-7	1.35-1.60	6-20	0.05-0.07	0.0-2.9	0.2-0.8	.02	.02			
	15-24	0-7	1.35-1.60	6-101	0.02-0.07	0.0-2.9	0.0-0.2	.02	.02			
	24-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			
Ultic Haploxerafals---	0-1	15-25	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-5	15-25	1.10-1.30	0.6-2	0.12-0.15	0.0-2.9	1.0-2.0	.20	.37			
	5-11	20-32	1.20-1.40	0.2-0.6	0.11-0.18	3.0-5.9	0.5-1.0	.15	.24			
	11-15	20-32	1.20-1.40	0.2-0.6	0.11-0.18	3.0-5.9	0.5-1.0	.15	.24			
	15-25	20-32	1.20-1.40	0.2-0.6	0.11-0.18	3.0-5.9	0.5-1.0	.17	.24			
	25-34	20-35	1.20-1.40	0.2-0.6	0.11-0.18	3.0-5.9	0.2-0.8	.17	.24			
	34-60	10-25	1.20-1.50	0.6-6	0.07-0.16	0.0-2.9	0.2-0.8	.17	.28			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
423: Lithic Xerorthents----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	1	4	86
	1-5	4-10	1.20-1.40	6-20	0.07-0.10	0.0-2.9	0.8-1.5	.15	.24			
	5-10	2-7	1.35-1.60	6-20	0.01-0.03	0.0-2.9	0.2-0.8	.02	.02			
	10-18	0-7	1.35-1.60	6-101	0.00-0.03	0.0-2.9	0.0-0.5	.02	.02			
	18-30	---	---	---	---	---	---	---	---			
424: Middlefork-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-4	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	4-12	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.24	.24			
	12-15	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	15-32	20-27	1.20-1.40	0.6-2	0.14-0.21	0.0-5.9	0.5-1.0	.37	.37			
	32-47	20-32	1.20-1.40	0.2-0.6	0.14-0.21	0.0-5.9	0.5-1.0	.28	.32			
	47-61	20-32	1.20-1.40	0.2-0.6	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
Charters, coarse sandy loam-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	1-4	7-14	1.20-1.50	2-6	0.10-0.12	0.0-2.9	3.0-7.0	.02	.02			
	4-8	7-14	1.30-1.60	2-6	0.10-0.12	0.0-2.9	0.5-1.0	.15	.15			
	8-15	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	15-32	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	32-48	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	48-60	6-12	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
425: Middlefork-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-4	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	4-12	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.24	.24			
	12-15	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	15-32	20-27	1.20-1.40	0.6-2	0.14-0.21	0.0-5.9	0.5-1.0	.37	.37			
	32-47	20-32	1.20-1.40	0.2-0.6	0.14-0.21	0.0-5.9	0.5-1.0	.28	.32			
	47-61	20-32	1.20-1.40	0.2-0.6	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
Brassey-----	0-1	12-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	4	6	48
	1-4	12-18	1.10-1.30	0.6-2	0.13-0.15	0.0-2.9	3.0-7.0	.17	.24			
	4-11	12-18	1.20-1.40	0.6-2	0.13-0.15	0.0-2.9	0.5-1.0	.24	.37			
	11-21	20-27	1.20-1.40	0.6-2	0.08-0.14	0.0-5.9	0.5-1.0	.10	.37			
	21-37	20-27	1.20-1.40	0.6-2	0.06-0.09	0.0-5.9	0.5-1.0	.05	.24			
	37-49	18-24	1.25-1.50	2-6	0.03-0.07	0.0-2.9	0.5-1.0	.05	.24			
	49-60	2-7	1.35-1.60	6-20	0.01-0.02	0.0-2.9	0.5-1.0	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
426: Middlefork, moist-----	0-2	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	2-5	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	5-13	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.28	.28			
	13-28	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	28-36	20-27	1.20-1.40	0.6-2	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
	36-47	20-32	1.20-1.40	0.2-0.6	0.09-0.18	0.0-5.9	0.5-1.0	.15	.24			
	47-62	20-32	1.20-1.40	0.2-0.6	0.12-0.21	0.0-5.9	0.5-1.0	.24	.32			
427: Middlefork, moist-----	0-2	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	2-5	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	5-13	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.28	.28			
	13-28	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	28-36	20-27	1.20-1.40	0.6-2	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
	36-47	20-32	1.20-1.40	0.2-0.6	0.09-0.18	0.0-5.9	0.5-1.0	.15	.24			
	47-62	20-32	1.20-1.40	0.2-0.6	0.12-0.21	0.0-5.9	0.5-1.0	.24	.32			
428: Zeb, gravelly sandy loam-----	0-1	8-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-8	8-18	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	8-13	8-18	1.25-1.50	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.10	.20			
	13-23	7-14	1.25-1.50	2-6	0.03-0.11	0.0-2.9	0.5-1.0	.05	.15			
	23-43	2-10	1.25-1.50	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.02	.02			
	43-60	0-5	1.25-1.50	20-101	0.01-0.04	0.0-2.9	0.5-1.0	.02	.05			
Republic-----	0-2	6-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-7	6-10	1.00-1.30	0.6-2	0.13-0.15	0.0-2.9	3.0-8.0	.15	.15			
	7-14	6-10	1.00-1.30	0.6-2	0.13-0.15	0.0-2.9	0.5-1.0	.24	.24			
	14-23	8-14	1.25-1.50	0.6-2	0.13-0.15	0.0-2.9	0.5-1.0	.24	.24			
	23-42	8-14	1.25-1.50	0.6-2	0.13-0.15	0.0-2.9	0.5-1.0	.24	.24			
	42-60	6-10	1.25-1.50	0.6-2	0.13-0.15	0.0-2.9	0.5-1.0	.24	.24			
429: Huston, very stony surface-----	0-1	7-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-6	7-18	1.20-1.50	2-6	0.06-0.10	0.0-2.9	2.0-6.0	.02	.02			
	6-13	7-18	1.25-1.55	2-6	0.06-0.10	0.0-2.9	1.5-4.5	.02	.05			
	13-26	7-18	1.30-1.60	2-6	0.05-0.09	0.0-2.9	1.0-2.0	.05	.10			
	26-46	7-18	1.30-1.60	2-6	0.05-0.09	0.0-2.9	0.5-1.0	.05	.15			
	46-60	3-10	1.30-1.60	6-20	0.04-0.08	0.0-2.9	0.5-1.0	.05	.15			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
503: Cartwright, dry-----	0-5	15-18	1.10-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.20	.28	5	5	56
	5-20	15-18	1.20-1.40	0.6-2	0.13-0.17	0.0-2.9	2.0-5.0	.17	.28			
	20-24	18-30	1.20-1.40	0.6-2	0.11-0.14	0.0-5.9	0.5-1.0	.10	.24			
	24-60	18-30	1.20-1.40	0.6-2	0.11-0.14	0.0-5.9	0.5-1.0	.10	.24			
504: Cartwright, dry-----	0-5	15-18	1.10-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.20	.28	5	5	56
	5-20	15-18	1.20-1.40	0.6-2	0.13-0.17	0.0-2.9	2.0-5.0	.17	.28			
	20-24	18-30	1.20-1.40	0.6-2	0.11-0.14	0.0-5.9	0.5-1.0	.10	.24			
	24-60	18-30	1.20-1.40	0.6-2	0.11-0.14	0.0-5.9	0.5-1.0	.10	.24			
505: Brownlee-----	0-4	15-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.24	.28	3	5	56
	4-9	15-25	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.20	.28			
	9-16	18-30	1.20-1.40	0.6-2	0.14-0.20	3.0-5.9	0.5-1.0	.28	.37			
	16-21	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	21-27	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	27-45	10-20	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.15	.24			
	45-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			
506: Brownlee-----	0-4	15-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.24	.28	3	5	56
	4-9	15-25	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.20	.28			
	9-16	18-30	1.20-1.40	0.6-2	0.14-0.20	3.0-5.9	0.5-1.0	.28	.37			
	16-21	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	21-27	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	27-45	10-20	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.15	.24			
	45-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			
Robbscreek-----	0-2	12-18	1.20-1.50	2-6	0.08-0.10	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	2-6	12-18	1.30-1.60	2-6	0.08-0.10	0.0-2.9	2.0-5.0	.02	.05			
	6-13	12-20	1.30-1.60	2-6	0.08-0.10	0.0-2.9	0.5-1.0	.10	.15			
	13-19	18-27	1.20-1.40	0.6-2	0.10-0.14	0.0-5.9	0.5-1.0	.15	.24			
	19-26	18-27	1.20-1.40	0.6-2	0.10-0.14	0.0-5.9	0.5-1.0	.15	.28			
	26-30	18-27	1.20-1.40	0.6-2	0.10-0.14	0.0-5.9	0.5-1.0	.10	.28			
	30-40	---	---	---	---	---	---	---	---			
Whisk-----	0-3	6-12	1.15-1.40	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	3-11	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17			
	11-14	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
507:												
Shoebend-----	0-7	15-18	1.10-1.30	0.6-2	0.14-0.17	0.0-2.9	1.0-3.0	.24	.32	2	5	56
	7-14	15-18	1.20-1.40	0.6-2	0.14-0.17	0.0-2.9	0.2-1.0	.32	.37			
	14-20	22-35	1.20-1.40	0.2-0.6	0.14-0.20	3.0-5.9	0.2-1.0	.20	.24			
	20-28	22-35	1.20-1.40	0.2-0.6	0.14-0.20	3.0-5.9	0.2-1.0	.24	.28			
	28-34	---	---	---	---	---	---	---	---			
	34-44	---	---	---	---	---	---	---	---			
Dobson-----	0-2	10-18	1.20-1.50	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.05	.10	1	4	86
	2-12	10-18	1.30-1.60	2-6	0.07-0.14	0.0-2.9	0.5-1.0	.10	.15			
	12-14	5-10	1.35-1.60	2-6	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02			
	14-24	---	---	---	---	---	---	---	---			
Jerusalem-----	0-3	12-22	1.10-1.30	0.6-2	0.14-0.17	0.0-2.9	1.0-3.0	.28	.32	5	5	56
	3-12	12-22	1.20-1.40	0.6-2	0.14-0.17	0.0-2.9	0.2-1.0	.37	.43			
	12-23	22-35	1.20-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.2-1.0	.20	.28			
	23-38	22-35	1.20-1.40	0.2-0.6	0.14-0.19	3.0-5.9	0.2-1.0	.20	.28			
	38-60	18-27	1.20-1.40	0.6-2	0.08-0.14	0.0-5.9	0.2-1.0	.17	.28			
509:												
Arrowrock-----	0-2	2-8	1.25-1.50	6-20	0.05-0.08	0.0-2.9	1.0-2.0	.05	.10	1	2	134
	2-7	2-8	1.35-1.60	6-20	0.05-0.08	0.0-2.9	0.2-0.8	.10	.15			
	7-12	1-7	1.35-1.60	6-20	0.05-0.08	0.0-2.9	0.2-0.8	.05	.15			
	12-15	---	---	---	---	---	---	---	---			
	15-25	---	---	---	---	---	---	---	---			
Borid-----	0-3	10-15	1.15-1.40	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.10	.20	1	4	86
	3-7	10-15	1.30-1.60	2-6	0.05-0.08	0.0-2.9	1.0-3.0	.10	.20			
	7-15	10-15	1.30-1.60	2-6	0.05-0.08	0.0-2.9	0.2-1.0	.05	.24			
	15-25	---	---	---	---	---	---	---	---			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---
511:												
Olaton, north slope, moist-----	0-7	5-10	1.20-1.50	2-6	0.10-0.12	0.0-2.9	2.0-5.0	.05	.05	5	3	86
	7-29	5-10	1.30-1.60	2-6	0.07-0.12	0.0-2.9	2.0-5.0	.05	.05			
	29-42	5-15	1.30-1.60	2-6	0.07-0.12	0.0-2.9	1.0-3.0	.10	.10			
	42-60	4-12	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
Roney, moist-----	0-5	8-15	1.20-1.50	2-6	0.07-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	5-17	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	2.0-5.0	.02	.05			
	17-32	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	32-38	5-10	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.05	.15			
	38-48	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
513: Shimo, fine gravelly loamy sand, north slope-----	0-7	2-7	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	2	2	134
	7-14	2-7	1.35-1.60	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05			
	14-30	2-7	1.35-1.60	6-20	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			
	30-40	---	---	---	---	---	---	---	---			
Cartwright-----	0-2	15-18	1.10-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28	5	5	56
	2-8	15-18	1.20-1.40	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28			
	8-21	15-18	1.20-1.40	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.24	.28			
	21-33	15-18	1.20-1.40	0.6-2	0.10-0.17	0.0-2.9	0.5-2.0	.24	.28			
	33-48	18-30	1.20-1.40	0.6-2	0.14-0.19	0.0-5.9	0.5-1.0	.28	.32			
	48-60	18-30	1.20-1.40	0.6-2	0.12-0.16	0.0-5.9	0.5-1.0	.28	.37			
Robbscreek, moist----	0-10	12-18	1.20-1.50	2-6	0.08-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	10-22	18-27	1.10-1.30	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.15	.24			
	22-30	18-27	1.10-1.30	0.6-2	0.09-0.13	0.0-5.9	0.5-1.0	.15	.28			
	30-40	---	---	---	---	---	---	---	---			
516: Shimo, extremely stony surface-----	0-4	2-7	1.25-1.50	6-20	0.02-0.05	0.0-2.9	2.0-5.0	.02	.05	2	3	86
	4-12	2-7	1.35-1.60	6-20	0.02-0.05	0.0-2.9	2.0-5.0	.02	.05			
	12-20	2-7	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	20-24	2-7	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	24-34	---	---	---	---	---	---	---	---			
Olaton, south slope---	0-9	5-10	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	5	4	86
	9-25	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05			
	25-40	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.05	.15			
	40-60	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.05	.15			
Schiller, south slope	0-6	8-15	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	5	4	86
	6-18	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05			
	18-30	8-15	1.30-1.60	2-6	0.04-0.07	0.0-2.9	2.0-5.0	.02	.05			
	30-45	8-15	1.30-1.60	2-6	0.03-0.10	0.0-2.9	0.5-1.0	.05	.15			
	45-60	4-10	1.30-1.60	2-6	0.03-0.10	0.0-2.9	0.5-1.0	.05	.15			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
525: Robbscreek-----	0-2	12-18	1.20-1.50	2-6	0.08-0.10	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	2-6	12-18	1.30-1.60	2-6	0.08-0.10	0.0-2.9	2.0-5.0	.02	.05			
	6-13	12-20	1.30-1.60	2-6	0.08-0.10	0.0-2.9	0.5-1.0	.10	.15			
	13-19	18-27	1.20-1.40	0.6-2	0.10-0.14	0.0-5.9	0.5-1.0	.15	.24			
	19-26	18-27	1.20-1.40	0.6-2	0.10-0.14	0.0-5.9	0.5-1.0	.15	.28			
	26-30	18-27	1.20-1.40	0.6-2	0.10-0.14	0.0-5.9	0.5-1.0	.10	.28			
	30-40	---	---	---	---	---	---	---	---			
Dobson-----	0-2	10-18	1.20-1.50	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.05	.10	1	4	86
	2-12	10-18	1.30-1.60	2-6	0.07-0.14	0.0-2.9	0.5-1.0	.10	.15			
	12-14	5-10	1.35-1.60	2-6	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02			
	14-24	---	---	---	---	---	---	---	---			
Brownlee-----	0-4	15-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.24	.28	3	5	56
	4-9	15-25	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.20	.28			
	9-16	18-30	1.20-1.40	0.6-2	0.14-0.20	3.0-5.9	0.5-1.0	.28	.37			
	16-21	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	21-27	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	27-45	10-20	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.15	.24			
	45-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			
526: Cartwright-----	0-2	15-18	1.10-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28	5	5	56
	2-8	15-18	1.20-1.40	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28			
	8-21	15-18	1.20-1.40	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.24	.28			
	21-33	15-18	1.20-1.40	0.6-2	0.10-0.17	0.0-2.9	0.5-2.0	.24	.28			
	33-48	18-30	1.20-1.40	0.6-2	0.14-0.19	0.0-5.9	0.5-1.0	.28	.32			
	48-60	18-30	1.20-1.40	0.6-2	0.12-0.16	0.0-5.9	0.5-1.0	.28	.37			
Brownlee, moist-----	0-10	15-20	1.10-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.20	.28	4	5	56
	10-31	20-30	1.20-1.30	0.2-0.6	0.12-0.20	0.0-5.9	0.5-1.0	.17	.24			
	31-46	10-20	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.15	.24			
	46-60	---	---	---	---	---	---	---	---			
Robbscreek, moist-----	0-10	12-18	1.20-1.50	2-6	0.08-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	10-22	18-27	1.10-1.30	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.15	.24			
	22-30	18-27	1.10-1.30	0.6-2	0.09-0.13	0.0-5.9	0.5-1.0	.15	.28			
	30-40	---	---	---	---	---	---	---	---			
527: Dobson-----	0-2	10-18	1.20-1.50	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.05	.10	1	4	86
	2-12	10-18	1.30-1.60	2-6	0.07-0.14	0.0-2.9	0.5-1.0	.10	.15			
	12-14	5-10	1.35-1.60	2-6	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02			
	14-24	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
527: Roney, dry-----	0-2	8-15	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	2-12	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	12-17	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	17-30	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	30-40	---	---	---	---	---	---	---	---			
528: Roney, dry-----	0-2	8-15	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	2-12	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	12-17	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	17-30	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	30-40	---	---	---	---	---	---	---	---			
Dobson-----	0-2	10-18	1.20-1.50	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.05	.10	1	4	86
	2-12	10-18	1.30-1.60	2-6	0.07-0.14	0.0-2.9	0.5-1.0	.10	.15			
	12-14	5-10	1.35-1.60	2-6	0.05-0.09	0.0-2.9	0.5-1.0	.02	.02			
	14-24	---	---	---	---	---	---	---	---			
Olaton, south slope---	0-9	5-10	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	5	4	86
	9-25	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05			
	25-40	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.05	.15			
	40-60	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.05	.15			
529: Roney-----	0-10	8-15	1.20-1.50	2-6	0.07-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	10-24	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	24-30	5-10	1.35-1.60	2-6	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	30-40	---	---	---	---	---	---	---	---			
Kisky, fine gravelly sandy loam-----	0-7	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-12	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	12-22	---	---	---	---	---	---	---	---			
Olaton, south slope---	0-9	5-10	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	5	4	86
	9-25	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05			
	25-40	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.05	.15			
	40-60	5-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.05	.15			
532: Schiller, north slope	0-6	8-15	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	5	4	86
	6-18	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05			
	18-36	8-15	1.30-1.60	2-6	0.04-0.08	0.0-2.9	0.5-1.0	.05	.15			
	36-60	4-10	1.30-1.60	2-6	0.03-0.11	0.0-2.9	0.5-1.0	.05	.15			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
532: Shimo, fine gravelly loamy sand, north slope-----	0-7	2-7	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	2	2	134
	7-14	2-7	1.35-1.60	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05			
	14-30	2-7	1.35-1.60	6-20	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			
	30-40	---	---	---	---	---	---	---	---			
533: Olaton, north slope, dry-----	0-5	5-10	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	5	4	86
	5-22	5-10	1.30-1.60	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05			
	22-38	5-15	1.30-1.60	2-6	0.06-0.10	0.0-2.9	0.5-1.0	.10	.15			
	38-55	5-15	1.35-1.60	2-6	0.03-0.07	0.0-2.9	0.5-1.0	.02	.02			
	55-65	4-15	1.35-1.60	2-6	0.03-0.07	0.0-2.9	0.5-1.0	.02	.02			
Roney, moist-----	0-5	8-15	1.20-1.50	2-6	0.07-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	5-17	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	2.0-5.0	.02	.05			
	17-32	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	32-38	5-10	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.05	.15			
	38-48	---	---	---	---	---	---	---	---			
534: Shimo, fine gravelly loamy sand-----	0-3	2-7	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	2	2	134
	3-12	2-7	1.35-1.60	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05			
	12-25	2-7	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	25-35	---	---	---	---	---	---	---	---			
Kisky, fine gravelly sandy loam-----	0-7	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-12	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	12-22	---	---	---	---	---	---	---	---			
Schiller-----	0-3	8-15	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	5	4	86
	3-13	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05			
	13-21	8-15	1.30-1.60	2-6	0.04-0.08	0.0-2.9	0.5-1.0	.02	.05			
	21-27	8-15	1.30-1.60	2-6	0.04-0.08	0.0-2.9	0.5-1.0	.05	.15			
	27-46	4-10	1.30-1.60	2-6	0.02-0.10	0.0-2.9	0.5-1.0	.02	.17			
	46-60	4-10	1.30-1.60	2-6	0.02-0.10	0.0-2.9	0.5-1.0	.02	.02			
538: Borid-----	0-3	10-15	1.15-1.40	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.10	.20	1	4	86
	3-7	10-15	1.30-1.60	2-6	0.05-0.08	0.0-2.9	1.0-3.0	.10	.20			
	7-15	10-15	1.30-1.60	2-6	0.05-0.08	0.0-2.9	0.2-1.0	.05	.24			
	15-25	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
538: Shimo, fine gravelly loamy sand-----	0-3	2-7	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	2	2	134
	3-12	2-7	1.35-1.60	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05			
	12-25	2-7	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	25-35	---	---	---	---	---	---	---	---			
541: Roney-----	0-10	8-15	1.20-1.50	2-6	0.07-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	10-24	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	24-30	5-10	1.35-1.60	2-6	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	30-40	---	---	---	---	---	---	---	---			
Kisky, fine gravelly sandy loam-----	0-7	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-12	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	12-22	---	---	---	---	---	---	---	---			
544: Arrowrock-----	0-2	2-8	1.25-1.50	6-20	0.05-0.08	0.0-2.9	1.0-2.0	.05	.10	1	2	134
	2-7	2-8	1.35-1.60	6-20	0.05-0.08	0.0-2.9	0.2-0.8	.10	.15			
	7-12	1-7	1.35-1.60	6-20	0.05-0.08	0.0-2.9	0.2-0.8	.05	.15			
	12-15	---	---	---	---	---	---	---	---			
	15-25	---	---	---	---	---	---	---	---			
Borid-----	0-3	10-15	1.15-1.40	2-6	0.07-0.11	0.0-2.9	1.0-3.0	.10	.20	1	4	86
	3-7	10-15	1.30-1.60	2-6	0.05-0.08	0.0-2.9	1.0-3.0	.10	.20			
	7-15	10-15	1.30-1.60	2-6	0.05-0.08	0.0-2.9	0.2-1.0	.05	.24			
	15-25	---	---	---	---	---	---	---	---			
Painter-----	0-2	2-6	1.15-1.40	6-20	0.10-0.13	0.0-2.9	1.0-3.0	.20	.20	2	3	86
	2-18	2-6	1.35-1.60	6-20	0.04-0.08	0.0-2.9	0.2-1.0	.10	.10			
	18-24	2-6	1.35-1.60	6-20	0.04-0.08	0.0-2.9	0.2-1.0	.10	.10			
	24-36	---	---	---	---	---	---	---	---			
	36-46	---	---	---	---	---	---	---	---			
551: Shimo, fine gravelly loamy sand, north slope-----	0-7	2-7	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	2	2	134
	7-14	2-7	1.35-1.60	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05			
	14-30	2-7	1.35-1.60	6-20	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			
	30-40	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
551: Kisky, fine gravelly loamy sand-----	0-10	2-8	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	1	2	134
	10-16	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	16-26	---	---	---	---	---	---	---	---			
555: Brownlee-----	0-4	15-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.24	.28	3	5	56
	4-9	15-25	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.20	.28			
	9-16	18-30	1.20-1.40	0.6-2	0.14-0.20	3.0-5.9	0.5-1.0	.28	.37			
	16-21	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	21-27	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	27-45	10-20	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.15	.24			
	45-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			
Schiller-----	0-3	8-15	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	5	4	86
	3-13	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05			
	13-21	8-15	1.30-1.60	2-6	0.04-0.08	0.0-2.9	0.5-1.0	.02	.05			
	21-27	8-15	1.30-1.60	2-6	0.04-0.08	0.0-2.9	0.5-1.0	.05	.15			
	27-46	4-10	1.30-1.60	2-6	0.02-0.10	0.0-2.9	0.5-1.0	.02	.17			
	46-60	4-10	1.30-1.60	2-6	0.02-0.10	0.0-2.9	0.5-1.0	.02	.02			
556: Kisky, fine gravelly sandy loam-----	0-7	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-12	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	12-22	---	---	---	---	---	---	---	---			
Shimo, fine gravelly loamy sand-----	0-3	2-7	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	2	2	134
	3-12	2-7	1.35-1.60	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05			
	12-25	2-7	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	25-35	---	---	---	---	---	---	---	---			
Brownlee-----	0-4	15-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.24	.28	3	5	56
	4-9	15-25	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	2.0-5.0	.20	.28			
	9-16	18-30	1.20-1.40	0.6-2	0.14-0.20	3.0-5.9	0.5-1.0	.28	.37			
	16-21	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	21-27	20-30	1.20-1.40	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.20	.24			
	27-45	10-20	1.25-1.50	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.15	.24			
	45-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
558: Kisky, fine gravelly sandy loam-----	0-7	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-12	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	12-22	---	---	---	---	---	---	---	---			
Whisk-----	0-3	6-12	1.15-1.40	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	3-11	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17			
	11-14	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			
Roney, dry-----	0-2	8-15	1.20-1.50	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	2-12	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	12-17	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	17-30	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	30-40	---	---	---	---	---	---	---	---			
560: Robbscreek, moist----	0-10	12-18	1.20-1.50	2-6	0.08-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	10-22	18-27	1.10-1.30	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.15	.24			
	22-30	18-27	1.10-1.30	0.6-2	0.09-0.13	0.0-5.9	0.5-1.0	.15	.28			
	30-40	---	---	---	---	---	---	---	---			
Hellake-----	0-3	18-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.20	.24	4	6	48
	3-10	18-25	1.10-1.35	0.6-2	0.14-0.18	0.0-2.9	1.5-4.5	.24	.28			
	10-22	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	22-36	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	36-43	27-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.28	.32			
	43-53	15-27	1.20-1.40	0.6-2	0.05-0.13	0.0-2.9	0.5-1.0	.10	.37			
	53-60	4-18	1.25-1.50	2-6	0.02-0.09	0.0-2.9	0.5-1.0	.05	.24			
	60-66	4-18	1.25-1.50	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
Shimo, fine gravelly loamy sand, north slope-----	0-7	2-7	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	2	2	134
	7-14	2-7	1.35-1.60	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05			
	14-30	2-7	1.35-1.60	6-20	0.02-0.04	0.0-2.9	0.5-1.0	.02	.10			
	30-40	---	---	---	---	---	---	---	---			
561: Shimo, fine gravelly sandy loam, north slope-----	0-11	2-7	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	11-16	2-7	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	16-32	2-7	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	32-42	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
561: Kisky, fine gravelly loamy sand-----	0-10	2-8	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.05	1	2	134
	10-16	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	16-26	---	---	---	---	---	---	---	---			
Olaton, north slope, moist-----	0-7	5-10	1.20-1.50	2-6	0.10-0.12	0.0-2.9	2.0-5.0	.05	.05	5	3	86
	7-29	5-10	1.30-1.60	2-6	0.07-0.12	0.0-2.9	2.0-5.0	.05	.05			
	29-42	5-15	1.30-1.60	2-6	0.07-0.12	0.0-2.9	1.0-3.0	.10	.10			
	42-60	4-12	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
562: Kisky, fine gravelly sandy loam-----	0-7	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-12	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	12-22	---	---	---	---	---	---	---	---			
Shimo, fine gravelly sandy loam-----	0-8	2-7	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	2	4	86
	8-32	2-7	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	32-42	---	---	---	---	---	---	---	---			
Roney-----	0-10	8-15	1.20-1.50	2-6	0.07-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	10-24	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	24-30	5-10	1.35-1.60	2-6	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	30-40	---	---	---	---	---	---	---	---			
600: McDesh-----	0-3	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	2	6	48
	3-11	27-35	1.20-1.40	0.2-0.6	0.19-0.21	0.0-2.9	1.5-4.0	.24	.24			
	11-21	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	0.8-2.0	.28	.28			
	21-24	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	0.5-1.0	.28	.28			
	24-34	---	---	---	---	---	---	---	---			
Immig, rubbly surface	0-4	15-27	1.10-1.30	0.6-2	0.05-0.12	0.0-2.9	2.0-5.0	.10	.28	2	8	0
	4-7	27-35	1.20-1.40	0.2-0.6	0.07-0.14	3.0-5.9	1.0-3.0	.10	.28			
	7-17	40-60	1.25-1.45	0.06-0.2	0.06-0.11	6.0-8.9	0.5-1.0	.10	.37			
	17-25	40-60	1.25-1.45	0.06-0.2	0.04-0.07	6.0-8.9	0.5-1.0	.05	.37			
	25-35	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
600: Gwin, very stony loam, extremely stony surface-----	0-4	15-25	1.00-1.30	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32	1	8	0
	4-7	15-25	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32			
	7-13	27-35	1.20-1.40	0.2-0.6	0.05-0.08	3.0-5.9	0.2-0.8	.05	.32			
	13-22	---	---	---	---	---	---	---	---			
601: Hann-----	0-3	20-27	1.10-1.40	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.43	.43	5	6	48
	3-6	25-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-3.0	.37	.37			
	6-13	40-50	1.20-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-3.0	.37	.37			
	13-25	40-50	1.20-1.45	0.06-0.2	0.14-0.17	6.0-8.9	0.5-2.0	.37	.37			
	25-44	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.43	.43			
	44-72	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.49	.49			
Gwin, very stony loam, extremely stony surface-----	0-4	15-25	1.00-1.30	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32	1	8	0
	4-7	15-25	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32			
	7-13	27-35	1.20-1.40	0.2-0.6	0.05-0.08	3.0-5.9	0.2-0.8	.05	.32			
	13-22	---	---	---	---	---	---	---	---			
Shafer-----	0-1	30-40	1.10-1.30	0.2-0.6	0.19-0.21	3.0-5.9	2.0-5.0	.24	.24	2	4	86
	1-7	35-50	1.20-1.40	0.06-0.2	0.16-0.19	3.0-5.9	2.0-5.0	.20	.20			
	7-18	45-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	1.5-4.0	.20	.20			
	18-22	35-40	1.20-1.40	0.06-0.2	0.19-0.21	6.0-8.9	0.5-1.0	.32	.32			
	22-25	---	---	---	---	---	---	---	---			
	25-35	---	---	---	---	---	---	---	---			
602: Hillcreek-----	0-2	18-25	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	2.0-5.0	.28	.28	5	6	48
	2-10	18-25	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	2.0-5.0	.28	.28			
	10-27	20-27	1.00-1.20	0.6-2	0.19-0.22	3.0-5.9	1.5-4.0	.28	.28			
	27-43	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.32	.32			
	43-59	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.24	.32			
	59-66	25-35	1.20-1.40	0.2-0.6	0.14-0.16	3.0-5.9	0.5-1.0	.20	.32			
Hovelton, cobbly ashly loam, moist, very stony surface-----	0-12	12-18	1.00-1.20	0.6-2	0.13-0.15	0.0-2.9	2.0-5.0	.15	.28	2	6	48
	12-22	25-35	1.20-1.40	0.2-0.6	0.08-0.11	3.0-5.9	0.5-1.0	.10	.32			
	22-32	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
602: Hann-----	0-3	20-27	1.10-1.40	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.43	.43	5	6	48
	3-6	25-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-3.0	.37	.37			
	6-13	40-50	1.20-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-3.0	.37	.37			
	13-25	40-50	1.20-1.45	0.06-0.2	0.14-0.17	6.0-8.9	0.5-2.0	.37	.37			
	25-44	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.43	.43			
	44-72	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.49	.49			
604: Shafer-----	0-1	30-40	1.10-1.30	0.2-0.6	0.19-0.21	3.0-5.9	2.0-5.0	.24	.24	2	4	86
	1-7	35-50	1.20-1.40	0.06-0.2	0.16-0.19	3.0-5.9	2.0-5.0	.20	.20			
	7-18	45-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	1.5-4.0	.20	.20			
	18-22	35-40	1.20-1.40	0.06-0.2	0.19-0.21	6.0-8.9	0.5-1.0	.32	.32			
	22-25	---	---	---	---	---	---	---	---			
	25-35	---	---	---	---	---	---	---	---			
Hann-----	0-3	20-27	1.10-1.40	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.43	.43	5	6	48
	3-6	25-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-3.0	.37	.37			
	6-13	40-50	1.20-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-3.0	.37	.37			
	13-25	40-50	1.20-1.45	0.06-0.2	0.14-0.17	6.0-8.9	0.5-2.0	.37	.37			
	25-44	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.43	.43			
	44-72	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.49	.49			
605: Gwin, very stony loam, extremely stony surface-----	0-4	15-25	1.00-1.30	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32	1	8	0
	4-7	15-25	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32			
	7-13	27-35	1.20-1.40	0.2-0.6	0.05-0.08	3.0-5.9	0.2-0.8	.05	.32			
	13-22	---	---	---	---	---	---	---	---			
Flybow-----	0-3	7-13	1.10-1.30	0.6-2	0.06-0.11	0.0-2.9	0.5-1.0	.10	.32	1	7	38
	3-8	8-15	1.20-1.40	0.6-2	0.04-0.06	0.0-2.9	0.5-1.0	.05	.37			
	8-18	---	---	---	---	---	---	---	---			
606: Hillcreek-----	0-2	18-25	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	2.0-5.0	.28	.28	5	6	48
	2-10	18-25	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	2.0-5.0	.28	.28			
	10-27	20-27	1.00-1.20	0.6-2	0.19-0.22	3.0-5.9	1.5-4.0	.28	.28			
	27-43	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.32	.32			
	43-59	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.24	.32			
	59-66	25-35	1.20-1.40	0.2-0.6	0.14-0.16	3.0-5.9	0.5-1.0	.20	.32			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
606: Hovelton, cobbly ashy loam, moist, very stony surface-----	0-12	12-18	1.00-1.20	0.6-2	0.13-0.15	0.0-2.9	2.0-5.0	.15	.28	2	6	48
	12-22	25-35	1.20-1.40	0.2-0.6	0.08-0.11	3.0-5.9	0.5-1.0	.10	.32			
	22-32	---	---	---	---	---	---	---	---			
607: Duco, stony loam, very stony surface-----	0-3	15-27	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	1.0-3.0	.20	.32	1	7	38
	3-15	27-35	1.20-1.40	0.2-0.6	0.05-0.07	3.0-5.9	0.2-1.0	.05	.32			
	15-25	---	---	---	---	---	---	---	---			
Immig, very stony surface-----	0-4	15-27	1.10-1.30	0.6-2	0.04-0.06	0.0-2.9	2.0-5.0	.05	.28	2	8	0
	4-10	27-40	1.20-1.40	0.2-0.6	0.11-0.13	3.0-5.9	2.0-5.0	.10	.32			
	10-14	40-60	1.25-1.45	0.06-0.2	0.08-0.10	6.0-8.9	0.5-1.0	.15	.37			
	14-25	40-60	1.25-1.45	0.06-0.2	0.04-0.06	6.0-8.9	0.5-1.0	.05	.37			
	25-35	---	---	---	---	---	---	---	---			
Rubble land-----	0-20	---	---	---	---	---	---	---	---	---	---	---
	20-30	---	---	---	---	---	---	---	---			
608: Duco, very gravelly loam, stony surface--	0-4	15-27	1.10-1.30	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32	1	8	0
	4-13	15-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	0.2-0.8	.10	.37			
	13-19	25-35	1.20-1.40	0.2-0.6	0.05-0.11	3.0-5.9	0.2-0.8	.02	.32			
	19-29	---	---	---	---	---	---	---	---			
Hovelton, gravelly ashy loam-----	0-7	12-18	1.00-1.20	0.6-2	0.12-0.15	0.0-2.9	2.0-5.0	.15	.28	2	6	48
	7-17	12-18	1.00-1.20	0.6-2	0.07-0.11	0.0-2.9	2.0-5.0	.10	.28			
	17-38	25-35	1.20-1.40	0.2-0.6	0.04-0.08	3.0-5.9	1.0-3.0	.05	.28			
	38-48	---	---	---	---	---	---	---	---			
McDesh, south slope---	0-3	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	2	6	48
	3-8	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	2.0-5.0	.20	.20			
	8-37	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	1.0-3.0	.24	.24			
	37-47	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
610: Hovelton, cobbly ashy loam, very stony surface-----	0-2	12-18	1.00-1.20	0.6-2	0.12-0.15	0.0-2.9	2.0-5.0	.15	.28	2	6	48
	2-6	12-18	1.00-1.20	0.6-2	0.12-0.15	0.0-2.9	2.0-5.0	.15	.28			
	6-13	18-27	1.20-1.40	0.2-0.6	0.06-0.12	3.0-5.9	1.5-4.0	.10	.28			
	13-24	18-30	1.20-1.40	0.2-0.6	0.05-0.07	3.0-5.9	0.5-1.0	.05	.37			
	24-34	---	---	---	---	---	---	---	---			
Duco, stony loam, very stony surface-----	0-3	15-27	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	1.0-3.0	.20	.32	1	7	38
	3-15	27-35	1.20-1.40	0.2-0.6	0.05-0.07	3.0-5.9	0.2-1.0	.05	.32			
	15-25	---	---	---	---	---	---	---	---			
McDesh, south slope---	0-3	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	2	6	48
	3-8	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	2.0-5.0	.20	.20			
	8-37	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	1.0-3.0	.24	.24			
	37-47	---	---	---	---	---	---	---	---			
612: Hann-----	0-3	20-27	1.10-1.40	0.2-0.6	0.18-0.20	0.0-2.9	2.0-5.0	.43	.43	5	6	48
	3-6	25-40	1.20-1.40	0.06-0.2	0.18-0.20	3.0-5.9	1.0-3.0	.37	.37			
	6-13	40-50	1.20-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-3.0	.37	.37			
	13-25	40-50	1.20-1.45	0.06-0.2	0.14-0.17	6.0-8.9	0.5-2.0	.37	.37			
	25-44	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.43	.43			
	44-72	25-35	1.20-1.40	0.06-0.2	0.19-0.21	3.0-5.9	0.2-1.0	.49	.49			
Hillcreek, dry-----	0-6	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	2.0-5.0	.24	.28	5	6	48
	6-12	18-27	1.20-1.40	0.6-2	0.18-0.20	3.0-5.9	1.0-3.0	.24	.28			
	12-22	20-27	1.20-1.40	0.6-2	0.19-0.21	3.0-5.9	1.0-2.0	.24	.28			
	22-36	27-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.24	.32			
	36-60	25-35	1.20-1.40	0.2-0.6	0.11-0.17	3.0-5.9	0.5-1.0	.20	.37			
613: Duco, stony loam, very stony surface-----	0-3	15-27	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	1.0-3.0	.20	.32	1	7	38
	3-15	27-35	1.20-1.40	0.2-0.6	0.05-0.07	3.0-5.9	0.2-1.0	.05	.32			
	15-25	---	---	---	---	---	---	---	---			
Searles, very stony surface-----	0-3	18-27	1.10-1.30	0.6-2	0.11-0.14	0.0-2.9	1.0-2.0	.15	.32	2	7	38
	3-8	27-35	1.20-1.40	0.2-0.6	0.08-0.13	0.0-2.9	1.0-2.0	.10	.28			
	8-15	27-35	1.20-1.40	0.2-0.6	0.08-0.13	0.0-2.0	1.0-2.0	.05	.28			
	15-25	25-35	1.20-1.40	0.2-0.6	0.06-0.12	0.0-2.9	0.2-0.8	.05	.37			
	25-35	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
613: McDesh, south slope---	0-3	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	2	6	48
	3-8	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	2.0-5.0	.20	.20			
	8-37	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	1.0-3.0	.24	.24			
	37-47	---	---	---	---	---	---	---	---			
618: McDesh, south slope---	0-3	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	2	6	48
	3-8	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	2.0-5.0	.20	.20			
	8-37	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	1.0-3.0	.24	.24			
	37-47	---	---	---	---	---	---	---	---			
Duco, very gravelly loam, stony surface--	0-4	15-27	1.10-1.30	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32	1	8	0
	4-13	15-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	0.2-0.8	.10	.37			
	13-19	25-35	1.20-1.40	0.2-0.6	0.05-0.11	3.0-5.9	0.2-0.8	.02	.32			
	19-29	---	---	---	---	---	---	---	---			
Shafer-----	0-1	30-40	1.10-1.30	0.2-0.6	0.19-0.21	3.0-5.9	2.0-5.0	.24	.24	2	4	86
	1-7	35-50	1.20-1.40	0.06-0.2	0.16-0.19	3.0-5.9	2.0-5.0	.20	.20			
	7-18	45-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	1.5-4.0	.20	.20			
	18-22	35-40	1.20-1.40	0.06-0.2	0.19-0.21	6.0-8.9	0.5-1.0	.32	.32			
	22-25	---	---	---	---	---	---	---	---			
	25-35	---	---	---	---	---	---	---	---			
619: McDesh-----	0-3	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	2	6	48
	3-11	27-35	1.20-1.40	0.2-0.6	0.19-0.21	0.0-2.9	1.5-4.0	.24	.24			
	11-21	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	0.8-2.0	.28	.28			
	21-24	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	0.5-1.0	.28	.28			
	24-34	---	---	---	---	---	---	---	---			
Gwin, gravelly loam, stony surface-----	0-2	10-20	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	2.0-5.0	.10	.28	1	6	48
	2-7	12-20	1.20-1.40	0.6-2	0.08-0.15	0.0-2.9	1.0-3.0	.10	.32			
	7-15	27-35	1.20-1.40	0.2-0.6	0.05-0.13	3.0-5.9	0.5-1.0	.05	.32			
	15-23	---	---	---	---	---	---	---	---			
Shafer-----	0-1	30-40	1.10-1.30	0.2-0.6	0.19-0.21	3.0-5.9	2.0-5.0	.24	.24	2	4	86
	1-7	35-50	1.20-1.40	0.06-0.2	0.16-0.19	3.0-5.9	2.0-5.0	.20	.20			
	7-18	45-60	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	1.5-4.0	.20	.20			
	18-22	35-40	1.20-1.40	0.06-0.2	0.19-0.21	6.0-8.9	0.5-1.0	.32	.32			
	22-25	---	---	---	---	---	---	---	---			
	25-35	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
620: Immig, very stony surface-----	0-4	15-27	1.10-1.30	0.6-2	0.04-0.06	0.0-2.9	2.0-5.0	.05	.28	2	8	0
	4-10	27-40	1.20-1.40	0.2-0.6	0.11-0.13	3.0-5.9	2.0-5.0	.10	.32			
	10-14	40-60	1.25-1.45	0.06-0.2	0.08-0.10	6.0-8.9	0.5-1.0	.15	.37			
	14-25	40-60	1.25-1.45	0.06-0.2	0.04-0.06	6.0-8.9	0.5-1.0	.05	.37			
	25-35	---	---	---	---	---	---	---	---			
McDesh, south slope---	0-3	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	2	6	48
	3-8	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	2.0-5.0	.20	.20			
	8-37	40-50	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	1.0-3.0	.24	.24			
	37-47	---	---	---	---	---	---	---	---			
Duco, stony loam, very stony surface-----	0-3	15-27	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	1.0-3.0	.20	.32	1	7	38
	3-15	27-35	1.20-1.40	0.2-0.6	0.05-0.07	3.0-5.9	0.2-1.0	.05	.32			
	15-25	---	---	---	---	---	---	---	---			
621: McDaniel-----	0-4	20-25	1.00-1.20	0.6-2	0.07-0.12	0.0-2.9	2.0-5.0	.10	.28	5	8	0
	4-14	20-25	1.00-1.20	0.6-2	0.07-0.12	0.0-2.9	2.0-5.0	.10	.28			
	14-23	20-25	1.20-1.40	0.6-2	0.06-0.10	0.0-2.9	1.0-3.0	.10	.32			
	23-34	20-27	1.20-1.40	0.6-2	0.06-0.10	0.0-2.9	1.0-3.0	.10	.32			
	34-60	27-35	1.20-1.40	0.2-0.6	0.07-0.13	3.0-5.9	0.5-1.0	.10	.32			
Hovelton, gravelly ashy loam-----	0-7	12-18	1.00-1.20	0.6-2	0.12-0.15	0.0-2.9	2.0-5.0	.15	.28	2	6	48
	7-17	12-18	1.00-1.20	0.6-2	0.07-0.11	0.0-2.9	2.0-5.0	.10	.28			
	17-38	25-35	1.20-1.40	0.2-0.6	0.04-0.08	3.0-5.9	1.0-3.0	.05	.28			
	38-48	---	---	---	---	---	---	---	---			
622: Hovelton, gravelly ashy loam-----	0-7	12-18	1.00-1.20	0.6-2	0.12-0.15	0.0-2.9	2.0-5.0	.15	.28	2	6	48
	7-17	12-18	1.00-1.20	0.6-2	0.07-0.11	0.0-2.9	2.0-5.0	.10	.28			
	17-38	25-35	1.20-1.40	0.2-0.6	0.04-0.08	3.0-5.9	1.0-3.0	.05	.28			
	38-48	---	---	---	---	---	---	---	---			
Gwin, very stony loam, extremely stony surface-----	0-4	15-25	1.00-1.30	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32	1	8	0
	4-7	15-25	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32			
	7-13	27-35	1.20-1.40	0.2-0.6	0.05-0.08	3.0-5.9	0.2-0.8	.05	.32			
	13-22	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
630:												
Gwin, very gravelly loam-----	0-5	15-25	1.10-1.30	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32	1	7	38
	5-15	27-35	1.20-1.40	0.2-0.6	0.08-0.13	3.0-5.9	0.2-0.8	.10	.32			
	15-24	---	---	---	---	---	---	---	---			
Flybow-----	0-3	7-13	1.10-1.30	0.6-2	0.06-0.11	0.0-2.9	0.5-1.0	.10	.32	1	7	38
	3-8	8-15	1.20-1.40	0.6-2	0.04-0.06	0.0-2.9	0.5-1.0	.05	.37			
	8-18	---	---	---	---	---	---	---	---			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---
631:												
Flybow-----	0-3	7-13	1.10-1.30	0.6-2	0.06-0.11	0.0-2.9	0.5-1.0	.10	.32	1	7	38
	3-8	8-15	1.20-1.40	0.6-2	0.04-0.06	0.0-2.9	0.5-1.0	.05	.37			
	8-18	---	---	---	---	---	---	---	---			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---
Rubble land-----	0-20	---	---	---	---	---	---	---	---	---	---	---
	20-30	---	---	---	---	---	---	---	---			
634:												
Gwin, very stony loam, extremely stony surface-----	0-4	15-25	1.00-1.30	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32	1	8	0
	4-7	15-25	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-2.0	.10	.32			
	7-13	27-35	1.20-1.40	0.2-0.6	0.05-0.08	3.0-5.9	0.2-0.8	.05	.32			
	13-22	---	---	---	---	---	---	---	---			
McDesh, very stony loam, very stony surface-----	0-3	20-27	1.10-1.30	0.6-2	0.06-0.13	0.0-2.9	2.0-5.0	.10	.28	2	8	0
	3-7	20-27	1.20-1.40	0.6-2	0.06-0.13	0.0-2.9	2.0-5.0	.10	.28			
	7-12	27-35	1.20-1.40	0.2-0.6	0.16-0.19	3.0-5.9	2.0-5.0	.17	.24			
	12-20	40-60	1.25-1.45	0.06-0.2	0.13-0.15	6.0-8.9	1.0-3.0	.17	.24			
	20-24	40-60	1.25-1.45	0.06-0.2	0.09-0.15	6.0-8.9	0.5-1.0	.17	.32			
	24-34	---	---	---	---	---	---	---	---			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
635: Shafer, very stony surface-----	0-2	27-35	1.20-1.40	0.2-0.6	0.07-0.11	3.0-5.9	1.0-2.0	.05	.28	2	8	0
	2-6	27-35	1.20-1.40	0.2-0.6	0.07-0.11	3.0-5.9	1.0-2.0	.20	.28			
	6-9	40-60	1.20-1.40	0.0015-0.06	0.14-0.18	5.9-8.9	0.5-1.0	.20	.28			
	9-19	40-60	1.20-1.40	0.0015-0.06	0.14-0.18	5.9-8.9	0.5-1.0	.20	.28			
	19-22	27-35	1.20-1.40	0.2-0.6	0.11-0.14	3.0-5.9	0.5-1.0	.15	.32			
	22-32	---	---	---	---	---	---	---	---			
	---	---	---	---	---	---	---	---	---			
Karney-----	0-3	20-27	1.10-1.30	0.6-2	0.14-0.17	3.0-5.9	2.0-5.0	.20	.28	3	6	48
	3-6	35-60	1.20-1.40	0.06-0.2	0.17-0.20	6.0-8.9	2.0-5.0	.17	.24			
	6-12	35-60	1.25-1.45	0.06-0.2	0.12-0.15	6.0-8.9	1.0-3.0	.20	.24			
	12-20	35-50	1.25-1.45	0.06-0.2	0.12-0.15	6.0-8.9	0.5-1.0	.20	.28			
	20-31	35-50	1.25-1.45	0.06-0.2	0.12-0.15	6.0-8.9	0.5-1.0	.20	.28			
	31-55	---	---	---	---	---	---	---	---			
	55-65	---	---	---	---	---	---	---	---			
Yad-----	0-2	27-35	1.10-1.30	0.06-0.2	0.16-0.19	3.0-5.9	2.0-5.0	.32	.32	5	6	48
	2-6	27-35	1.15-1.35	0.06-0.2	0.16-0.19	3.0-5.9	0.5-1.0	.32	.32			
	6-14	35-60	1.20-1.45	0.0016-0.06	0.16-0.19	6.0-8.9	0.5-1.0	.28	.28			
	14-25	35-60	1.20-1.45	0.0015-0.06	0.16-0.19	6.0-8.9	0.5-1.0	.28	.28			
	25-41	27-40	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
	41-52	25-35	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
	52-60	27-40	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
636: Hann, stony surface---	0-4	20-27	1.10-1.30	0.2-0.6	0.17-0.20	0.0-2.9	2.0-5.0	.28	.43	5	7	38
	4-11	25-35	1.20-1.40	0.06-0.2	0.17-0.20	3.0-5.9	2.0-5.0	.20	.32			
	11-20	27-35	1.20-1.40	0.06-0.2	0.17-0.20	3.0-5.9	2.0-5.0	.20	.32			
	20-27	40-50	1.25-1.45	0.06-0.2	0.15-0.17	6.0-8.9	1.0-3.0	.37	.37			
	27-38	40-60	1.25-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-1.0	.37	.37			
	38-41	40-60	1.25-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-1.0	.32	.37			
	41-52	40-60	1.25-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-1.0	.37	.37			
	52-60	40-60	1.25-1.45	0.06-0.2	0.14-0.16	6.0-8.9	0.5-1.0	.24	.28			
	---	---	---	---	---	---	---	---	---			
McDesh, very stony loam, extremely bouldery surface----	0-3	20-27	1.00-1.30	0.6-2	0.06-0.18	0.0-2.9	1.0-3.0	.10	.32	2	8	0
	3-12	27-35	1.10-1.30	0.2-0.6	0.07-0.21	3.0-5.9	1.0-3.0	.10	.28			
	12-17	27-35	1.20-1.40	0.06-0.2	0.15-0.21	3.0-5.9	0.8-1.5	.32	.43			
	17-21	40-60	1.25-1.45	0.06-0.2	0.13-0.21	6.0-8.9	0.5-1.0	.32	.37			
	21-32	40-60	1.25-1.45	0.06-0.2	0.13-0.16	6.0-8.9	0.5-1.0	.37	.37			
	32-37	40-60	1.25-1.45	0.06-0.2	0.13-0.20	6.0-8.9	0.5-1.0	.20	.28			
	37-39	27-35	1.25-1.45	0.06-0.2	0.13-0.20	3.0-5.9	0.5-1.0	.32	.32			
	39-41	---	---	---	---	---	---	---	---			
	---	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
636: Robbscreek, moist-----	0-10	12-18	1.20-1.50	2-6	0.08-0.11	0.0-2.9	2.0-5.0	.02	.05	2	4	86
	10-22	18-27	1.10-1.30	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.15	.24			
	22-30	18-27	1.10-1.30	0.6-2	0.09-0.13	0.0-5.9	0.5-1.0	.15	.28			
	30-40	---	---	---	---	---	---	---	---			
638: Yad-----	0-2	27-35	1.10-1.30	0.06-0.2	0.16-0.19	3.0-5.9	2.0-5.0	.32	.32	5	6	48
	2-6	27-35	1.15-1.35	0.06-0.2	0.16-0.19	3.0-5.9	0.5-1.0	.32	.32			
	6-14	35-60	1.20-1.45	0.0016-0.06	0.16-0.19	6.0-8.9	0.5-1.0	.28	.28			
	14-25	35-60	1.20-1.45	0.0015-0.06	0.16-0.19	6.0-8.9	0.5-1.0	.28	.28			
	25-41	27-40	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
	41-52	25-35	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
	52-60	27-40	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
Cranegulch-----	0-3	15-20	1.10-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28	5	5	56
	3-10	15-20	1.10-1.30	0.6-2	0.14-0.17	3.0-5.9	2.0-5.0	.24	.28			
	10-14	20-30	1.20-1.40	0.2-0.6	0.13-0.15	3.0-5.9	0.5-1.0	.17	.24			
	14-21	35-50	1.20-1.40	0.06-0.2	0.13-0.16	6.0-8.9	0.5-1.0	.15	.20			
	21-33	35-50	1.25-1.45	0.06-0.2	0.13-0.15	6.0-8.9	0.5-1.0	.20	.28			
	33-50	35-50	1.20-1.40	0.06-0.2	0.13-0.16	6.0-8.9	0.5-1.0	.15	.20			
	50-60	35-50	1.20-1.40	0.06-0.2	0.17-0.20	6.0-8.9	0.5-1.0	.24	.32			
Duco, stony loam, very stony surface-----	0-3	15-27	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	1.0-3.0	.20	.32	1	7	38
	3-15	27-35	1.20-1.40	0.2-0.6	0.05-0.07	3.0-5.9	0.2-1.0	.05	.32			
	15-25	---	---	---	---	---	---	---	---			
640: Timberbutte-----	0-2	7-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	2	134
	2-12	7-12	0.80-1.00	0.6-2	0.16-0.26	0.0-2.9	3.0-8.0	.15	.37			
	12-21	7-12	0.80-1.00	0.6-2	0.14-0.24	0.0-2.9	3.0-8.0	.10	.37			
	21-29	7-12	0.80-1.00	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.10	.49			
	29-39	7-12	1.25-1.45	2-6	0.03-0.05	0.0-2.9	0.5-1.0	.05	.24			
	39-60	5-10	1.25-1.45	2-6	0.03-0.05	0.0-2.9	0.5-1.0	.02	.24			
641: Aradaran-----	0-3	20-27	1.10-1.30	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28	5	6	48
	3-9	20-27	1.20-1.40	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28			
	9-14	20-27	1.20-1.40	0.6-2	0.16-0.18	0.0-2.9	2.0-5.0	.28	.28			
	14-23	35-40	1.20-1.40	0.06-0.2	0.19-0.21	6.0-8.9	1.0-3.0	.28	.28			
	23-29	35-50	1.25-1.45	0.06-0.2	0.17-0.19	6.0-8.9	0.5-1.0	.32	.32			
	29-42	35-50	1.25-1.45	0.06-0.2	0.17-0.19	6.0-8.9	0.5-1.0	.24	.28			
	42-55	25-40	1.20-1.40	0.2-0.6	0.10-0.16	3.0-5.9	0.5-1.0	.17	.32			
	55-60	25-40	1.20-1.40	0.2-0.6	0.10-0.16	3.0-5.9	0.5-1.0	.15	.24			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
641: Yad-----	0-2	27-35	1.10-1.30	0.06-0.2	0.16-0.19	3.0-5.9	2.0-5.0	.32	.32	5	6	48
	2-6	27-35	1.15-1.35	0.06-0.2	0.16-0.19	3.0-5.9	0.5-1.0	.32	.32			
	6-14	35-60	1.20-1.45	0.0016-0.06	0.16-0.19	6.0-8.9	0.5-1.0	.28	.28			
	14-25	35-60	1.20-1.45	0.0015-0.06	0.16-0.19	6.0-8.9	0.5-1.0	.28	.28			
	25-41	27-40	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
	41-52	25-35	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
	52-60	27-40	1.20-1.40	0.06-0.2	0.14-0.17	3.0-5.9	0.5-1.0	.20	.28			
650: Longs-----	0-1	12-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	5	56
	1-9	12-20	1.00-1.20	0.6-2	0.15-0.19	0.0-2.9	3.0-8.0	.20	.24			
	9-29	16-25	1.00-1.20	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.17	.37			
	29-44	18-27	1.20-1.40	0.6-2	0.05-0.11	0.0-2.9	0.5-1.0	.05	.37			
	44-49	18-27	1.20-1.40	0.6-2	0.05-0.11	0.0-2.9	0.5-1.0	.05	.37			
	49-59	---	---	---	---	---	---	---	---			
Highvalley-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-5	14-20	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	5-10	16-25	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	10-24	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	1.0-3.0	.24	.24			
	24-48	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	0.5-1.0	.24	.24			
	48-66	15-25	1.00-1.20	0.6-2	0.12-0.19	0.0-2.9	0.5-1.0	.24	.24			
Hoff-----	0-6	10-18	1.10-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-7.0	.15	.24	1	6	48
	6-11	10-18	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	2.0-5.0	.10	.28			
	11-19	20-30	1.20-1.40	0.2-0.6	0.06-0.13	3.0-5.9	1.0-3.0	.05	.28			
	19-29	---	---	---	---	---	---	---	---			
651: Hess-----	0-1	20-27	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	6	48
	1-4	20-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	4-10	20-27	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	3.0-8.0	.24	.24			
	10-15	20-27	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	1.0-3.0	.24	.28			
	15-20	24-30	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	1.0-3.0	.20	.24			
	20-29	27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
	29-38	27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
	38-44	27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
	44-54	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
651: Lidos-----	0-1	12-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-9	12-20	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	3.0-8.0	.17	.24			
	9-16	27-35	1.00-1.20	0.2-0.6	0.17-0.19	3.0-5.9	3.0-8.0	.20	.28			
	16-22	27-35	1.20-1.40	0.2-0.6	0.14-0.16	3.0-5.9	0.5-1.0	.24	.43			
	22-40	27-35	1.20-1.40	0.2-0.6	0.11-0.13	3.0-5.9	0.5-1.0	.15	.43			
	40-47	27-35	1.20-1.40	0.2-0.6	0.11-0.13	3.0-5.9	0.5-1.0	.15	.43			
	47-53	10-18	1.25-1.50	2-6	0.09-0.10	0.0-2.9	0.5-1.0	.15	.24			
	53-60	40-50	1.25-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-1.0	.37	.37			
Cleymor-----	0-1	20-27	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-4	20-27	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	3.0-7.0	.37	.37			
	4-7	23-30	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	3.0-7.0	.28	.28			
	7-11	35-50	1.20-1.45	0.06-0.2	0.17-0.21	6.0-8.9	2.0-6.0	.28	.28			
	11-18	35-50	1.20-1.45	0.06-0.2	0.17-0.21	6.0-8.9	2.0-6.0	.28	.28			
	18-31	35-50	1.25-1.45	0.0015-0.06	0.15-0.19	6.0-8.9	1.0-3.0	.32	.32			
	31-37	35-50	1.25-1.45	0.0015-0.06	0.15-0.19	6.0-8.9	1.0-3.0	.32	.32			
	37-45	40-50	1.25-1.45	0.0015-0.06	0.10-0.14	6.0-8.9	1.0-3.0	.15	.32			
	45-60	40-50	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	1.0-3.0	.28	.32			
	652: Hess-----	0-1	20-27	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	6
1-4		20-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
4-10		20-27	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	3.0-8.0	.24	.24			
10-15		20-27	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	1.0-3.0	.24	.28			
15-20		24-30	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	1.0-3.0	.20	.24			
20-29		27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
29-38		27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
38-44		27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
44-54		---	---	---	---	---	---	---	---			
Lidos-----		0-1	12-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5
	1-9	12-20	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	3.0-8.0	.17	.24			
	9-16	27-35	1.00-1.20	0.2-0.6	0.17-0.19	3.0-5.9	3.0-8.0	.20	.28			
	16-22	27-35	1.20-1.40	0.2-0.6	0.14-0.16	3.0-5.9	0.5-1.0	.24	.43			
	22-40	27-35	1.20-1.40	0.2-0.6	0.11-0.13	3.0-5.9	0.5-1.0	.15	.43			
	40-47	27-35	1.20-1.40	0.2-0.6	0.11-0.13	3.0-5.9	0.5-1.0	.15	.43			
	47-53	10-18	1.25-1.50	2-6	0.09-0.10	0.0-2.9	0.5-1.0	.15	.24			
	53-60	40-50	1.25-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-1.0	.37	.37			
	Klicker-----	0-1	10-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	5
1-8		10-15	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	3.0-8.0	.24	.24			
8-12		12-18	1.00-1.20	0.6-2	0.14-0.16	0.0-2.9	3.0-8.0	.15	.24			
12-17		27-32	1.20-1.40	0.2-0.6	0.10-0.15	3.0-5.9	0.5-1.0	.15	.32			
17-26		30-35	1.20-1.40	0.2-0.6	0.08-0.13	3.0-5.9	0.5-1.0	.10	.32			
26-36		---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
653: Lidos-----	0-1	12-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-9	12-20	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	3.0-8.0	.17	.24			
	9-16	27-35	1.00-1.20	0.2-0.6	0.17-0.19	3.0-5.9	3.0-8.0	.20	.28			
	16-22	27-35	1.20-1.40	0.2-0.6	0.14-0.16	3.0-5.9	0.5-1.0	.24	.43			
	22-40	27-35	1.20-1.40	0.2-0.6	0.11-0.13	3.0-5.9	0.5-1.0	.15	.43			
	40-47	27-35	1.20-1.40	0.2-0.6	0.11-0.13	3.0-5.9	0.5-1.0	.15	.43			
	47-53	10-18	1.25-1.50	2-6	0.09-0.10	0.0-2.9	0.5-1.0	.15	.24			
	53-60	40-50	1.25-1.45	0.06-0.2	0.15-0.17	6.0-8.9	0.5-1.0	.37	.37			
Klicker-----	0-1	10-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	5	56
	1-8	10-15	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	3.0-8.0	.24	.24			
	8-12	12-18	1.00-1.20	0.6-2	0.14-0.16	0.0-2.9	3.0-8.0	.15	.24			
	12-17	27-32	1.20-1.40	0.2-0.6	0.10-0.15	3.0-5.9	0.5-1.0	.15	.32			
	17-26	30-35	1.20-1.40	0.2-0.6	0.08-0.13	3.0-5.9	0.5-1.0	.10	.32			
	26-36	---	---	---	---	---	---	---	---			
Hess-----	0-1	20-27	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	6	48
	1-4	20-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	4-10	20-27	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	3.0-8.0	.24	.24			
	10-15	20-27	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	1.0-3.0	.24	.28			
	15-20	24-30	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	1.0-3.0	.20	.24			
	20-29	27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
	29-38	27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
	38-44	27-35	1.20-1.40	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.24	.32			
	44-54	---	---	---	---	---	---	---	---			
654: Shilling-----	0-1	10-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-5	10-15	1.00-1.20	0.6-2	0.13-0.15	0.0-2.9	3.0-8.0	.15	.24			
	5-10	15-20	1.00-1.20	0.6-2	0.13-0.15	0.0-2.9	3.0-8.0	.15	.24			
	10-19	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.15	.32			
	19-35	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	0.5-1.0	.15	.37			
	35-54	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	0.5-1.0	.15	.37			
	54-60	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	0.5-1.0	.15	.37			
Highvalley-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-5	14-20	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	5-10	16-25	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	10-24	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	1.0-3.0	.24	.24			
	24-48	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	0.5-1.0	.24	.24			
	48-66	15-25	1.00-1.20	0.6-2	0.12-0.19	0.0-2.9	0.5-1.0	.24	.24			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
654: Hoff-----	0-6	10-18	1.10-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-7.0	.15	.24	1	6	48
	6-11	10-18	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	2.0-5.0	.10	.28			
	11-19	20-30	1.20-1.40	0.2-0.6	0.06-0.13	3.0-5.9	1.0-3.0	.05	.28			
	19-29	---	---	---	---	---	---	---	---			
655: Shilling, moist-----	0-2	10-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	2-9	10-15	1.00-1.20	0.6-2	0.13-0.15	0.0-2.9	3.0-8.0	.15	.24			
	9-15	15-20	1.00-1.20	0.6-2	0.13-0.15	0.0-2.9	3.0-8.0	.15	.24			
	15-25	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32			
	25-45	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32			
	45-60	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	0.5-1.0	.15	.37			
Highvalley, moist-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-10	14-20	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	10-35	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	1.0-3.0	.32	.32			
	35-60	15-25	1.00-1.20	0.6-2	0.12-0.19	0.0-2.9	0.5-1.0	.24	.37			
656: Shilling, moist-----	0-2	10-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	2-9	10-15	1.00-1.20	0.6-2	0.13-0.15	0.0-2.9	3.0-8.0	.15	.24			
	9-15	15-20	1.00-1.20	0.6-2	0.13-0.15	0.0-2.9	3.0-8.0	.15	.24			
	15-25	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32			
	25-45	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32			
	45-60	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	0.5-1.0	.15	.37			
Highvalley, moist-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-10	14-20	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	10-35	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	1.0-3.0	.32	.32			
	35-60	15-25	1.00-1.20	0.6-2	0.12-0.19	0.0-2.9	0.5-1.0	.24	.37			
657: Pumpkin, stony surface	0-1	18-25	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	7	38
	1-3	18-25	1.00-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-7.0	.15	.24			
	3-9	18-25	1.20-1.40	0.6-2	0.11-0.14	0.0-2.9	3.0-7.0	.15	.24			
	9-14	25-30	1.20-1.40	0.2-0.6	0.12-0.16	3.0-5.9	1.0-3.0	.17	.28			
	14-22	25-35	1.20-1.40	0.2-0.6	0.06-0.12	3.0-5.9	0.5-1.0	.10	.37			
	22-44	10-15	1.25-1.50	2-6	0.03-0.05	0.0-2.9	0.5-1.0	.05	.24			
	44-60	10-15	1.25-1.50	2-6	0.03-0.05	0.0-2.9	0.5-1.0	.05	.24			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
658: Cleymor-----	0-1	20-27	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-4	20-27	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	3.0-7.0	.37	.37			
	4-7	23-30	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	3.0-7.0	.28	.28			
	7-11	35-50	1.20-1.45	0.06-0.2	0.17-0.21	6.0-8.9	2.0-6.0	.28	.28			
	11-18	35-50	1.20-1.45	0.06-0.2	0.17-0.21	6.0-8.9	2.0-6.0	.28	.28			
	18-31	35-50	1.25-1.45	0.0015-0.06	0.15-0.19	6.0-8.9	1.0-3.0	.32	.32			
	31-37	35-50	1.25-1.45	0.0015-0.06	0.15-0.19	6.0-8.9	1.0-3.0	.32	.32			
	37-45	40-50	1.25-1.45	0.0015-0.06	0.10-0.14	6.0-8.9	1.0-3.0	.15	.32			
	45-60	40-50	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	1.0-3.0	.28	.32			
Pumpkin, stony surface	0-1	18-25	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	7	38
	1-3	18-25	1.00-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-7.0	.15	.24			
	3-9	18-25	1.20-1.40	0.6-2	0.11-0.14	0.0-2.9	3.0-7.0	.15	.24			
	9-14	25-30	1.20-1.40	0.2-0.6	0.12-0.16	3.0-5.9	1.0-3.0	.17	.28			
	14-22	25-35	1.20-1.40	0.2-0.6	0.06-0.12	3.0-5.9	0.5-1.0	.10	.37			
	22-44	10-15	1.25-1.50	2-6	0.03-0.05	0.0-2.9	0.5-1.0	.05	.24			
	44-60	10-15	1.25-1.50	2-6	0.03-0.05	0.0-2.9	0.5-1.0	.05	.24			
659: Hoff, south slope----	0-7	10-18	1.10-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-7.0	.15	.24	1	6	48
	7-12	20-30	1.20-1.40	0.2-0.6	0.06-0.13	3.0-5.9	1.0-3.0	.05	.28			
	12-22	---	---	---	---	---	---	---	---			
660: Longs-----	0-1	12-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	5	56
	1-9	12-20	1.00-1.20	0.6-2	0.15-0.19	0.0-2.9	3.0-8.0	.20	.24			
	9-29	16-25	1.00-1.20	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.17	.37			
	29-44	18-27	1.20-1.40	0.6-2	0.05-0.11	0.0-2.9	0.5-1.0	.05	.37			
	44-49	18-27	1.20-1.40	0.6-2	0.05-0.11	0.0-2.9	0.5-1.0	.05	.37			
	49-59	---	---	---	---	---	---	---	---			
Highvalley-----	0-1	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-5	14-20	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	5-10	16-25	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	3.0-8.0	.24	.24			
	10-24	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	1.0-3.0	.24	.24			
	24-48	18-27	1.00-1.20	0.6-2	0.17-0.19	0.0-2.9	0.5-1.0	.24	.24			
	48-66	15-25	1.00-1.20	0.6-2	0.12-0.19	0.0-2.9	0.5-1.0	.24	.24			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
661: Awley-----	0-1	10-18	0.10-0.60	6-101	0.30-0.60	---	85-100	---	---	5	2	134
	1-8	10-18	0.85-1.00	2-6	0.15-0.18	0.0-2.9	5.0-10	.17	.24			
	8-18	10-18	0.85-1.00	2-6	0.14-0.18	0.0-2.9	2.0-4.0	.24	.28			
	18-25	8-14	0.85-1.00	2-6	0.10-0.16	0.0-2.9	1.0-3.0	.10	.20			
	25-37	8-14	1.25-1.50	2-6	0.05-0.12	0.0-2.9	0.5-1.0	.05	.24			
	37-45	5-10	1.25-1.50	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.02	.24			
	45-60	5-10	1.25-1.50	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.05	.24			
Bo-----	0-1	10-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	4	2	134
	1-4	10-18	0.85-1.00	0.6-2	0.15-0.17	0.0-2.9	6.0-10	.20	.24			
	4-10	10-18	0.85-1.00	0.6-2	0.15-0.17	0.0-2.9	6.0-10	.20	.24			
	10-16	10-18	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	1.0-2.0	.28	.32			
	16-25	10-18	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.32	.37			
	25-51	10-18	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.32	.37			
	51-60	8-14	1.20-1.40	2-6	0.05-0.12	0.0-2.9	0.5-1.0	.10	.37			
662: Awley-----	0-1	10-18	0.10-0.60	6-101	0.30-0.60	---	85-100	---	---	5	2	134
	1-8	10-18	0.85-1.00	2-6	0.15-0.18	0.0-2.9	5.0-10	.17	.24			
	8-18	10-18	0.85-1.00	2-6	0.14-0.18	0.0-2.9	2.0-4.0	.24	.28			
	18-25	8-14	0.85-1.00	2-6	0.10-0.16	0.0-2.9	1.0-3.0	.10	.20			
	25-37	8-14	1.25-1.50	2-6	0.05-0.12	0.0-2.9	0.5-1.0	.05	.24			
	37-45	5-10	1.25-1.50	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.02	.24			
	45-60	5-10	1.25-1.50	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.05	.24			
Bo-----	0-1	10-18	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	4	2	134
	1-4	10-18	0.85-1.00	0.6-2	0.15-0.17	0.0-2.9	6.0-10	.20	.24			
	4-10	10-18	0.85-1.00	0.6-2	0.15-0.17	0.0-2.9	6.0-10	.20	.24			
	10-16	10-18	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	1.0-2.0	.28	.32			
	16-25	10-18	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.32	.37			
	25-51	10-18	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.32	.37			
	51-60	8-14	1.20-1.40	2-6	0.05-0.12	0.0-2.9	0.5-1.0	.10	.37			
663: Cleymor-----	0-1	20-27	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-4	20-27	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	3.0-7.0	.37	.37			
	4-7	23-30	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	3.0-7.0	.28	.28			
	7-11	35-50	1.20-1.45	0.06-0.2	0.17-0.21	6.0-8.9	2.0-6.0	.28	.28			
	11-18	35-50	1.20-1.45	0.06-0.2	0.17-0.21	6.0-8.9	2.0-6.0	.28	.28			
	18-31	35-50	1.25-1.45	0.0015-0.06	0.15-0.19	6.0-8.9	1.0-3.0	.32	.32			
	31-37	35-50	1.25-1.45	0.0015-0.06	0.15-0.19	6.0-8.9	1.0-3.0	.32	.32			
	37-45	40-50	1.25-1.45	0.0015-0.06	0.10-0.14	6.0-8.9	1.0-3.0	.15	.32			
	45-60	40-50	1.25-1.45	0.0015-0.06	0.15-0.17	6.0-8.9	1.0-3.0	.28	.32			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
663: Hoff-----	0-6	10-18	1.10-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-7.0	.15	.24	1	6	48
	6-11	10-18	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	2.0-5.0	.10	.28			
	11-19	20-30	1.20-1.40	0.2-0.6	0.06-0.13	3.0-5.9	1.0-3.0	.05	.28			
	19-29	---	---	---	---	---	---	---	---			
666: Pachic Argixerolls, very stony surface---	0-1	12-27	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-11	12-27	1.10-1.30	0.6-2	0.11-0.15	0.0-2.9	3.0-7.0	.15	.24			
	11-18	12-27	1.20-1.40	0.6-2	0.11-0.15	0.0-2.9	2.0-6.0	.15	.24			
	18-24	15-40	1.20-1.40	0.2-0.6	0.10-0.18	0.0-5.9	1.0-3.0	.17	.28			
	24-30	15-40	1.20-1.40	0.2-0.6	0.10-0.18	0.0-5.9	0.5-1.0	.17	.32			
	30-48	15-40	1.20-1.40	0.2-0.6	0.10-0.15	0.0-5.9	0.5-1.0	.10	.32			
	48-60	12-40	1.20-1.40	0.2-0.6	0.05-0.15	0.0-5.9	0.5-1.0	.05	.32			
Rubble land-----	0-60	---	---	---	---	---	---	---	---	---	---	---
Typic Haploxerolls, extremely stony surface-----	0-8	13-22	1.15-1.40	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	5	4	86
	8-18	13-22	1.20-1.50	2-6	0.07-0.15	0.0-2.9	1.0-3.0	.10	.20			
	18-26	15-24	1.20-1.50	2-6	0.04-0.12	0.0-2.9	0.5-1.0	.10	.24			
	26-60	15-24	1.20-1.50	6-20	0.03-0.05	0.0-2.9	0.5-1.0	.02	.24			
700: Drybuck-----	0-1	7-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	3	86
	1-7	7-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.10	.15			
	7-15	7-15	1.15-1.50	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.10	.15			
	15-31	7-15	1.25-1.60	2-6	0.09-0.13	0.0-2.9	1.0-3.0	.15	.20			
	31-43	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.15	.24			
	43-53	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.17	.24			
	53-63	---	---	---	---	---	---	---	---			
Whisk, moist-----	0-7	6-12	1.15-1.40	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-15	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.17			
	15-25	---	---	---	---	---	---	---	---			
701: Drybuck-----	0-1	7-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	3	86
	1-7	7-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.10	.15			
	7-15	7-15	1.15-1.50	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.10	.15			
	15-31	7-15	1.25-1.60	2-6	0.09-0.13	0.0-2.9	1.0-3.0	.15	.20			
	31-43	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.15	.24			
	43-53	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.17	.24			
	53-63	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
701: Whisk, moist-----	0-7	6-12	1.15-1.40	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-15	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.17			
	15-25	---	---	---	---	---	---	---	---			
702: Deerrun-----	0-1	5-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-11	5-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.15	.15			
	11-19	5-15	1.25-1.50	2-6	0.07-0.12	0.0-2.9	0.5-1.0	.20	.24			
	19-33	4-12	1.30-1.60	2-6	0.07-0.12	0.0-2.9	0.5-1.0	.10	.15			
	33-43	---	---	---	---	---	---	---	---			
Kisky, fine gravelly sandy loam, moist----	0-1	2-8	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	1	2	134
	1-8	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-6.0	.10	.17			
	8-14	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.02			
	14-24	---	---	---	---	---	---	---	---			
Drybuck, dry-----	0-1	7-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	3	86
	1-6	7-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.15	.15			
	6-25	7-15	1.20-1.50	2-6	0.09-0.13	0.0-2.9	1.0-5.0	.15	.17			
	25-45	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	45-57	5-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	57-67	---	---	---	---	---	---	---	---			
704: Drybuck-----	0-1	7-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	3	86
	1-7	7-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.10	.15			
	7-15	7-15	1.15-1.50	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.10	.15			
	15-31	7-15	1.25-1.60	2-6	0.09-0.13	0.0-2.9	1.0-3.0	.15	.20			
	31-43	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.15	.24			
	43-53	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.17	.24			
	53-63	---	---	---	---	---	---	---	---			
Northfork, fine gravelly sandy loam--	0-1	8-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	8-15	1.15-1.40	2-6	0.07-0.13	0.0-2.9	3.0-7.0	.10	.15			
	4-14	8-15	1.15-1.40	2-6	0.07-0.13	0.0-2.9	2.0-6.0	.10	.15			
	14-44	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.24			
	44-56	5-15	1.25-1.60	2-6	0.02-0.11	0.0-2.9	0.5-1.0	.10	.24			
	56-60	5-15	1.25-1.60	2-6	0.02-0.11	0.0-2.9	0.5-1.0	.10	.20			
Whisk, moist-----	0-7	6-12	1.15-1.40	2-6	0.07-0.10	0.0-2.9	2.0-5.0	.10	.17	1	4	86
	7-15	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.17			
	15-25	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
705:												
Northfork, sandy loam	0-1	8-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	1-7	8-15	1.15-1.40	2-6	0.07-0.12	0.0-2.9	3.0-7.0	.10	.15			
	7-18	8-15	1.25-1.60	2-6	0.06-0.12	0.0-2.9	1.5-4.0	.10	.24			
	18-34	5-15	1.25-1.60	2-6	0.03-0.11	0.0-2.9	1.0-2.0	.10	.24			
	34-39	5-12	1.25-1.60	2-6	0.03-0.11	0.0-2.9	0.5-1.0	.10	.24			
	39-60	2-8	1.25-1.60	2-6	0.03-0.11	0.0-2.9	0.5-1.0	.10	.20			
Shirts, sandy loam, dry-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	5-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-8.0	.10	.15			
	12-21	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.10	.10			
	21-33	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	33-39	2-7	1.35-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.02	.05			
	39-49	---	---	---	---	---	---	---	---			
706:												
Northfork, fine gravelly sandy loam--	0-1	8-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	8-15	1.15-1.40	2-6	0.07-0.13	0.0-2.9	3.0-7.0	.10	.15			
	4-14	8-15	1.15-1.40	2-6	0.07-0.13	0.0-2.9	2.0-6.0	.10	.15			
	14-44	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.24			
	44-56	5-15	1.25-1.60	2-6	0.02-0.11	0.0-2.9	0.5-1.0	.10	.24			
	56-60	5-15	1.25-1.60	2-6	0.02-0.11	0.0-2.9	0.5-1.0	.10	.20			
Shirts, coarse sandy loam-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-3	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.02	.02			
	3-10	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	2.0-5.0	.05	.05			
	10-15	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	15-25	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	25-29	2-7	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	29-39	---	---	---	---	---	---	---	---			
Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
707: Packerjohn, ashy coarse sandy loam----	0-2	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-10	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	3.0-8.0	.02	.02			
	10-19	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	2.0-6.0	.02	.02			
	19-33	3-8	1.15-1.45	6-20	0.05-0.14	0.0-2.9	0.5-1.0	.02	.02			
	33-44	1-4	1.35-1.60	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.02	.02			
	44-60	1-4	1.35-1.60	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.02	.02			
Shirts, coarse sandy loam-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-3	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.02	.02			
	3-10	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	2.0-5.0	.05	.05			
	10-15	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	15-25	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	25-29	2-7	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	29-39	---	---	---	---	---	---	---	---			
Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			
708: Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			
Northfork, fine gravelly sandy loam--	0-1	8-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	8-15	1.15-1.40	2-6	0.07-0.13	0.0-2.9	3.0-7.0	.10	.15			
	4-14	8-15	1.15-1.40	2-6	0.07-0.13	0.0-2.9	2.0-6.0	.10	.15			
	14-44	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.24			
	44-56	5-15	1.25-1.60	2-6	0.02-0.11	0.0-2.9	0.5-1.0	.10	.24			
	56-60	5-15	1.25-1.60	2-6	0.02-0.11	0.0-2.9	0.5-1.0	.10	.20			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---
709: Shirts, sandy loam, south slope-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.15	.15			
	5-11	5-12	1.20-1.40	2-6	0.09-0.13	0.0-2.9	2.0-4.0	.15	.17			
	11-23	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.17	.24			
	23-35	5-12	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.24			
	35-45	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
709:												
Charters, sandy loam--	0-2	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-7	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	3.0-7.0	.10	.15			
	7-16	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15			
	16-29	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	29-39	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	39-50	4-8	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.15	.24			
	50-60	2-6	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
710:												
Charters, fine gravelly sandy loam--	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	4-13	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	13-19	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	19-34	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	34-52	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	52-60	6-12	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
Northfork, fine gravelly sandy loam--	0-1	8-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	8-15	1.15-1.40	2-6	0.07-0.13	0.0-2.9	3.0-7.0	.10	.15			
	4-14	8-15	1.15-1.40	2-6	0.07-0.13	0.0-2.9	2.0-6.0	.10	.15			
	14-44	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.24			
	44-56	5-15	1.25-1.60	2-6	0.02-0.11	0.0-2.9	0.5-1.0	.10	.24			
	56-60	5-15	1.25-1.60	2-6	0.02-0.11	0.0-2.9	0.5-1.0	.10	.20			
Shirts, coarse sandy loam-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-3	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.02	.02			
	3-10	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	2.0-5.0	.05	.05			
	10-15	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	15-25	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	25-29	2-7	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	29-39	---	---	---	---	---	---	---	---			
711:												
Charters, fine gravelly sandy loam, dry-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-11	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	11-16	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	16-33	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	33-41	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	41-60	6-12	1.25-1.60	2-6	0.04-0.10	0.0-2.9	0.5-1.0	.10	.24			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
711: Shirts, sandy loam, dry-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	5-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-8.0	.10	.15			
	12-21	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.10	.10			
	21-33	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	33-39	2-7	1.35-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.02	.05			
	39-49	---	---	---	---	---	---	---	---			
Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			
712: Charters, fine gravelly sandy loam--	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	4-13	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	13-19	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	19-34	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	34-52	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	52-60	6-12	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
Shirts, coarse sandy loam-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-3	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.02	.02			
	3-10	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	2.0-5.0	.05	.05			
	10-15	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	15-25	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	25-29	2-7	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	29-39	---	---	---	---	---	---	---	---			
Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			
714: Shirts, sandy loam, south slope-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.15	.15			
	5-11	5-12	1.20-1.40	2-6	0.09-0.13	0.0-2.9	2.0-4.0	.15	.17			
	11-23	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.17	.24			
	23-35	5-12	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.24			
	35-45	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
714: Eagleson, fine gravelly sandy loam--	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-12	5-12	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	12-17	6-12	1.25-1.50	2-6	0.03-0.08	0.0-2.9	1.0-2.0	.05	.20			
	17-25	2-5	1.35-1.60	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
	25-35	---	---	---	---	---	---	---	---			
Charters, sandy loam--	0-2	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-7	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	3.0-7.0	.10	.15			
	7-16	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15			
	16-29	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	29-39	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	39-50	4-8	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.15	.24			
	50-60	2-6	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
715: Eagleson, fine gravelly sandy loam, dry-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-10	5-12	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	10-16	5-12	1.20-1.50	2-6	0.04-0.08	0.0-2.9	1.5-5.0	.05	.17			
	16-27	6-12	1.25-1.60	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.02	.24			
	27-37	---	---	---	---	---	---	---	---			
Kosh-----	0-10	2-8	1.15-1.40	6-20	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	10-18	2-8	1.35-1.60	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.05	.24			
	18-28	---	---	---	---	---	---	---	---			
716: Zan-----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-3	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	3-14	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	14-24	4-10	1.00-1.30	6-20	0.04-0.08	0.0-2.9	1.0-3.0	.02	.02			
	24-35	2-8	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	35-60	2-5	1.35-1.60	20-101	0.02-0.06	0.0-2.9	0.5-1.0	.02	.02			
Belsh-----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-7	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	7-15	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	15-21	4-10	1.30-1.60	6-20	0.04-0.08	0.0-2.9	0.5-1.0	.02	.15			
	21-37	2-5	1.30-1.60	20-101	0.01-0.04	0.0-2.9	0.5-1.0	.02	.02			
	37-60	2-5	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
716: Montchief-----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-11	4-10	1.15-1.40	6-20	0.08-0.16	0.0-2.9	3.0-8.0	.10	.15			
	11-16	4-10	1.15-1.40	6-20	0.07-0.16	0.0-2.9	2.0-6.0	.05	.15			
	16-25	3-8	1.35-1.60	6-20	0.01-0.06	0.0-2.9	1.0-2.0	.02	.10			
	25-33	1-4	1.35-1.60	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.02	.10			
	33-43	---	---	---	---	---	---	---	---			
718: Charters, fine gravelly sandy loam--	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	4-13	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	13-19	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	19-34	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	34-52	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	52-60	6-12	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
Crumley-----	0-2	7-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	2-4	7-12	1.15-1.40	2-6	0.07-0.10	0.0-2.9	3.0-7.0	.05	.15			
	4-12	7-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	12-18	7-14	1.25-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.05	.24			
	18-30	3-7	1.25-1.50	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	30-60	3-7	1.25-1.50	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
Eagleson, sandy loam--	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-4	5-12	1.15-1.40	2-6	0.09-0.12	0.0-2.9	3.0-7.0	.10	.15			
	4-15	5-12	1.15-1.40	2-6	0.05-0.11	0.0-2.9	2.0-6.0	.10	.15			
	15-19	6-12	1.25-1.50	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.10	.24			
	19-37	2-8	1.25-1.60	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.05	.24			
	37-47	---	---	---	---	---	---	---	---			
720: Drybuck, dry-----	0-1	7-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	3	86
	1-6	7-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.15	.15			
	6-25	7-15	1.20-1.50	2-6	0.09-0.13	0.0-2.9	1.0-5.0	.15	.17			
	25-45	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	45-57	5-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	57-67	---	---	---	---	---	---	---	---			
Deerrun-----	0-1	5-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-11	5-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.15	.15			
	11-19	5-15	1.25-1.50	2-6	0.07-0.12	0.0-2.9	0.5-1.0	.20	.24			
	19-33	4-12	1.30-1.60	2-6	0.07-0.12	0.0-2.9	0.5-1.0	.10	.15			
	33-43	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
720: Kisky, fine gravelly sandy loam, moist----	0-1	2-8	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	1	2	134
	1-8	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	2.0-6.0	.10	.17			
	8-14	2-8	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.02			
	14-24	---	---	---	---	---	---	---	---			
721: Shirts, fine gravelly sandy loam-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	2-7	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	7-11	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	2.0-4.0	.10	.17			
	11-25	5-12	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.15	.24			
	25-29	2-7	1.25-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.10	.24			
	29-39	---	---	---	---	---	---	---	---			
Kosh-----	0-10	2-8	1.15-1.40	6-20	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	10-18	2-8	1.35-1.60	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.05	.24			
	18-28	---	---	---	---	---	---	---	---			
Charters, fine gravelly sandy loam, dry-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-11	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	11-16	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	16-33	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	33-41	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	41-60	6-12	1.25-1.60	2-6	0.04-0.10	0.0-2.9	0.5-1.0	.10	.24			
726: Garval-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	2	134
	1-5	2-7	1.25-1.50	6-20	0.04-0.07	0.0-2.9	2.0-6.0	.02	.02			
	5-13	2-7	1.25-1.50	6-20	0.04-0.07	0.0-2.9	1.0-3.0	.02	.02			
	13-19	2-7	1.35-1.60	20-101	0.01-0.06	0.0-2.9	0.5-2.0	.02	.02			
	19-29	2-6	1.35-1.60	20-101	0.01-0.06	0.0-2.9	0.5-1.0	.02	.02			
	29-39	---	---	---	---	---	---	---	---			
Kisky, fine gravelly loamy coarse sand----	0-4	2-8	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.02	1	2	134
	4-10	2-8	1.35-1.60	6-20	0.04-0.06	0.0-2.9	0.5-1.0	.02	.02			
	10-16	2-8	1.35-1.60	6-20	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	16-26	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
730: Hellake-----	0-3	18-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.20	.24	4	6	48
	3-10	18-25	1.10-1.35	0.6-2	0.14-0.18	0.0-2.9	1.5-4.5	.24	.28			
	10-22	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	22-36	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	36-43	27-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.28	.32			
	43-53	15-27	1.20-1.40	0.6-2	0.05-0.13	0.0-2.9	0.5-1.0	.10	.37			
	53-60	4-18	1.25-1.50	2-6	0.02-0.09	0.0-2.9	0.5-1.0	.05	.24			
	60-66	4-18	1.25-1.50	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
Stardust-----	0-1	15-25	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	6	48
	1-3	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	2.0-6.0	.17	.24			
	3-9	15-25	1.00-1.30	0.6-2	0.12-0.16	0.0-2.9	1.0-5.0	.20	.28			
	9-18	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-2.0	.24	.37			
	18-38	18-30	1.20-1.40	0.6-2	0.09-0.14	0.0-5.9	0.5-1.0	.17	.24			
	38-54	20-25	1.20-1.40	0.6-2	0.09-0.14	0.0-2.9	0.5-1.0	.15	.24			
	54-67	8-19	1.20-1.40	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.24			
731: Shirts, sandy loam, dry-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	5-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-8.0	.10	.15			
	12-21	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.10	.10			
	21-33	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	33-39	2-7	1.35-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.02	.05			
	39-49	---	---	---	---	---	---	---	---			
Charters, fine gravelly sandy loam, dry-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-11	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	11-16	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	16-33	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	33-41	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	41-60	6-12	1.25-1.60	2-6	0.04-0.10	0.0-2.9	0.5-1.0	.10	.24			
Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
733: Shirts, fine gravelly sandy loam-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	2-7	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	7-11	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	2.0-4.0	.10	.17			
	11-25	5-12	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.15	.24			
	25-29	2-7	1.25-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.10	.24			
	29-39	---	---	---	---	---	---	---	---			
Kosh-----	0-10	2-8	1.15-1.40	6-20	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	10-18	2-8	1.35-1.60	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.05	.24			
	18-28	---	---	---	---	---	---	---	---			
734: Shirts, sandy loam, dry-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	5-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-8.0	.10	.15			
	12-21	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.10	.10			
	21-33	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	33-39	2-7	1.35-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.02	.05			
	39-49	---	---	---	---	---	---	---	---			
Kosh-----	0-10	2-8	1.15-1.40	6-20	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	10-18	2-8	1.35-1.60	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.05	.24			
	18-28	---	---	---	---	---	---	---	---			
735: Shirts, coarse sandy loam-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-3	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.02	.02			
	3-10	5-12	1.20-1.50	2-6	0.09-0.13	0.0-2.9	2.0-5.0	.05	.05			
	10-15	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	15-25	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	25-29	2-7	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	29-39	---	---	---	---	---	---	---	---			
Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
735: Charters, fine gravelly sandy loam--	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	4-13	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	13-19	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	19-34	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	34-52	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	52-60	6-12	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
738: Tripod-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-6	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	6-13	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	13-23	0-4	1.35-1.60	20-101	0.01-0.05	0.0-2.9	1.0-2.0	.02	.02			
	23-50	0-4	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	50-60	0-4	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
Packerjohn, ashy coarse sandy loam---	0-2	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-10	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	3.0-8.0	.02	.02			
	10-19	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	2.0-6.0	.02	.02			
	19-33	3-8	1.15-1.45	6-20	0.05-0.14	0.0-2.9	0.5-1.0	.02	.02			
	33-44	1-4	1.35-1.60	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.02	.02			
	44-60	1-4	1.35-1.60	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.02	.02			
Pajo, fine gravelly ashy coarse sandy loam-----	0-1	3-8	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-8	3-8	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.10	.15			
	8-16	3-8	1.00-1.30	6-20	0.04-0.08	0.0-2.9	1.0-3.0	.02	.02			
	16-27	0-2	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	27-37	---	---	---	---	---	---	---	---			
739: Shirts, sandy loam, moist-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	12-25	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.15	.20			
	25-34	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	34-39	2-7	1.25-1.50	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	39-49	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
739: Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			
Packerjohn, ashy coarse sandy loam----	0-2	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-10	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	3.0-8.0	.02	.02			
	10-19	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	2.0-6.0	.02	.02			
	19-33	3-8	1.15-1.45	6-20	0.05-0.14	0.0-2.9	0.5-1.0	.02	.02			
	33-44	1-4	1.35-1.60	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.02	.02			
	44-60	1-4	1.35-1.60	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.02	.02			
740: Charters, sandy loam--	0-2	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-7	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	3.0-7.0	.10	.15			
	7-16	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15			
	16-29	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	29-39	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	39-50	4-8	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.15	.24			
	50-60	2-6	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
Eagleson, fine gravelly sandy loam--	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-12	5-12	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	12-17	6-12	1.25-1.50	2-6	0.03-0.08	0.0-2.9	1.0-2.0	.05	.20			
	17-25	2-5	1.35-1.60	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
	25-35	---	---	---	---	---	---	---	---			
741: Zan-----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-3	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	3-14	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	14-24	4-10	1.00-1.30	6-20	0.04-0.08	0.0-2.9	1.0-3.0	.02	.02			
	24-35	2-8	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	35-60	2-5	1.35-1.60	20-101	0.02-0.06	0.0-2.9	0.5-1.0	.02	.02			
742: Crumley-----	0-2	7-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	2-4	7-12	1.15-1.40	2-6	0.07-0.10	0.0-2.9	3.0-7.0	.05	.15			
	4-12	7-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	12-18	7-14	1.25-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.05	.24			
	18-30	3-7	1.25-1.50	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			
	30-60	3-7	1.25-1.50	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.10			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
742: Eagleson, sandy loam--	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-4	5-12	1.15-1.40	2-6	0.09-0.12	0.0-2.9	3.0-7.0	.10	.15			
	4-15	5-12	1.15-1.40	2-6	0.05-0.11	0.0-2.9	2.0-6.0	.10	.15			
	15-19	6-12	1.25-1.50	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.10	.24			
	19-37	2-8	1.25-1.60	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.05	.24			
	37-47	---	---	---	---	---	---	---	---			
743: Packerjohn, ashy coarse sandy loam----	0-2	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-10	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	3.0-8.0	.02	.02			
	10-19	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	2.0-6.0	.02	.02			
	19-33	3-8	1.15-1.45	6-20	0.05-0.14	0.0-2.9	0.5-1.0	.02	.02			
	33-44	1-4	1.35-1.60	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.02	.02			
	44-60	1-4	1.35-1.60	6-20	0.07-0.12	0.0-2.9	0.5-1.0	.02	.02			
Shirts, sandy loam, moist-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	12-25	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.15	.20			
	25-34	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	34-39	2-7	1.25-1.50	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	39-49	---	---	---	---	---	---	---	---			
744: Packerjohn, ashy sandy loam, cool-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	1-9	2-7	1.00-1.30	6-20	0.12-0.16	0.0-2.9	3.0-8.0	.10	.15			
	9-15	3-8	1.00-1.50	6-20	0.08-0.14	0.0-2.9	1.0-3.0	.15	.20			
	15-31	3-8	1.25-1.60	6-20	0.04-0.12	0.0-2.9	0.5-1.0	.10	.10			
	31-60	1-4	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.10			
Shirts, sandy loam, moist-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	12-25	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.15	.20			
	25-34	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	34-39	2-7	1.25-1.50	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	39-49	---	---	---	---	---	---	---	---			
Tripod, cool-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-6	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	6-20	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	1.0-3.0	.05	.10			
	20-60	0-4	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.05	.15			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
745: Tripod, moist-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-4	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	4-16	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	1.0-3.0	.05	.10			
	16-38	0-4	1.35-1.60	20-101	0.01-0.04	0.0-2.9	0.5-1.0	.02	.02			
	38-60	0-4	1.35-1.60	20-101	0.01-0.04	0.0-2.9	0.5-1.0	.02	.02			
Packerjohn, ashy sandy loam-----	0-2	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-5	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	3.0-8.0	.15	.15			
	5-16	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	2.0-6.0	.10	.15			
	16-23	3-8	1.30-1.60	6-20	0.04-0.12	0.0-2.9	0.5-1.0	.20	.24			
	23-39	3-8	1.30-1.60	6-20	0.04-0.13	0.0-2.9	0.5-1.0	.15	.24			
	39-60	1-4	1.30-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.10			
746: Packerjohn, ashy sandy loam-----	0-2	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-5	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	3.0-8.0	.15	.15			
	5-16	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	2.0-6.0	.10	.15			
	16-23	3-8	1.30-1.60	6-20	0.04-0.12	0.0-2.9	0.5-1.0	.20	.24			
	23-39	3-8	1.30-1.60	6-20	0.04-0.13	0.0-2.9	0.5-1.0	.15	.24			
	39-60	1-4	1.30-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.10			
747: Pinney, moist-----	0-1	15-24	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	1-4	15-24	1.00-1.30	0.2-0.6	0.19-0.25	0.0-2.9	3.0-8.0	.28	.32			
	4-10	15-24	1.00-1.30	0.2-0.6	0.19-0.25	0.0-2.9	2.0-6.0	.32	.37			
	10-21	15-24	1.00-1.30	0.2-0.6	0.19-0.25	0.0-2.9	1.0-5.0	.37	.43			
	21-32	20-30	1.20-1.40	0.6-2	0.12-0.18	0.0-5.9	0.5-1.0	.20	.24			
	32-45	20-32	1.20-1.40	0.2-0.6	0.09-0.20	0.0-5.9	0.5-1.0	.20	.24			
	45-60	20-32	1.20-1.40	0.2-0.6	0.09-0.20	0.0-5.9	0.5-1.0	.15	.24			
Charters, fine gravelly sandy loam--	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	4-13	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	13-19	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	19-34	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	34-52	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	52-60	6-12	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
747: Shirts, sandy loam, dry-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	5-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-8.0	.10	.15			
	12-21	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.10	.10			
	21-33	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	33-39	2-7	1.35-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.02	.05			
	39-49	---	---	---	---	---	---	---	---			
748: Belsh, moist-----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-6	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	6-20	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	20-34	4-10	1.30-1.60	6-20	0.04-0.08	0.0-2.9	0.5-1.0	.02	.15			
	34-60	2-5	1.35-1.60	6-20	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
Zan, moist-----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-6	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	6-12	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	12-25	2-8	1.00-1.30	6-20	0.08-0.13	0.0-2.9	0.5-1.0	.10	.24			
	25-41	2-8	1.25-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	41-60	2-5	1.35-1.60	6-20	0.02-0.06	0.0-2.9	0.5-1.0	.02	.02			
749: Quartzburg-----	0-1	3-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	2	134
	1-5	3-7	1.25-1.50	6-20	0.03-0.07	0.0-2.9	2.0-6.0	.02	.02			
	5-10	3-8	1.25-1.50	6-20	0.03-0.07	0.0-2.9	1.0-3.0	.02	.02			
	10-25	2-8	1.35-1.60	6-20	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	25-37	2-8	1.35-1.60	6-20	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	37-42	---	---	---	---	---	---	---	---			
	42-52	---	---	---	---	---	---	---	---			
Charters, sandy loam--	0-2	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-7	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	3.0-7.0	.10	.15			
	7-16	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15			
	16-29	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	29-39	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	39-50	4-8	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.15	.24			
	50-60	2-6	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
750: Garval-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	2	134
	1-5	2-7	1.25-1.50	6-20	0.04-0.07	0.0-2.9	2.0-6.0	.02	.02			
	5-13	2-7	1.25-1.50	6-20	0.04-0.07	0.0-2.9	1.0-3.0	.02	.02			
	13-19	2-7	1.35-1.60	20-101	0.01-0.06	0.0-2.9	0.5-2.0	.02	.02			
	19-29	2-6	1.35-1.60	20-101	0.01-0.06	0.0-2.9	0.5-1.0	.02	.02			
	29-39	---	---	---	---	---	---	---	---			
Kisky, fine gravelly loamy coarse sand----	0-4	2-8	1.25-1.50	6-20	0.04-0.06	0.0-2.9	2.0-5.0	.02	.02	1	2	134
	4-10	2-8	1.35-1.60	6-20	0.04-0.06	0.0-2.9	0.5-1.0	.02	.02			
	10-16	2-8	1.35-1.60	6-20	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	16-26	---	---	---	---	---	---	---	---			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---
751: Belsh, moist-----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-6	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	6-20	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	20-34	4-10	1.30-1.60	6-20	0.04-0.08	0.0-2.9	0.5-1.0	.02	.15			
	34-60	2-5	1.35-1.60	6-20	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
Zan, moist-----	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-6	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	6-12	4-10	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	12-25	2-8	1.00-1.30	6-20	0.08-0.13	0.0-2.9	0.5-1.0	.10	.24			
	25-41	2-8	1.25-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	41-60	2-5	1.35-1.60	6-20	0.02-0.06	0.0-2.9	0.5-1.0	.02	.02			
752: Josie-----	0-2	4-10	1.15-1.40	2-6	0.08-0.16	0.0-2.9	3.0-8.0	.10	.15	5	3	86
	2-12	4-10	1.15-1.40	2-6	0.08-0.16	0.0-2.9	2.0-6.0	.10	.15			
	12-33	4-10	1.25-1.50	2-6	0.08-0.16	0.0-2.9	0.5-1.0	.17	.24			
	33-44	4-10	1.30-1.60	6-20	0.05-0.10	0.0-2.9	0.5-1.0	.10	.10			
	44-60	0-5	1.30-1.60	6-20	0.05-0.10	0.0-2.9	0.5-1.0	.10	.10			
Zimmer, fine gravelly sandy loam-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	4	86
	7-12	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	12-15	2-7	1.25-1.60	2-6	0.04-0.07	0.0-2.9	0.5-1.0	.05	.10			
	15-25	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
753:												
Tripod, cool-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-6	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	6-20	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	1.0-3.0	.05	.10			
	20-60	0-4	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.05	.15			
Packerjohn, ashy sandy loam, cool-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	1-9	2-7	1.00-1.30	6-20	0.12-0.16	0.0-2.9	3.0-8.0	.10	.15			
	9-15	3-8	1.00-1.50	6-20	0.08-0.14	0.0-2.9	1.0-3.0	.15	.20			
	15-31	3-8	1.25-1.60	6-20	0.04-0.12	0.0-2.9	0.5-1.0	.10	.10			
	31-60	1-4	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.10			
Shirts, sandy loam, moist-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	12-25	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.15	.20			
	25-34	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	34-39	2-7	1.25-1.50	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	39-49	---	---	---	---	---	---	---	---			
754:												
Packerjohn, ashy sandy loam-----	0-2	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-5	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	3.0-8.0	.15	.15			
	5-16	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	2.0-6.0	.10	.15			
	16-23	3-8	1.30-1.60	6-20	0.04-0.12	0.0-2.9	0.5-1.0	.20	.24			
	23-39	3-8	1.30-1.60	6-20	0.04-0.13	0.0-2.9	0.5-1.0	.15	.24			
	39-60	1-4	1.30-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.05	.10			
Shirts, sandy loam, moist-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	12-25	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.15	.20			
	25-34	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	34-39	2-7	1.25-1.50	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	39-49	---	---	---	---	---	---	---	---			
755:												
Zimmer-----	0-7	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15	1	3	86
	7-14	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	14-24	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
755: Quartzburg-----	0-1	3-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	2	134
	1-5	3-7	1.25-1.50	6-20	0.03-0.07	0.0-2.9	2.0-6.0	.02	.02			
	5-10	3-8	1.25-1.50	6-20	0.03-0.07	0.0-2.9	1.0-3.0	.02	.02			
	10-25	2-8	1.35-1.60	6-20	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	25-37	2-8	1.35-1.60	6-20	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	37-42	---	---	---	---	---	---	---	---			
	42-52	---	---	---	---	---	---	---	---			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---
756: Pajo, fine gravelly ashy coarse sandy loam-----	0-1	3-8	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-8	3-8	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.10	.15			
	8-16	3-8	1.00-1.30	6-20	0.04-0.08	0.0-2.9	1.0-3.0	.02	.02			
	16-27	0-2	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	27-37	---	---	---	---	---	---	---	---			
Tripod-----	0-1	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-6	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.02	.02			
	6-13	2-7	1.00-1.30	6-20	0.08-0.13	0.0-2.9	2.0-6.0	.02	.02			
	13-23	0-4	1.35-1.60	6-20	0.01-0.05	0.0-2.9	1.0-2.0	.02	.02			
	23-50	0-4	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	50-60	0-4	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
Kosh, moist-----	0-4	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	4-9	2-8	1.25-1.50	6-20	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	9-18	0-5	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.15			
	18-28	---	---	---	---	---	---	---	---			
758: Eagleson, sandy loam--	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-4	5-12	1.15-1.40	2-6	0.09-0.12	0.0-2.9	3.0-7.0	.10	.15			
	4-15	5-12	1.15-1.40	2-6	0.05-0.11	0.0-2.9	2.0-6.0	.10	.15			
	15-19	6-12	1.25-1.50	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.10	.24			
	19-37	2-8	1.25-1.60	2-6	0.03-0.08	0.0-2.9	0.5-1.0	.05	.24			
	37-47	---	---	---	---	---	---	---	---			
Kosh, moist-----	0-4	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	4-9	2-8	1.25-1.50	6-20	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	9-18	0-5	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.15			
	18-28	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
758: Charters, fine gravelly sandy loam--	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	4-13	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	13-19	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	19-34	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	34-52	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	52-60	6-12	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
759: Charters, sandy loam--	0-2	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-7	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	3.0-7.0	.10	.15			
	7-16	7-14	1.15-1.40	2-6	0.07-0.12	0.0-2.9	2.0-6.0	.10	.15			
	16-29	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	29-39	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	39-50	4-8	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.15	.24			
	50-60	2-6	1.25-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			
Shirts, sandy loam, south slope-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.15	.15			
	5-11	5-12	1.20-1.40	2-6	0.09-0.13	0.0-2.9	2.0-4.0	.15	.17			
	11-23	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.17	.24			
	23-35	5-12	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.24			
	35-45	---	---	---	---	---	---	---	---			
Kosh, moist-----	0-4	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	4-9	2-8	1.25-1.50	6-20	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	9-18	0-5	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.15			
	18-28	---	---	---	---	---	---	---	---			
761: Charters, fine gravelly sandy loam--	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-4	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	4-13	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	13-19	8-15	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	19-34	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	34-52	6-12	1.30-1.60	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.15			
	52-60	6-12	1.30-1.60	6-20	0.04-0.10	0.0-2.9	0.5-1.0	.02	.02			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
761: Middlefork, moist-----	0-2	14-20	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	5	56
	2-5	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	3.0-7.0	.24	.24			
	5-13	14-20	1.00-1.30	0.6-2	0.14-0.18	0.0-2.9	1.0-5.0	.28	.28			
	13-28	16-22	1.20-1.40	0.6-2	0.14-0.18	0.0-2.9	1.0-3.0	.32	.32			
	28-36	20-27	1.20-1.40	0.6-2	0.12-0.18	0.0-5.9	0.5-1.0	.17	.24			
	36-47	20-32	1.20-1.40	0.2-0.6	0.09-0.18	0.0-5.9	0.5-1.0	.15	.24			
	47-62	20-32	1.20-1.40	0.2-0.6	0.12-0.21	0.0-5.9	0.5-1.0	.24	.32			
762: Drybuck, dry-----	0-1	7-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	3	3	86
	1-6	7-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.15	.15			
	6-25	7-15	1.20-1.50	2-6	0.09-0.13	0.0-2.9	1.0-5.0	.15	.17			
	25-45	8-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	45-57	5-15	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.20	.24			
	57-67	---	---	---	---	---	---	---	---			
Hellake-----	0-3	18-25	1.10-1.30	0.6-2	0.14-0.18	0.0-2.9	2.0-6.0	.20	.24	4	6	48
	3-10	18-25	1.10-1.35	0.6-2	0.14-0.18	0.0-2.9	1.5-4.5	.24	.28			
	10-22	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	22-36	24-30	1.20-1.40	0.2-0.6	0.17-0.21	3.0-5.9	0.5-1.0	.28	.32			
	36-43	27-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.28	.32			
	43-53	15-27	1.20-1.40	0.6-2	0.05-0.13	0.0-2.9	0.5-1.0	.10	.37			
	53-60	4-18	1.25-1.50	2-6	0.02-0.09	0.0-2.9	0.5-1.0	.05	.24			
	60-66	4-18	1.25-1.50	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
Deerrun-----	0-1	5-15	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-11	5-15	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-6.0	.15	.15			
	11-19	5-15	1.25-1.50	2-6	0.07-0.12	0.0-2.9	0.5-1.0	.20	.24			
	19-33	4-12	1.30-1.60	2-6	0.07-0.12	0.0-2.9	0.5-1.0	.10	.15			
	33-43	---	---	---	---	---	---	---	---			
763: Eagleson, fine gravelly sandy loam--	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-12	5-12	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	12-17	6-12	1.25-1.50	2-6	0.03-0.08	0.0-2.9	1.0-2.0	.05	.20			
	17-25	2-5	1.35-1.60	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
	25-35	---	---	---	---	---	---	---	---			
Kosh-----	0-10	2-8	1.15-1.40	6-20	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	10-18	2-8	1.35-1.60	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.05	.24			
	18-28	---	---	---	---	---	---	---	---			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
765: Backswitch, coarse sandy loam-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-8	5-12	1.20-1.50	2-6	0.09-0.11	0.0-2.9	3.0-7.0	.02	.02			
	8-14	7-15	1.30-1.60	2-6	0.09-0.11	0.0-2.9	0.5-1.0	.10	.15			
	14-25	7-15	1.30-1.60	2-6	0.09-0.11	0.0-2.9	0.5-1.0	.10	.15			
	25-35	3-10	1.35-1.60	2-6	0.09-0.11	0.0-2.9	0.5-1.0	.02	.02			
	35-38	---	---	---	---	---	---	---	---			
	38-48	---	---	---	---	---	---	---	---			
Zimmer, warm-----	0-4	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	3.0-7.0	.10	.15	1	3	86
	4-10	5-12	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	10-16	2-7	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.24			
	16-26	---	---	---	---	---	---	---	---			
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---	---
766: Backswitch, coarse sandy loam-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-8	5-12	1.20-1.50	2-6	0.09-0.11	0.0-2.9	3.0-7.0	.02	.02			
	8-14	7-15	1.30-1.60	2-6	0.09-0.11	0.0-2.9	0.5-1.0	.10	.15			
	14-25	7-15	1.30-1.60	2-6	0.09-0.11	0.0-2.9	0.5-1.0	.10	.15			
	25-35	3-10	1.35-1.60	2-6	0.09-0.11	0.0-2.9	0.5-1.0	.02	.02			
	35-38	---	---	---	---	---	---	---	---			
	38-48	---	---	---	---	---	---	---	---			
Charters, coarse sandy loam-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	1-4	7-14	1.20-1.50	2-6	0.10-0.12	0.0-2.9	3.0-7.0	.02	.02			
	4-8	7-14	1.30-1.60	2-6	0.10-0.12	0.0-2.9	0.5-1.0	.15	.15			
	8-15	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	15-32	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	32-48	8-15	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
	48-60	6-12	1.30-1.60	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.15			
Zimmer, dry-----	0-2	5-12	1.15-1.40	2-6	0.07-0.12	0.0-2.9	3.0-7.0	.10	.15	1	3	86
	2-7	5-10	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.15	.24			
	7-11	5-10	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	11-16	4-8	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	16-26	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
767: Shirts, sandy loam, dry-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	5-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-8.0	.10	.15			
	12-21	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.10	.10			
	21-33	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	33-39	2-7	1.35-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.02	.05			
	39-49	---	---	---	---	---	---	---	---			
Kosh-----	0-10	2-8	1.15-1.40	6-20	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	10-18	2-8	1.35-1.60	6-20	0.01-0.06	0.0-2.9	0.5-1.0	.05	.24			
	18-28	---	---	---	---	---	---	---	---			
Charters, fine gravelly sandy loam, dry-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-11	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	11-16	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	16-33	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	33-41	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	41-60	6-12	1.25-1.60	2-6	0.04-0.10	0.0-2.9	0.5-1.0	.10	.24			
768: Shirts, sandy loam, south slope-----	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.15	.15			
	5-11	5-12	1.20-1.40	2-6	0.09-0.13	0.0-2.9	2.0-4.0	.15	.17			
	11-23	5-12	1.25-1.50	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.17	.24			
	23-35	5-12	1.25-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.24			
	35-45	---	---	---	---	---	---	---	---			
Kosh, moist-----	0-4	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	4-9	2-8	1.25-1.50	6-20	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	9-18	0-5	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.15			
	18-28	---	---	---	---	---	---	---	---			
Eagleson, fine gravelly sandy loam--	0-1	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-12	5-12	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	12-17	6-12	1.25-1.50	2-6	0.03-0.08	0.0-2.9	1.0-2.0	.05	.20			
	17-25	2-5	1.35-1.60	6-20	0.01-0.08	0.0-2.9	0.5-1.0	.02	.10			
	25-35	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
770: Shirts, sandy loam, dry-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	5-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-8.0	.10	.15			
	12-21	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.10	.10			
	21-33	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	33-39	2-7	1.35-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.02	.05			
	39-49	---	---	---	---	---	---	---	---			
Charters, fine gravelly sandy loam, dry-----	0-1	7-14	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	4	86
	1-11	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	3.0-7.0	.10	.15			
	11-16	7-14	1.15-1.40	2-6	0.07-0.11	0.0-2.9	2.0-6.0	.10	.15			
	16-33	8-15	1.25-1.50	2-6	0.07-0.11	0.0-2.9	0.5-1.0	.15	.24			
	33-41	6-12	1.25-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	41-60	6-12	1.25-1.60	2-6	0.04-0.10	0.0-2.9	0.5-1.0	.10	.24			
Kosh, moist-----	0-4	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	4-9	2-8	1.25-1.50	6-20	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	9-18	0-5	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.15			
	18-28	---	---	---	---	---	---	---	---			
771: Backswitch, sandy loam	0-1	4-10	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	1-7	4-10	1.00-1.30	2-6	0.07-0.09	0.0-2.9	3.0-8.0	.15	.15			
	7-11	5-13	1.20-1.40	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.17	.24			
	11-21	5-15	1.25-1.45	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.17	.24			
	21-33	5-15	1.25-1.45	2-6	0.09-0.12	0.0-2.9	0.5-1.0	.05	.24			
	33-40	2-7	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.2-0.8	.05	.15			
	40-50	---	---	---	---	---	---	---	---			
	50-60	---	---	---	---	---	---	---	---			
Shirts, sandy loam, dry-----	0-2	5-12	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	3	86
	2-5	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	3.0-8.0	.10	.15			
	5-12	5-12	1.15-1.40	2-6	0.09-0.13	0.0-2.9	2.0-8.0	.10	.15			
	12-21	5-12	1.20-1.50	2-6	0.07-0.13	0.0-2.9	1.0-3.0	.10	.10			
	21-33	5-12	1.30-1.60	2-6	0.07-0.13	0.0-2.9	0.5-1.0	.10	.15			
	33-39	2-7	1.35-1.60	6-20	0.07-0.11	0.0-2.9	0.5-1.0	.02	.05			
	39-49	---	---	---	---	---	---	---	---			

Table 19.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
772: Pajo, fine gravelly ashy sandy loam-----	0-1	3-8	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	2	4	86
	1-12	3-8	1.00-1.30	6-20	0.08-0.13	0.0-2.9	3.0-8.0	.10	.15			
	12-16	3-8	1.00-1.30	6-20	0.07-0.13	0.0-2.9	1.0-3.0	.10	.20			
	16-28	0-3	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	28-38	0-3	1.35-1.60	20-101	0.01-0.05	0.0-2.9	0.5-1.0	.02	.02			
	38-48	---	---	---	---	---	---	---	---			
Packerjohn, ashy sandy loam, dry-----	0-2	2-7	0.10-0.30	6-101	0.30-0.60	---	85-100	---	---	5	3	86
	2-10	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	3.0-8.0	.15	.15			
	10-17	2-7	1.00-1.30	6-20	0.11-0.16	0.0-2.9	2.0-7.0	.15	.15			
	17-34	3-8	1.20-1.45	6-20	0.08-0.14	0.0-2.9	1.0-2.0	.15	.24			
	34-50	1-4	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
	50-60	1-4	1.35-1.60	6-20	0.04-0.07	0.0-2.9	0.5-1.0	.02	.02			
Kosh, moist-----	0-4	2-8	1.15-1.40	6-20	0.07-0.10	0.0-2.9	3.0-7.0	.10	.15	1	4	86
	4-9	2-8	1.25-1.50	6-20	0.07-0.10	0.0-2.9	0.5-1.0	.10	.24			
	9-18	0-5	1.35-1.60	6-20	0.01-0.04	0.0-2.9	0.5-1.0	.02	.15			
	18-28	---	---	---	---	---	---	---	---			
900: Pits, gravel-----	---	---	---	---	---	---	---	---	---	---	---	---
Dumps, gravel-----	---	---	---	---	---	---	---	---	---	---	---	---
901: Dumps, landfill-----	---	---	---	---	---	---	---	---	---	---	---	---
999: Water-----	---	---	---	---	---	---	---	---	---	---	---	---

Table 20.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
220:				
Oxyaquic Xerofluvents	0-5	4.0-12	6.1-7.3	0
	5-11	2.0-10	6.1-7.3	0
	11-18	2.0-10	6.1-7.3	0
	18-39	1.0-9.0	6.1-7.8	0
	39-60	1.0-9.0	6.1-8.4	0
Cumulic Haploxerolls	0-10	8.0-18	6.1-7.8	0
	10-26	8.0-18	6.1-7.8	0
	26-36	5.0-18	6.1-8.4	0
	36-50	5.0-18	6.1-8.4	0
	50-60	1.0-11	6.1-8.4	0
221:				
Bissell-----	0-7	15-25	6.1-7.3	0
	7-10	15-20	6.1-7.3	0
	10-15	20-30	6.1-7.3	0
	15-26	20-30	6.1-7.3	0
	26-41	15-25	6.1-7.3	0
	41-60	3.0-12	6.1-7.3	0
222:				
Bissell-----	0-7	15-25	6.1-7.3	0
	7-10	15-20	6.1-7.3	0
	10-15	20-30	6.1-7.3	0
	15-26	20-30	6.1-7.3	0
	26-41	15-25	6.1-7.3	0
	41-60	3.0-12	6.1-7.3	0
223:				
Staircase, dry-----	0-6	10-20	6.1-7.3	0
	6-20	10-20	6.1-7.3	0
	20-27	5.0-15	6.1-7.3	0
	27-42	3.0-10	6.1-7.3	0
	42-60	3.0-10	6.1-7.3	0
224:				
Porter-----	0-4	10-25	6.1-7.3	0
	4-11	10-25	6.1-7.3	0
	11-22	10-25	6.1-7.3	0
	22-34	10-20	6.1-7.3	0
	34-48	3.0-10	6.1-7.3	0
	48-72	3.0-10	6.1-7.3	0
225:				
Boise-----	0-3	10-20	5.6-7.3	0
	3-7	10-20	5.6-7.3	0
	7-15	8.0-20	5.6-6.5	0
	15-28	8.0-20	5.6-6.5	0
	28-36	3.0-10	5.6-6.5	0
	36-53	3.0-10	5.6-6.5	0
	53-60	3.0-10	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	pH	Pct
226:				
Flofeather, very rarely flooded-----	0-7	7.0-20	6.1-7.3	0
	7-11	7.0-20	6.1-7.3	0
	11-17	5.0-25	6.1-7.3	0
	17-32	5.0-15	6.1-7.3	0
	32-52	2.0-10	6.1-7.3	0
	52-60	2.0-8.0	6.1-7.3	0
Shawmount, stony surface-----	0-4	13-25	6.1-7.3	0
	4-9	15-25	6.1-7.3	0
	9-14	15-25	6.1-7.3	0
	14-26	12-20	6.1-7.3	0
	26-35	7.0-13	6.1-7.3	0
	35-60	4.0-10	6.1-7.3	0
227:				
Piercepark, loam-----	0-7	15-25	6.6-7.3	0
	7-12	15-25	6.6-7.3	0
	12-22	15-25	6.6-7.3	0
	22-28	10-20	6.6-7.3	0
	28-37	10-20	6.6-7.3	0
	37-50	10-20	6.6-7.3	0
	50-60	10-20	7.3-7.8	0
228:				
Piercepark, loam-----	0-7	15-25	6.6-7.3	0
	7-12	15-25	6.6-7.3	0
	12-22	15-25	6.6-7.3	0
	22-28	10-20	6.6-7.3	0
	28-37	10-20	6.6-7.3	0
	37-50	10-20	6.6-7.3	0
	50-60	10-20	7.3-7.8	0
229:				
Piercepark, coarse sandy loam-----	0-2	10-17	6.6-7.3	0
	2-6	10-17	6.6-7.3	0
	6-10	10-17	6.6-7.3	0
	10-16	10-20	6.6-7.3	0
	16-27	10-20	6.6-7.3	0
	27-34	10-20	6.6-7.8	0
	34-60	10-20	6.6-7.8	0
230:				
Hann-----	0-3	15-25	6.1-7.3	0
	3-6	20-30	6.1-7.3	0
	6-13	30-40	6.1-7.3	0
	13-25	30-40	6.1-7.3	0
	25-44	15-25	6.6-7.8	0
	44-72	15-25	6.6-7.8	0
Doubledia, silty clay loam-----	0-3	20-35	6.6-7.3	0
	3-6	25-50	6.6-7.3	0
	6-11	25-50	6.6-7.3	0
	11-21	25-50	6.6-7.3	0
	21-25	20-35	6.6-7.8	0
	25-34	20-50	6.6-7.8	0
	34-41	20-50	6.6-7.8	0
	41-51	---	---	0-5

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
232:				
Jasseek-----	0-7	15-25	6.1-7.3	0
	7-10	15-25	6.1-7.3	0
	10-18	20-30	6.1-7.3	0
	18-27	25-35	6.1-7.3	0
	27-33	25-35	6.1-7.3	0
	33-43	15-25	6.1-7.3	0
	43-60	3.0-15	6.6-7.3	0
233:				
Jasseek-----	0-7	15-25	6.1-7.3	0
	7-10	15-25	6.1-7.3	0
	10-18	20-30	6.1-7.3	0
	18-27	25-35	6.1-7.3	0
	27-33	25-35	6.1-7.3	0
	33-43	15-25	6.1-7.3	0
	43-60	3.0-15	6.6-7.3	0
238:				
Adaboi-----	0-2	15-25	6.1-7.3	0
	2-9	15-25	6.1-7.3	0
	9-13	20-30	6.1-7.3	0
	13-20	20-30	6.1-7.3	0
	20-25	20-30	6.1-7.3	0
	25-43	25-40	6.6-7.3	0
	43-66	25-40	6.6-7.3	0
240:				
Collister-----	0-4	15-25	6.1-7.3	0
	4-10	15-25	6.1-7.3	0
	10-19	15-25	6.1-7.3	0
	19-23	15-25	6.1-7.3	0
	23-28	20-30	6.1-7.3	0
	28-36	20-30	6.1-7.3	0
	36-42	20-30	6.1-7.3	0
	42-58	20-30	6.1-7.3	0
	58-66	15-30	6.1-7.3	0
Flofeather-----	0-7	8.0-20	6.1-7.3	0
	7-22	8.0-20	6.1-7.3	0
	22-30	8.0-20	6.1-7.3	0
	30-41	8.0-20	6.1-7.3	0
	41-48	4.0-12	6.1-7.3	0
	48-60	3.0-12	6.1-7.3	0
300:				
Shawmount, stony surface-----	0-4	13-25	6.1-7.3	0
	4-9	15-25	6.1-7.3	0
	9-14	15-25	6.1-7.3	0
	14-26	12-20	6.1-7.3	0
	26-35	7.0-13	6.1-7.3	0
	35-60	4.0-10	6.1-7.3	0
301:				
Breadloaf-----	0-2	20-25	6.1-7.3	0
	2-6	25-45	6.1-7.3	0
	6-12	25-40	6.6-7.3	0
	12-17	25-40	6.6-7.3	0
	17-23	25-40	6.6-7.3	0
	23-33	---	---	1-5

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
301: Doubledia, silty clay loam-----	0-3	20-35	6.6-7.3	0
	3-6	25-50	6.6-7.3	0
	6-11	25-50	6.6-7.3	0
	11-21	25-50	6.6-7.3	0
	21-25	20-35	6.6-7.8	0
	25-34	20-50	6.6-7.8	0
	34-41	20-50	6.6-7.8	0
	41-51	---	---	0-5
302: Breadloaf-----	0-2	20-25	6.1-7.3	0
	2-6	25-45	6.1-7.3	0
	6-12	25-40	6.6-7.3	0
	12-17	25-40	6.6-7.3	0
	17-23	25-40	6.6-7.3	0
	23-33	---	---	1-5
Doubledia, silty clay loam-----	0-3	20-35	6.6-7.3	0
	3-6	25-50	6.6-7.3	0
	6-11	25-50	6.6-7.3	0
	11-21	25-50	6.6-7.3	0
	21-25	20-35	6.6-7.8	0
	25-34	20-50	6.6-7.8	0
	34-41	20-50	6.6-7.8	0
	41-51	---	---	0-5
Hann-----	0-3	15-25	6.1-7.3	0
	3-6	20-30	6.1-7.3	0
	6-13	30-40	6.1-7.3	0
	13-25	30-40	6.1-7.3	0
	25-44	15-25	6.6-7.8	0
	44-72	15-25	6.6-7.8	0
303: Doubledia, silty clay loam-----	0-3	20-35	6.6-7.3	0
	3-6	25-50	6.6-7.3	0
	6-11	25-50	6.6-7.3	0
	11-21	25-50	6.6-7.3	0
	21-25	20-35	6.6-7.8	0
	25-34	20-50	6.6-7.8	0
	34-41	20-50	6.6-7.8	0
	41-51	---	---	0-5
Hann-----	0-3	15-25	6.1-7.3	0
	3-6	20-30	6.1-7.3	0
	6-13	30-40	6.1-7.3	0
	13-25	30-40	6.1-7.3	0
	25-44	15-25	6.6-7.8	0
	44-72	15-25	6.6-7.8	0
Breadloaf-----	0-2	20-25	6.1-7.3	0
	2-6	25-45	6.1-7.3	0
	6-12	25-40	6.6-7.3	0
	12-17	25-40	6.6-7.3	0
	17-23	25-40	6.6-7.3	0
	23-33	---	---	1-5

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
304:				
Breadloaf-----	0-2	20-25	6.1-7.3	0
	2-6	25-45	6.1-7.3	0
	6-12	25-40	6.6-7.3	0
	12-17	25-40	6.6-7.3	0
	17-23	25-40	6.6-7.3	0
	23-33	---	---	1-5
Doubledia, silty clay loam-----	0-3	20-35	6.6-7.3	0
	3-6	25-50	6.6-7.3	0
	6-11	25-50	6.6-7.3	0
	11-21	25-50	6.6-7.3	0
	21-25	20-35	6.6-7.8	0
	25-34	20-50	6.6-7.8	0
	34-41	20-50	6.6-7.8	0
	41-51	---	---	0-5
Hullsgulch, loam----	0-2	12-25	6.1-7.3	0
	2-9	12-25	6.1-7.3	0
	9-15	12-25	6.1-7.3	0
	15-29	15-25	6.1-7.3	0
	29-46	15-25	6.1-7.3	0
	46-58	10-15	6.1-7.3	0
	58-66	5.0-10	6.1-7.8	0
305:				
Siphonlake, south slope-----	0-10	12-25	6.1-7.3	0
	10-19	9.0-20	5.6-7.3	0
	19-22	9.0-20	5.6-7.3	0
	22-46	6.0-13	5.6-7.3	0
	46-56	5.0-12	5.6-7.3	0
	56-66	---	---	---
Solarview-----	0-2	7.0-12	6.6-7.3	0
	2-12	4.0-8.0	6.6-7.3	0
	12-16	0.0-4.0	6.6-7.3	0
	16-26	---	---	---
306:				
Van Dusen-----	0-7	15-30	6.1-7.3	0
	7-23	15-25	5.6-7.3	0
	23-39	15-25	5.6-7.3	0
	39-49	15-25	5.6-7.3	0
	49-60	15-25	5.6-7.3	0
Siphonlake-----	0-2	12-25	6.1-7.3	0
	2-6	12-25	6.1-7.3	0
	6-19	9.0-20	5.6-6.5	0
	19-31	9.0-20	5.6-6.5	0
	31-42	6.0-13	5.6-6.5	0
	42-47	5.0-12	5.6-7.3	0
	47-57	---	---	---
307:				
Adaboi-----	0-2	15-25	6.1-7.3	0
	2-9	15-25	6.1-7.3	0
	9-13	20-30	6.1-7.3	0
	13-20	20-30	6.1-7.3	0
	20-25	20-30	6.1-7.3	0
	25-43	25-40	6.6-7.3	0
	43-66	25-40	6.6-7.3	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
307:				
Meclo-----	0-4	15-25	6.1-7.3	0
	4-8	15-25	6.1-7.3	0
	8-13	25-35	6.6-7.8	0
	13-22	25-35	6.6-7.8	0
	22-31	20-30	6.6-7.8	1-5
	31-41	---	---	1-5
308:				
Breadloaf-----	0-2	20-25	6.1-7.3	0
	2-6	25-45	6.1-7.3	0
	6-12	25-40	6.6-7.3	0
	12-17	25-40	6.6-7.3	0
	17-23	25-40	6.6-7.3	0
	23-33	---	---	1-5
Crawley, silt loam---	0-4	15-25	6.1-7.3	0
	4-7	20-30	6.6-7.8	0
	7-13	20-30	6.6-7.8	0
	13-23	---	---	0-5
Doubledia, clay loam	0-3	25-35	6.1-7.3	0
	3-7	35-55	6.1-7.3	0
	7-12	35-55	6.1-7.3	0
	12-24	35-55	6.1-7.3	0
	24-37	35-55	6.6-7.8	0
	37-55	35-55	6.6-7.8	0
	55-65	---	---	---
309:				
Hullsgulch, sandy loam-----	0-2	7.0-15	6.1-7.3	0
	2-11	7.0-15	6.1-7.3	0
	11-18	15-25	6.1-7.3	0
	18-32	15-25	6.1-7.3	0
	32-48	9.0-20	6.1-7.3	0
	48-60	9.0-20	6.1-7.8	0
Solarview-----	0-2	7.0-12	6.6-7.3	0
	2-12	4.0-8.0	6.6-7.3	0
	12-16	0.0-4.0	6.6-7.3	0
	16-26	---	---	---
311:				
Meclo-----	0-4	15-25	6.1-7.3	0
	4-8	15-25	6.1-7.3	0
	8-13	25-35	6.6-7.8	0
	13-22	25-35	6.6-7.8	0
	22-31	20-30	6.6-7.8	1-5
	31-41	---	---	1-5
Crawley, silt loam---	0-4	15-25	6.1-7.3	0
	4-7	20-30	6.6-7.8	0
	7-13	20-30	6.6-7.8	0
	13-23	---	---	0-5
Adaboi-----	0-2	15-25	6.1-7.3	0
	2-9	15-25	6.1-7.3	0
	9-13	20-30	6.1-7.3	0
	13-20	20-30	6.1-7.3	0
	20-25	20-30	6.1-7.3	0
	25-43	25-40	6.6-7.3	0
	43-66	25-40	6.6-7.3	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
328: Gacey, extremely stony surface-----	0-3	15-25	6.1-7.3	0
	3-7	20-30	6.1-7.3	0
	7-10	25-35	6.1-7.3	0
	10-15	25-35	6.1-7.3	0
	15-20	---	---	0
	20-60	3.0-12	6.6-7.3	0
329: Ayette-----	0-4	15-30	6.1-7.3	0
	4-8	20-30	6.1-7.3	0
	8-12	20-30	6.1-7.3	0
	12-30	25-35	6.1-7.3	0
	30-43	25-35	6.1-7.3	0
	43-53	---	---	---
Duco, stony loam, very stony surface--	0-3	12-25	6.6-7.8	0
	3-15	20-25	6.6-7.8	0
	15-25	---	---	---
330: Breadloaf-----	0-2	20-25	6.1-7.3	0
	2-6	25-45	6.1-7.3	0
	6-12	25-40	6.6-7.3	0
	12-17	25-40	6.6-7.3	0
	17-23	25-40	6.6-7.3	0
	23-33	---	---	1-5
Ayette, moist-----	0-4	20-35	6.1-7.3	0
	4-9	20-35	6.1-7.3	0
	9-15	25-50	6.1-7.3	0
	15-27	20-50	6.1-7.3	0
	27-36	20-50	6.1-7.3	0
	36-55	20-50	6.1-7.3	0
	55-65	---	---	---
Immig, rubbly surface	0-4	14-30	6.6-7.3	0
	4-7	20-25	6.6-7.3	0
	7-17	30-45	6.6-7.3	0
	17-25	30-45	6.6-7.3	0
	25-35	---	---	---
331: Ayette, moist-----	0-4	20-35	6.1-7.3	0
	4-9	20-35	6.1-7.3	0
	9-15	25-50	6.1-7.3	0
	15-27	20-50	6.1-7.3	0
	27-36	20-50	6.1-7.3	0
	36-55	20-50	6.1-7.3	0
	55-65	---	---	---
Yad-----	0-2	20-30	6.6-7.3	0
	2-6	20-30	6.6-7.3	0
	6-14	20-50	6.6-7.3	0
	14-25	20-50	6.6-7.3	0
	25-41	15-35	6.6-7.8	0
	41-52	15-35	6.6-7.8	0
	52-60	15-35	6.6-7.8	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
332:				
Hann-----	0-3	15-25	6.1-7.3	0
	3-6	20-30	6.1-7.3	0
	6-13	30-40	6.1-7.3	0
	13-25	30-40	6.1-7.3	0
	25-44	15-25	6.6-7.8	0
	44-72	15-25	6.6-7.8	0
Ayette, moist-----	0-4	20-35	6.1-7.3	0
	4-9	20-35	6.1-7.3	0
	9-15	25-50	6.1-7.3	0
	15-27	20-50	6.1-7.3	0
	27-36	20-50	6.1-7.3	0
	36-55	20-50	6.1-7.3	0
	55-65	---	---	---
Picketpin-----	0-5	15-25	6.6-7.3	0
	5-11	15-35	6.6-7.3	0
	11-17	20-35	6.6-7.3	0
	17-35	15-35	6.6-7.3	0
	35-60	6.0-15	6.6-7.8	0
333:				
Ayette-----	0-4	15-30	6.1-7.3	0
	4-8	20-30	6.1-7.3	0
	8-12	20-30	6.1-7.3	0
	12-30	25-35	6.1-7.3	0
	30-43	25-35	6.1-7.3	0
	43-53	---	---	---
Crawley, loam-----	0-6	15-25	6.1-7.3	0
	6-14	20-30	6.6-7.8	0
	14-24	---	---	1-5
Hullsgulch, loam-----	0-2	12-25	6.1-7.3	0
	2-9	12-25	6.1-7.3	0
	9-15	12-25	6.1-7.3	0
	15-29	15-25	6.1-7.3	0
	29-46	15-25	6.1-7.3	0
	46-58	10-15	6.1-7.3	0
	58-66	5.0-10	6.1-7.8	0
335:				
Gimmi, very stony surface-----	0-3	15-30	6.1-7.3	0
	3-6	15-30	6.1-7.3	0
	6-10	20-25	6.1-7.3	0
	10-15	25-35	6.6-7.8	0
	15-23	25-35	6.6-7.8	0
	23-31	20-25	6.6-7.8	0
	31-41	---	---	---
Ayette, moist-----	0-4	20-35	6.1-7.3	0
	4-9	20-35	6.1-7.3	0
	9-15	25-50	6.1-7.3	0
	15-27	20-50	6.1-7.3	0
	27-36	20-50	6.1-7.3	0
	36-55	20-50	6.1-7.3	0
	55-65	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
335: Doubledia, silty clay loam-----	0-3	20-35	6.6-7.3	0
	3-6	25-50	6.6-7.3	0
	6-11	25-50	6.6-7.3	0
	11-21	25-50	6.6-7.3	0
	21-25	20-35	6.6-7.8	0
	25-34	20-50	6.6-7.8	0
	34-41	20-50	6.6-7.8	0
	41-51	---	---	0-5
400: Ralsen-----	0-2	10-35	6.1-7.3	0
	2-10	10-35	6.1-7.3	0
	10-17	8.0-15	6.1-6.5	0
	17-19	5.0-10	6.1-6.5	0
	19-24	5.0-10	6.1-6.5	0
	24-60	5.0-10	5.6-6.5	0
Foxlane-----	0-1	---	4.5-5.5	0
	1-4	11-25	5.6-6.5	0
	4-10	9.0-25	5.6-6.5	0
	10-13	2.0-12	5.6-6.0	0
	13-47	1.0-8.0	5.1-6.0	0
	47-60	1.0-5.0	5.1-6.0	0
Pay-----	0-3	7.0-27	6.1-6.5	0
	3-7	7.0-27	6.1-6.5	0
	7-11	7.0-19	6.1-6.5	0
	11-26	3.0-8.0	6.1-6.5	0
	26-41	1.0-5.0	5.6-6.0	0
	41-60	1.0-5.0	5.6-6.0	0
401: Staircase-----	0-4	9.0-25	5.6-7.3	0
	4-14	9.0-25	5.6-7.3	0
	14-22	9.0-25	5.6-7.3	0
	22-32	9.0-25	5.6-7.3	0
	32-42	7.0-15	5.6-7.3	0
	42-50	7.0-15	5.6-7.3	0
	50-58	4.0-11	5.6-7.3	0
	58-72	4.0-11	5.6-7.3	0
402: Crossbow-----	0-4	15-35	5.6-6.5	0
	4-11	12-30	5.6-6.5	0
	11-21	12-30	5.6-6.5	0
	21-36	12-25	5.6-6.5	0
	36-42	3.0-8.0	5.6-6.5	0
	42-60	1.0-5.0	5.6-6.5	0
Foxlane-----	0-1	---	4.5-5.5	0
	1-4	11-25	5.6-6.5	0
	4-10	9.0-25	5.6-6.5	0
	10-13	2.0-12	5.6-6.0	0
	13-47	1.0-8.0	5.1-6.0	0
	47-60	1.0-5.0	5.1-6.0	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
403:				
Ralsen-----	0-2	10-35	6.1-7.3	0
	2-10	10-35	6.1-7.3	0
	10-17	8.0-15	6.1-6.5	0
	17-19	5.0-10	6.1-6.5	0
	19-24	5.0-10	6.1-6.5	0
	24-60	5.0-10	5.6-6.5	0
Pay-----	0-3	7.0-27	6.1-6.5	0
	3-7	7.0-27	6.1-6.5	0
	7-11	7.0-19	6.1-6.5	0
	11-26	3.0-8.0	6.1-6.5	0
	26-41	1.0-5.0	5.6-6.0	0
	41-60	1.0-5.0	5.6-6.0	0
Crossbow-----	0-4	15-35	5.6-6.5	0
	4-11	12-30	5.6-6.5	0
	11-21	12-30	5.6-6.5	0
	21-36	12-25	5.6-6.5	0
	36-42	3.0-8.0	5.6-6.5	0
	42-60	1.0-5.0	5.6-6.5	0
404:				
Riverpoint-----	0-6	15-30	5.6-6.5	0
	6-11	15-30	5.6-6.5	0
	11-14	15-25	5.6-6.5	0
	14-19	15-25	5.6-6.5	0
	19-31	8.0-15	5.6-6.5	0
	31-41	4.0-10	5.6-6.5	0
	41-60	2.0-10	5.6-6.5	0
Hellake-----	0-3	15-30	5.6-6.5	0
	3-10	15-25	5.6-6.5	0
	10-22	20-25	5.1-6.0	0
	22-36	20-25	5.1-6.0	0
	36-43	20-25	5.1-6.0	0
	43-53	11-20	5.1-6.0	0
	53-60	4.0-15	5.1-6.0	0
	60-66	4.0-15	5.1-6.0	0
405:				
Hellake-----	0-3	15-30	5.6-6.5	0
	3-10	15-25	5.6-6.5	0
	10-22	20-25	5.1-6.0	0
	22-36	20-25	5.1-6.0	0
	36-43	20-25	5.1-6.0	0
	43-53	11-20	5.1-6.0	0
	53-60	4.0-15	5.1-6.0	0
	60-66	4.0-15	5.1-6.0	0
Staircase-----	0-4	9.0-25	5.6-7.3	0
	4-14	9.0-25	5.6-7.3	0
	14-22	9.0-25	5.6-7.3	0
	22-32	9.0-25	5.6-7.3	0
	32-42	7.0-15	5.6-7.3	0
	42-50	7.0-15	5.6-7.3	0
	50-58	4.0-11	5.6-7.3	0
	58-72	4.0-11	5.6-7.3	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
406:				
Hellake-----	0-3	15-30	5.6-6.5	0
	3-10	15-25	5.6-6.5	0
	10-22	20-25	5.1-6.0	0
	22-36	20-25	5.1-6.0	0
	36-43	20-25	5.1-6.0	0
	43-53	11-20	5.1-6.0	0
	53-60	4.0-15	5.1-6.0	0
	60-66	4.0-15	5.1-6.0	0
407:				
Hellake-----	0-3	15-30	5.6-6.5	0
	3-10	15-25	5.6-6.5	0
	10-22	20-25	5.1-6.0	0
	22-36	20-25	5.1-6.0	0
	36-43	20-25	5.1-6.0	0
	43-53	11-20	5.1-6.0	0
	53-60	4.0-15	5.1-6.0	0
	60-66	4.0-15	5.1-6.0	0
408:				
Stardust-----	0-1	---	4.5-5.5	0
	1-3	14-30	5.6-6.5	0
	3-9	12-30	5.6-6.5	0
	9-18	14-25	5.6-6.5	0
	18-38	14-25	5.6-6.5	0
	38-54	15-20	5.6-6.5	0
	54-67	7.0-15	5.6-6.5	0
409:				
Stardust-----	0-1	---	4.5-5.5	0
	1-3	14-30	5.6-6.5	0
	3-9	12-30	5.6-6.5	0
	9-18	14-25	5.6-6.5	0
	18-38	14-25	5.6-6.5	0
	38-54	15-20	5.6-6.5	0
	54-67	7.0-15	5.6-6.5	0
410:				
Stardust-----	0-1	---	4.5-5.5	0
	1-3	14-30	5.6-6.5	0
	3-9	12-30	5.6-6.5	0
	9-18	14-25	5.6-6.5	0
	18-38	14-25	5.6-6.5	0
	38-54	15-20	5.6-6.5	0
	54-67	7.0-15	5.6-6.5	0
Riverpoint, very stony surface-----	0-1	---	4.5-5.5	0
	1-7	15-30	5.6-6.5	0
	7-12	15-25	5.6-6.5	0
	12-24	15-25	5.6-6.5	0
	24-40	15-25	5.6-6.5	0
	40-60	7.0-10	5.6-6.5	0
411:				
Huston, very stony surface-----	0-1	---	4.5-5.5	0
	1-6	9.0-25	5.6-6.5	0
	6-13	8.0-20	5.6-6.5	0
	13-26	7.0-15	5.6-6.5	0
	26-46	6.0-15	5.6-6.5	0
	46-60	3.0-9.0	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
411: Zeb, gravelly sandy loam-----	0-1	---	4.5-5.5	0
	1-8	12-25	6.1-7.3	0
	8-13	8.0-20	6.1-7.3	0
	13-23	6.0-12	6.1-7.3	0
	23-43	1.0-10	6.1-7.3	0
	43-60	1.0-5.0	6.1-7.3	0
412: Huston, very stony surface-----	0-1	---	4.5-5.5	0
	1-6	9.0-25	5.6-6.5	0
	6-13	8.0-20	5.6-6.5	0
	13-26	7.0-15	5.6-6.5	0
	26-46	6.0-15	5.6-6.5	0
	46-60	3.0-9.0	5.6-6.5	0
Stardust-----	0-1	---	4.5-5.5	0
	1-3	14-30	5.6-6.5	0
	3-9	12-30	5.6-6.5	0
	9-18	14-25	5.6-6.5	0
	18-38	14-25	5.6-6.5	0
	38-54	15-20	5.6-6.5	0
	54-67	7.0-15	5.6-6.5	0
413: Cloudyway-----	0-1	---	4.5-5.5	0
	1-4	10-25	5.6-6.5	0
	4-9	9.0-25	5.6-6.5	0
	9-18	9.0-25	5.6-6.5	0
	18-24	7.0-20	5.6-6.5	0
	24-43	4.0-13	5.6-6.5	0
	43-60	4.0-10	5.6-6.5	0
414: Hellake-----	0-3	15-30	5.6-6.5	0
	3-10	15-25	5.6-6.5	0
	10-22	20-25	5.1-6.0	0
	22-36	20-25	5.1-6.0	0
	36-43	20-25	5.1-6.0	0
	43-53	11-20	5.1-6.0	0
	53-60	4.0-15	5.1-6.0	0
	60-66	4.0-15	5.1-6.0	0
Middlefork-----	0-1	---	4.5-5.5	0
	1-4	15-30	5.6-6.5	0
	4-12	12-25	5.6-6.5	0
	12-15	13-20	5.6-6.0	0
	15-32	12-25	5.6-6.0	0
	32-47	15-25	5.6-6.0	0
	47-61	15-25	5.6-6.0	0
415: Middlefork-----	0-1	---	4.5-5.5	0
	1-4	15-30	5.6-6.5	0
	4-12	12-25	5.6-6.5	0
	12-15	13-20	5.6-6.0	0
	15-32	12-25	5.6-6.0	0
	32-47	15-25	5.6-6.0	0
	47-61	15-25	5.6-6.0	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
415:				
Pinney-----	0-2	---	4.5-5.5	0
	2-5	15-35	5.6-6.0	0
	5-13	14-30	5.6-6.0	0
	13-23	15-20	5.6-6.0	0
	23-30	15-25	5.6-6.0	0
	30-49	15-25	5.6-6.0	0
	49-60	15-25	5.6-6.0	0
416:				
Pinney, moist-----	0-1	---	4.5-5.5	0
	1-4	15-35	5.6-6.5	0
	4-10	14-30	5.6-6.5	0
	10-21	15-25	5.6-6.5	0
	21-32	15-25	5.6-6.5	0
	32-45	15-25	5.6-6.5	0
	45-60	15-25	5.6-6.5	0
Middlefork, moist----	0-2	---	4.5-5.5	0
	2-5	15-30	6.1-6.5	0
	5-13	12-25	6.1-6.5	0
	13-28	13-20	5.6-6.0	0
	28-36	12-25	5.6-6.0	0
	36-47	15-25	5.6-6.0	0
	47-62	15-25	5.6-6.0	0
Zeb, gravelly sandy loam-----	0-1	---	4.5-5.5	0
	1-8	12-25	6.1-7.3	0
	8-13	8.0-20	6.1-7.3	0
	13-23	6.0-12	6.1-7.3	0
	23-43	1.0-10	6.1-7.3	0
	43-60	1.0-5.0	6.1-7.3	0
417:				
Middlefork-----	0-1	---	4.5-5.5	0
	1-4	15-30	5.6-6.5	0
	4-12	12-25	5.6-6.5	0
	12-15	13-20	5.6-6.0	0
	15-32	12-25	5.6-6.0	0
	32-47	15-25	5.6-6.0	0
	47-61	15-25	5.6-6.0	0
Zeb, fine gravelly sandy loam-----	0-1	---	4.5-5.5	0
	1-4	9.0-25	6.1-7.3	0
	4-11	5.0-13	6.1-7.3	0
	11-21	5.0-11	6.1-7.3	0
	21-43	4.0-7.0	6.1-7.3	0
	43-60	0.0-4.0	6.1-7.3	0
418:				
Middlefork-----	0-1	---	4.5-5.5	0
	1-4	15-30	5.6-6.5	0
	4-12	12-25	5.6-6.5	0
	12-15	13-20	5.6-6.0	0
	15-32	12-25	5.6-6.0	0
	32-47	15-25	5.6-6.0	0
	47-61	15-25	5.6-6.0	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	pH	Pct
418: Zeb, fine gravelly sandy loam-----	0-1	---	4.5-5.5	0
	1-4	9.0-25	6.1-7.3	0
	4-11	5.0-13	6.1-7.3	0
	11-21	5.0-11	6.1-7.3	0
	21-43	4.0-7.0	6.1-7.3	0
	43-60	0.0-4.0	6.1-7.3	0
419: Charters, fine gravelly sandy loam, dry-----	0-1	---	4.5-5.5	0
	1-11	11-25	6.1-7.3	0
	11-16	9.0-20	6.1-7.3	0
	16-33	7.0-12	6.1-7.3	0
	33-41	5.0-10	5.6-6.5	0
	41-60	5.0-10	5.6-6.5	0
Zeb, fine gravelly sandy loam-----	0-1	---	4.5-5.5	0
	1-4	9.0-25	6.1-7.3	0
	4-11	5.0-13	6.1-7.3	0
	11-21	5.0-11	6.1-7.3	0
	21-43	4.0-7.0	6.1-7.3	0
	43-60	0.0-4.0	6.1-7.3	0
420: Pioneervil-----	0-1	---	4.5-5.5	0
	1-6	13-30	6.1-7.3	0
	6-12	9.0-15	6.1-7.3	0
	12-19	9.0-20	5.6-6.5	0
	19-25	9.0-20	5.6-6.5	0
	25-31	9.0-20	5.6-6.5	0
	31-35	5.0-15	6.1-6.5	0
	35-75	0.0-11	5.6-7.3	0
Grimescreek-----	0-6	11-30	6.1-7.3	0
	6-11	7.0-15	6.1-7.3	0
	11-21	7.0-15	6.1-7.3	0
	21-23	4.0-15	6.1-7.3	0
	23-36	4.0-15	6.1-7.3	0
	36-58	4.0-15	6.1-7.3	0
	58-72	0.0-7.0	6.1-7.3	0
421: Dumps, dredge tailings-----	0-60	---	---	---
Oxyaquic Xerorthents, very stony surface--	0-1	---	4.5-5.5	0
	1-11	2.0-9.0	5.6-7.3	0
	11-22	2.0-6.0	5.6-7.3	0
	22-60	0.0-5.0	5.6-6.5	0
422: Lithic Xerorthents, very stony surface--	0-1	---	4.5-5.5	0
	1-3	3.0-8.0	5.6-7.3	0
	3-11	0.0-6.0	5.6-7.3	0
	11-24	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-	Soil	Calcium
		exchange capacity	reaction	carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
422:				
Dumps, placer tailings-----	0-24	---	---	---
	24-50	---	---	---
	50-60	---	---	---
Dystric Xeropsamments, very stony surface-----	0-1	---	4.5-5.5	0
	1-4	3.0-9.0	5.6-7.3	0
	4-15	2.0-6.0	5.6-7.3	0
	15-24	0.0-5.0	5.6-7.3	0
	24-50	---	---	---
	50-60	---	---	---
423:				
Dystric Xeropsamments, very stony surface-----	0-1	---	4.5-5.5	0
	1-4	3.0-9.0	5.6-7.3	0
	4-15	2.0-6.0	5.6-7.3	0
	15-24	0.0-5.0	5.6-7.3	0
	24-50	---	---	---
	50-60	---	---	---
Ultic Haploxeralfs---	0-1	---	4.5-5.5	0
	1-5	12-20	6.1-7.3	0
	5-11	15-25	5.6-7.3	0
	11-15	15-25	5.6-7.3	0
	15-25	15-25	5.6-6.5	0
	25-34	15-25	5.6-6.5	0
	34-60	7.0-20	5.6-6.5	0
Lithic Xerorthents---	0-1	---	4.5-5.5	0
	1-5	4.0-10	5.6-7.3	0
	5-10	2.0-6.0	5.6-7.3	0
	10-18	0.0-6.0	5.6-7.3	0
	18-30	---	---	---
424:				
Middlefork-----	0-1	---	4.5-5.5	0
	1-4	15-30	5.6-6.5	0
	4-12	12-25	5.6-6.5	0
	12-15	13-20	5.6-6.0	0
	15-32	12-25	5.6-6.0	0
	32-47	15-25	5.6-6.0	0
	47-61	15-25	5.6-6.0	0
Charters, coarse sandy loam-----	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-8	6.0-12	6.1-7.3	0
	8-15	7.0-12	6.1-7.3	0
	15-32	7.0-12	5.6-6.5	0
	32-48	7.0-12	5.6-6.5	0
	48-60	5.0-10	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
425:				
Middlefork-----	0-1	---	4.5-5.5	0
	1-4	15-30	5.6-6.5	0
	4-12	12-25	5.6-6.5	0
	12-15	13-20	5.6-6.0	0
	15-32	12-25	5.6-6.0	0
	32-47	15-25	5.6-6.0	0
	47-61	15-25	5.6-6.0	0
Brassey-----	0-1	---	4.5-5.5	0
	1-4	14-25	5.6-6.5	0
	4-11	9.0-15	5.6-6.5	0
	11-21	15-20	5.6-6.5	0
	21-37	15-20	5.6-6.5	0
	37-49	14-20	5.6-6.5	0
	49-60	2.0-7.0	5.6-6.5	0
426:				
Middlefork, moist----	0-2	---	4.5-5.5	0
	2-5	15-30	6.1-6.5	0
	5-13	12-25	6.1-6.5	0
	13-28	13-20	5.6-6.0	0
	28-36	12-25	5.6-6.0	0
	36-47	15-25	5.6-6.0	0
	47-62	15-25	5.6-6.0	0
427:				
Middlefork, moist----	0-2	---	4.5-5.5	0
	2-5	15-30	6.1-6.5	0
	5-13	12-25	6.1-6.5	0
	13-28	13-20	5.6-6.0	0
	28-36	12-25	5.6-6.0	0
	36-47	15-25	5.6-6.0	0
	47-62	15-25	5.6-6.0	0
428:				
Zeb, gravelly sandy loam-----	0-1	---	4.5-5.5	0
	1-8	12-25	6.1-7.3	0
	8-13	8.0-20	6.1-7.3	0
	13-23	6.0-12	6.1-7.3	0
	23-43	1.0-10	6.1-7.3	0
	43-60	1.0-5.0	6.1-7.3	0
Republic-----	0-2	---	4.5-5.5	0
	2-7	9.0-25	6.1-7.3	0
	7-14	5.0-9.0	6.1-7.3	0
	14-23	7.0-13	6.1-7.3	0
	23-42	7.0-13	6.1-7.3	0
	42-60	5.0-9.0	6.1-7.3	0
429:				
Huston, very stony surface-----	0-1	---	4.5-5.5	0
	1-6	9.0-25	5.6-6.5	0
	6-13	8.0-20	5.6-6.5	0
	13-26	7.0-15	5.6-6.5	0
	26-46	6.0-15	5.6-6.5	0
	46-60	3.0-9.0	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
503: Cartwright, dry-----	0-5	14-25	6.1-7.3	0
	5-20	14-25	6.1-7.3	0
	20-24	15-25	6.1-7.3	0
	24-60	15-25	6.1-7.3	0
504: Cartwright, dry-----	0-5	14-25	6.1-7.3	0
	5-20	14-25	6.1-7.3	0
	20-24	15-25	6.1-7.3	0
	24-60	15-25	6.1-7.3	0
505: Brownlee-----	0-4	14-30	5.6-6.5	0
	4-9	14-30	5.6-6.5	0
	9-16	14-25	5.6-6.5	0
	16-21	15-25	5.6-6.5	0
	21-27	15-25	5.6-6.5	0
	27-45	8.0-15	5.6-6.5	0
	45-50	---	---	---
	50-60	---	---	---
506: Brownlee-----	0-4	14-30	5.6-6.5	0
	4-9	14-30	5.6-6.5	0
	9-16	14-25	5.6-6.5	0
	16-21	15-25	5.6-6.5	0
	21-27	15-25	5.6-6.5	0
	27-45	8.0-15	5.6-6.5	0
	45-50	---	---	---
	50-60	---	---	---
Robbscreek-----	0-2	12-25	5.6-6.5	0
	2-6	12-25	5.6-6.5	0
	6-13	9.0-15	5.6-6.5	0
	13-19	14-20	6.1-7.3	0
	19-26	14-20	6.1-7.3	0
	26-30	14-20	6.1-7.3	0
	30-40	---	---	---
Whisk-----	0-3	8.0-18	5.6-6.5	0
	3-11	8.0-18	5.6-6.5	0
	11-14	5.0-10	5.6-6.5	0
	14-24	---	---	---
507: Shoebend-----	0-7	12-20	6.1-7.3	0
	7-14	11-15	6.1-7.3	0
	14-20	16-25	6.1-7.3	0
	20-28	16-25	6.1-7.3	0
	28-34	---	---	---
	34-44	---	---	---
Dobson-----	0-2	9.0-20	6.1-7.3	0
	2-12	8.0-15	6.1-7.3	0
	12-14	4.0-9.0	6.1-7.3	0
	14-24	---	---	---
Jerusalem-----	0-3	10-20	6.1-7.3	0
	3-12	9.0-15	6.1-7.3	0
	12-23	15-25	6.1-7.3	0
	23-38	15-25	6.1-7.3	0
	38-60	13-20	6.1-7.3	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
		<i>In</i> <i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
509:				
Arrowrock-----	0-2	3.0-10	6.6-7.3	0
	2-7	2.0-7.0	6.6-7.3	0
	7-12	1.0-6.0	6.6-7.3	0
	12-15	---	---	---
	15-25	---	---	---
Borid-----	0-3	9.0-15	6.1-7.3	0
	3-7	9.0-15	6.1-7.3	0
	7-15	7.0-12	6.1-7.3	0
	15-25	---	---	---
Rock outcrop-----	0-60	---	---	---
511:				
Olaton, north slope, moist-----	0-7	7.0-15	5.6-6.5	0
	7-29	7.0-15	5.6-6.5	0
	29-42	5.0-15	5.6-6.5	0
	42-60	4.0-9.0	5.6-6.5	0
Roney, moist-----	0-5	10-20	5.1-6.5	0
	5-17	10-20	5.1-6.5	0
	17-32	7.0-12	5.1-6.5	0
	32-38	4.0-9.0	5.1-6.5	0
	38-48	---	---	---
513:				
Shimo, fine gravelly loamy sand, north slope-----	0-7	5.0-15	6.1-7.3	0
	7-14	5.0-15	6.1-7.3	0
	14-30	2.0-7.0	6.1-7.3	0
	30-40	---	---	---
Cartwright-----	0-2	14-25	6.1-7.3	0
	2-8	14-25	6.1-7.3	0
	8-21	14-25	6.1-7.3	0
	21-33	11-15	6.1-7.3	0
	33-48	15-25	6.1-7.3	0
	48-60	15-25	6.1-7.3	0
Robbscreek, moist----	0-10	12-25	5.6-6.5	0
	10-22	14-20	6.1-7.3	0
	22-30	14-20	6.1-7.3	0
	30-40	---	---	---
516:				
Shimo, extremely stony surface-----	0-4	5.0-15	6.1-7.3	0
	4-12	5.0-15	6.1-7.3	0
	12-20	2.0-7.0	6.1-7.3	0
	20-24	2.0-7.0	6.1-7.3	0
	24-34	---	---	---
Olaton, south slope--	0-9	7.0-15	5.6-6.5	0
	9-25	7.0-20	5.6-6.5	0
	25-40	4.0-12	5.6-6.5	0
	40-60	4.0-12	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
516:				
Schiller, south slope	0-6	10-20	6.1-7.3	0
	6-18	10-20	6.1-7.3	0
	18-30	10-20	6.1-7.3	0
	30-45	7.0-12	6.1-7.3	0
	45-60	4.0-9.0	6.1-7.3	0
525:				
Robbscreek-----	0-2	12-25	5.6-6.5	0
	2-6	12-25	5.6-6.5	0
	6-13	9.0-15	5.6-6.5	0
	13-19	14-20	6.1-7.3	0
	19-26	14-20	6.1-7.3	0
	26-30	14-20	6.1-7.3	0
	30-40	---	---	---
Dobson-----	0-2	9.0-20	6.1-7.3	0
	2-12	8.0-15	6.1-7.3	0
	12-14	4.0-9.0	6.1-7.3	0
	14-24	---	---	---
Brownlee-----	0-4	14-30	5.6-6.5	0
	4-9	14-30	5.6-6.5	0
	9-16	14-25	5.6-6.5	0
	16-21	15-25	5.6-6.5	0
	21-27	15-25	5.6-6.5	0
	27-45	8.0-15	5.6-6.5	0
	45-50	---	---	---
	50-60	---	---	---
526:				
Cartwright-----	0-2	14-25	6.1-7.3	0
	2-8	14-25	6.1-7.3	0
	8-21	14-25	6.1-7.3	0
	21-33	11-15	6.1-7.3	0
	33-48	15-25	6.1-7.3	0
	48-60	15-25	6.1-7.3	0
Brownlee, moist-----	0-10	14-25	6.1-6.5	0
	10-31	15-25	6.1-6.5	0
	31-46	8.0-15	6.1-6.5	0
	46-60	---	---	---
Robbscreek, moist----	0-10	12-25	5.6-6.5	0
	10-22	14-20	6.1-7.3	0
	22-30	14-20	6.1-7.3	0
	30-40	---	---	---
527:				
Dobson-----	0-2	9.0-20	6.1-7.3	0
	2-12	8.0-15	6.1-7.3	0
	12-14	4.0-9.0	6.1-7.3	0
	14-24	---	---	---
Roney, dry-----	0-2	10-20	5.1-6.5	0
	2-12	7.0-12	5.1-6.5	0
	12-17	7.0-12	5.1-6.5	0
	17-30	7.0-12	5.1-6.5	0
	30-40	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
528:				
Roney, dry-----	0-2	10-20	5.1-6.5	0
	2-12	7.0-12	5.1-6.5	0
	12-17	7.0-12	5.1-6.5	0
	17-30	7.0-12	5.1-6.5	0
	30-40	---	---	---
Dobson-----	0-2	9.0-20	6.1-7.3	0
	2-12	8.0-15	6.1-7.3	0
	12-14	4.0-9.0	6.1-7.3	0
	14-24	---	---	---
Olaton, south slope--	0-9	7.0-15	5.6-6.5	0
	9-25	7.0-20	5.6-6.5	0
	25-40	4.0-12	5.6-6.5	0
	40-60	4.0-12	5.6-6.5	0
529:				
Roney-----	0-10	10-20	5.1-6.5	0
	10-24	7.0-12	5.1-6.5	0
	24-30	4.0-9.0	5.1-6.5	0
	30-40	---	---	---
Kisky, fine gravelly sandy loam-----	0-7	4.0-15	5.6-6.5	0
	7-12	2.0-7.0	5.6-6.5	0
	12-22	---	---	---
Olaton, south slope--	0-9	7.0-15	5.6-6.5	0
	9-25	7.0-20	5.6-6.5	0
	25-40	4.0-12	5.6-6.5	0
	40-60	4.0-12	5.6-6.5	0
532:				
Schiller, north slope	0-6	10-20	6.1-7.3	0
	6-18	10-20	6.1-7.3	0
	18-36	7.0-12	6.1-7.3	0
	36-60	4.0-9.0	6.1-7.3	0
Shimo, fine gravelly loamy sand, north slope-----	0-7	5.0-15	6.1-7.3	0
	7-14	5.0-15	6.1-7.3	0
	14-30	2.0-7.0	6.1-7.3	0
	30-40	---	---	---
533:				
Olaton, north slope, dry-----	0-5	7.0-15	5.6-6.5	0
	5-22	7.0-15	5.6-6.5	0
	22-38	4.0-12	5.6-6.5	0
	38-55	4.0-12	5.6-6.5	0
	55-65	4.0-12	5.6-6.5	0
Roney, moist-----	0-5	10-20	5.1-6.5	0
	5-17	10-20	5.1-6.5	0
	17-32	7.0-12	5.1-6.5	0
	32-38	4.0-9.0	5.1-6.5	0
	38-48	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
534:				
Shimo, fine gravelly loamy sand-----	0-3	5.0-15	6.1-7.3	0
	3-12	5.0-15	6.1-7.3	0
	12-25	2.0-7.0	6.1-7.3	0
	25-35	---	---	---
Kisky, fine gravelly sandy loam-----	0-7	4.0-15	5.6-6.5	0
	7-12	2.0-7.0	5.6-6.5	0
	12-22	---	---	---
Schiller-----	0-3	10-20	6.1-7.3	0
	3-13	10-20	6.1-7.3	0
	13-21	10-20	6.1-7.3	0
	21-27	7.0-12	6.1-7.3	0
	27-46	4.0-9.0	6.1-7.3	0
	46-60	4.0-9.0	6.1-7.3	0
538:				
Borid-----	0-3	9.0-15	6.1-7.3	0
	3-7	9.0-15	6.1-7.3	0
	7-15	7.0-12	6.1-7.3	0
	15-25	---	---	---
Shimo, fine gravelly loamy sand-----	0-3	5.0-15	6.1-7.3	0
	3-12	5.0-15	6.1-7.3	0
	12-25	2.0-7.0	6.1-7.3	0
	25-35	---	---	---
541:				
Roney-----	0-10	10-20	5.1-6.5	0
	10-24	7.0-12	5.1-6.5	0
	24-30	4.0-9.0	5.1-6.5	0
	30-40	---	---	---
Kisky, fine gravelly sandy loam-----	0-7	4.0-15	5.6-6.5	0
	7-12	2.0-7.0	5.6-6.5	0
	12-22	---	---	---
544:				
Arrowrock-----	0-2	3.0-10	6.6-7.3	0
	2-7	2.0-7.0	6.6-7.3	0
	7-12	1.0-6.0	6.6-7.3	0
	12-15	---	---	---
	15-25	---	---	---
Borid-----	0-3	9.0-15	6.1-7.3	0
	3-7	9.0-15	6.1-7.3	0
	7-15	7.0-12	6.1-7.3	0
	15-25	---	---	---
Painter-----	0-2	3.0-10	6.6-7.3	0
	2-18	2.0-6.0	6.6-7.3	0
	18-24	2.0-6.0	6.6-7.3	0
	24-36	---	---	---
	36-46	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
551: Shimo, fine gravelly loamy sand, north slope-----	0-7	5.0-15	6.1-7.3	0
	7-14	5.0-15	6.1-7.3	0
	14-30	2.0-7.0	6.1-7.3	0
	30-40	---	---	---
Kisky, fine gravelly loamy sand-----	0-10	5.0-15	6.1-6.5	0
	10-16	2.0-8.0	6.1-6.5	0
	16-26	---	---	---
555: Brownlee-----	0-4	14-30	5.6-6.5	0
	4-9	14-30	5.6-6.5	0
	9-16	14-25	5.6-6.5	0
	16-21	15-25	5.6-6.5	0
	21-27	15-25	5.6-6.5	0
	27-45	8.0-15	5.6-6.5	0
	45-50	---	---	---
	50-60	---	---	---
Schiller-----	0-3	10-20	6.1-7.3	0
	3-13	10-20	6.1-7.3	0
	13-21	10-20	6.1-7.3	0
	21-27	7.0-12	6.1-7.3	0
	27-46	4.0-9.0	6.1-7.3	0
	46-60	4.0-9.0	6.1-7.3	0
556: Kisky, fine gravelly sandy loam-----	0-7	4.0-15	5.6-6.5	0
	7-12	2.0-7.0	5.6-6.5	0
	12-22	---	---	---
Shimo, fine gravelly loamy sand-----	0-3	5.0-15	6.1-7.3	0
	3-12	5.0-15	6.1-7.3	0
	12-25	2.0-7.0	6.1-7.3	0
	25-35	---	---	---
Brownlee-----	0-4	14-30	5.6-6.5	0
	4-9	14-30	5.6-6.5	0
	9-16	14-25	5.6-6.5	0
	16-21	15-25	5.6-6.5	0
	21-27	15-25	5.6-6.5	0
	27-45	8.0-15	5.6-6.5	0
	45-50	---	---	---
	50-60	---	---	---
558: Kisky, fine gravelly sandy loam-----	0-7	4.0-15	5.6-6.5	0
	7-12	2.0-7.0	5.6-6.5	0
	12-22	---	---	---
Whisk-----	0-3	8.0-18	5.6-6.5	0
	3-11	8.0-18	5.6-6.5	0
	11-14	5.0-10	5.6-6.5	0
	14-24	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	pH	Pct
558:				
Roney, dry-----	0-2	10-20	5.1-6.5	0
	2-12	7.0-12	5.1-6.5	0
	12-17	7.0-12	5.1-6.5	0
	17-30	7.0-12	5.1-6.5	0
	30-40	---	---	---
560:				
Robbscreek, moist----	0-10	12-25	5.6-6.5	0
	10-22	14-20	6.1-7.3	0
	22-30	14-20	6.1-7.3	0
	30-40	---	---	---
Hellake-----	0-3	15-30	5.6-6.5	0
	3-10	15-25	5.6-6.5	0
	10-22	20-25	5.1-6.0	0
	22-36	20-25	5.1-6.0	0
	36-43	20-25	5.1-6.0	0
	43-53	11-20	5.1-6.0	0
	53-60	4.0-15	5.1-6.0	0
	60-66	4.0-15	5.1-6.0	0
Shimo, fine gravelly loamy sand, north slope-----	0-7	5.0-15	6.1-7.3	0
	7-14	5.0-15	6.1-7.3	0
	14-30	2.0-7.0	6.1-7.3	0
	30-40	---	---	---
561:				
Shimo, fine gravelly sandy loam, north slope-----	0-11	5.0-15	6.1-7.3	0
	11-16	2.0-7.0	6.1-7.3	0
	16-32	2.0-7.0	6.1-7.3	0
	32-42	---	---	---
Kisky, fine gravelly loamy sand-----	0-10	5.0-15	6.1-6.5	0
	10-16	2.0-8.0	6.1-6.5	0
	16-26	---	---	---
Olaton, north slope, moist-----	0-7	7.0-15	5.6-6.5	0
	7-29	7.0-15	5.6-6.5	0
	29-42	5.0-15	5.6-6.5	0
	42-60	4.0-9.0	5.6-6.5	0
562:				
Kisky, fine gravelly sandy loam-----	0-7	4.0-15	5.6-6.5	0
	7-12	2.0-7.0	5.6-6.5	0
	12-22	---	---	---
Shimo, fine gravelly sandy loam-----	0-8	4.0-13	6.1-7.3	0
	8-32	2.0-5.0	6.1-7.3	0
	32-42	---	---	---
Roney-----	0-10	10-20	5.1-6.5	0
	10-24	7.0-12	5.1-6.5	0
	24-30	4.0-9.0	5.1-6.5	0
	30-40	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	pH	Pct
600:				
McDesh-----	0-3	20-30	6.6-7.3	0
	3-11	20-30	6.6-7.3	0
	11-21	30-40	6.6-7.3	0
	21-24	30-35	6.6-7.3	0
	24-34	---	---	---
Immig, rubbly surface	0-4	14-30	6.6-7.3	0
	4-7	20-25	6.6-7.3	0
	7-17	30-45	6.6-7.3	0
	17-25	30-45	6.6-7.3	0
	25-35	---	---	---
Gwin, very stony loam, extremely stony surface-----	0-4	15-30	6.6-7.3	0
	4-7	15-30	6.6-7.3	0
	7-13	20-25	6.6-7.3	0
	13-22	---	---	---
601:				
Hann-----	0-3	15-25	6.1-7.3	0
	3-6	20-30	6.1-7.3	0
	6-13	30-40	6.1-7.3	0
	13-25	30-40	6.1-7.3	0
	25-44	15-25	6.6-7.8	0
	44-72	15-25	6.6-7.8	0
Gwin, very stony loam, extremely stony surface-----	0-4	15-30	6.6-7.3	0
	4-7	15-30	6.6-7.3	0
	7-13	20-25	6.6-7.3	0
	13-22	---	---	---
Shafer-----	0-1	25-40	6.1-7.3	0
	1-7	30-45	6.1-7.3	0
	7-18	35-50	6.1-7.3	0
	18-22	25-30	6.1-7.3	0
	22-25	---	---	---
	25-35	---	---	---
602:				
Hillcreek-----	0-2	15-30	6.6-7.3	0
	2-10	15-30	6.6-7.3	0
	10-27	15-25	6.6-7.3	0
	27-43	20-25	6.6-7.3	0
	43-59	20-25	6.6-7.3	0
	59-66	20-25	6.6-7.8	0
Hovelton, cobbly ashy loam, moist, very stony surface-----	0-12	12-25	6.1-7.3	0
	12-22	15-25	6.1-7.3	0
	22-32	---	---	---
Hann-----	0-3	15-25	6.1-7.3	0
	3-6	20-30	6.1-7.3	0
	6-13	30-40	6.1-7.3	0
	13-25	30-40	6.1-7.3	0
	25-44	15-25	6.6-7.8	0
	44-72	15-25	6.6-7.8	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	pH	Pct
604:				
Shafer-----	0-1	25-40	6.1-7.3	0
	1-7	30-45	6.1-7.3	0
	7-18	35-50	6.1-7.3	0
	18-22	25-30	6.1-7.3	0
	22-25	---	---	---
	25-35	---	---	---
Hann-----	0-3	15-25	6.1-7.3	0
	3-6	20-30	6.1-7.3	0
	6-13	30-40	6.1-7.3	0
	13-25	30-40	6.1-7.3	0
	25-44	15-25	6.6-7.8	0
	44-72	15-25	6.6-7.8	0
605:				
Gwin, very stony loam, extremely stony surface-----	0-4	15-30	6.6-7.3	0
	4-7	15-30	6.6-7.3	0
	7-13	20-25	6.6-7.3	0
	13-22	---	---	---
Flybow-----	0-3	7.0-12	6.1-7.3	0
	3-8	7.0-12	6.1-7.3	0
	8-18	---	---	---
606:				
Hillcreek-----	0-2	15-30	6.6-7.3	0
	2-10	15-30	6.6-7.3	0
	10-27	15-25	6.6-7.3	0
	27-43	20-25	6.6-7.3	0
	43-59	20-25	6.6-7.3	0
	59-66	20-25	6.6-7.8	0
Hovelton, cobbly ashy loam, moist, very stony surface-----	0-12	12-25	6.1-7.3	0
	12-22	15-25	6.1-7.3	0
	22-32	---	---	---
607:				
Duco, stony loam, very stony surface--	0-3	12-25	6.6-7.8	0
	3-15	20-25	6.6-7.8	0
	15-25	---	---	---
Immig, very stony surface-----	0-4	15-30	6.6-7.3	0
	4-10	25-40	6.6-7.3	0
	10-14	30-45	6.6-7.3	0
	14-25	30-45	6.6-7.3	0
	25-35	---	---	---
Rubble land-----	0-20	---	---	---
	20-30	---	---	---
608:				
Duco, very gravelly loam, stony surface	0-4	13-25	6.6-7.8	0
	4-13	11-20	6.6-7.8	0
	13-19	20-25	6.6-7.8	0
	19-29	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
608:				
Hovelton, gravelly ashy loam-----	0-7	12-25	6.1-7.3	0
	7-17	12-25	6.1-7.3	0
	17-38	20-30	6.1-7.3	0
	38-48	---	---	---
McDesh, south slope--	0-3	20-30	6.6-7.3	0
	3-8	30-40	6.6-7.3	0
	8-37	30-35	6.6-7.3	0
	37-47	---	---	---
610:				
Hovelton, cobbly ashy loam, very stony surface-----	0-2	12-25	6.1-7.3	0
	2-6	12-25	6.1-7.3	0
	6-13	15-25	6.1-7.3	0
	13-24	15-25	6.1-7.3	0
	24-34	---	---	---
Duco, stony loam, very stony surface--	0-3	12-25	6.6-7.8	0
	3-15	20-25	6.6-7.8	0
	15-25	---	---	---
McDesh, south slope--	0-3	20-30	6.6-7.3	0
	3-8	30-40	6.6-7.3	0
	8-37	30-35	6.6-7.3	0
	37-47	---	---	---
612:				
Hann-----	0-3	15-25	6.1-7.3	0
	3-6	20-30	6.1-7.3	0
	6-13	30-40	6.1-7.3	0
	13-25	30-40	6.1-7.3	0
	25-44	15-25	6.6-7.8	0
	44-72	15-25	6.6-7.8	0
Hillcreek, dry-----	0-6	15-30	6.6-7.3	0
	6-12	20-30	6.6-7.3	0
	12-22	20-30	6.6-7.3	0
	22-36	20-25	6.6-7.3	0
	36-60	20-25	6.6-7.8	0
613:				
Duco, stony loam, very stony surface--	0-3	12-25	6.6-7.8	0
	3-15	20-25	6.6-7.8	0
	15-25	---	---	---
Searles, very stony surface-----	0-3	15-25	6.6-7.3	0
	3-8	20-30	6.6-7.3	0
	8-15	20-30	6.6-7.3	0
	15-25	20-25	6.6-7.8	0
	25-35	---	---	---
McDesh, south slope--	0-3	20-30	6.6-7.3	0
	3-8	30-40	6.6-7.3	0
	8-37	30-35	6.6-7.3	0
	37-47	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
618:				
McDesh, south slope--	0-3	20-30	6.6-7.3	0
	3-8	30-40	6.6-7.3	0
	8-37	30-35	6.6-7.3	0
	37-47	---	---	---
Duco, very gravelly loam, stony surface	0-4	13-25	6.6-7.8	0
	4-13	11-20	6.6-7.8	0
	13-19	20-25	6.6-7.8	0
	19-29	---	---	---
Shafer-----	0-1	25-40	6.1-7.3	0
	1-7	30-45	6.1-7.3	0
	7-18	35-50	6.1-7.3	0
	18-22	25-30	6.1-7.3	0
	22-25	---	---	---
	25-35	---	---	---
619:				
McDesh-----	0-3	20-30	6.6-7.3	0
	3-11	20-30	6.6-7.3	0
	11-21	30-40	6.6-7.3	0
	21-24	30-35	6.6-7.3	0
	24-34	---	---	---
Gwin, gravelly loam, stony surface-----	0-2	11-25	6.6-7.3	0
	2-7	10-20	6.6-7.3	0
	7-15	20-25	6.6-7.3	0
	15-23	---	---	---
Shafer-----	0-1	25-40	6.1-7.3	0
	1-7	30-45	6.1-7.3	0
	7-18	35-50	6.1-7.3	0
	18-22	25-30	6.1-7.3	0
	22-25	---	---	---
	25-35	---	---	---
620:				
Immig, very stony surface-----	0-4	15-30	6.6-7.3	0
	4-10	25-40	6.6-7.3	0
	10-14	30-45	6.6-7.3	0
	14-25	30-45	6.6-7.3	0
	25-35	---	---	---
McDesh, south slope--	0-3	20-30	6.6-7.3	0
	3-8	30-40	6.6-7.3	0
	8-37	30-35	6.6-7.3	0
	37-47	---	---	---
Duco, stony loam, very stony surface--	0-3	12-25	6.6-7.8	0
	3-15	20-25	6.6-7.8	0
	15-25	---	---	---
621:				
McDaniel-----	0-4	20-30	6.6-7.3	0
	4-14	20-30	6.6-7.3	0
	14-23	15-25	6.6-7.3	0
	23-34	15-25	6.6-7.3	0
	34-60	20-25	6.6-7.3	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
621: Hovelton, gravelly ashy loam-----	0-7	12-25	6.1-7.3	0
	7-17	12-25	6.1-7.3	0
	17-38	20-30	6.1-7.3	0
	38-48	---	---	---
622: Hovelton, gravelly ashy loam-----	0-7	12-25	6.1-7.3	0
	7-17	12-25	6.1-7.3	0
	17-38	20-30	6.1-7.3	0
	38-48	---	---	---
Gwin, very stony loam, extremely stony surface-----	0-4	15-30	6.6-7.3	0
	4-7	15-30	6.6-7.3	0
	7-13	20-25	6.6-7.3	0
	13-22	---	---	---
630: Gwin, very gravelly loam-----	0-5	12-20	6.1-7.3	0
	5-15	20-25	6.1-7.3	0
	15-24	---	---	---
Flybow-----	0-3	7.0-12	6.1-7.3	0
	3-8	7.0-12	6.1-7.3	0
	8-18	---	---	---
Rock outcrop-----	0-60	---	---	---
631: Flybow-----	0-3	7.0-12	6.1-7.3	0
	3-8	7.0-12	6.1-7.3	0
	8-18	---	---	---
Rock outcrop-----	0-60	---	---	---
Rubble land-----	0-20	---	---	---
	20-30	---	---	---
634: Gwin, very stony loam, extremely stony surface-----	0-4	15-30	6.6-7.3	0
	4-7	15-30	6.6-7.3	0
	7-13	20-25	6.6-7.3	0
	13-22	---	---	---
McDesh, very stony loam, very stony surface-----	0-3	20-30	6.6-7.3	0
	3-7	20-30	6.6-7.3	0
	7-12	25-35	6.6-7.3	0
	12-20	30-50	6.6-7.8	0
	20-24	30-45	6.6-7.8	0
	24-34	---	---	---
Rock outcrop-----	0-60	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
635: Shafer, very stony surface-----	0-2	20-30	6.1-7.3	0
	2-6	20-30	6.1-7.3	0
	6-9	30-45	6.1-7.3	0
	9-19	30-45	6.1-7.3	0
	19-22	20-25	6.1-7.3	0
	22-32	---	---	---
Karney-----	0-3	20-30	6.6-7.3	0
	3-6	30-50	6.6-7.3	0
	6-12	25-50	6.6-7.3	0
	12-20	25-35	6.6-7.3	0
	20-31	25-35	6.6-7.3	0
	31-55	---	---	---
	55-65	---	---	---
Yad-----	0-2	20-30	6.6-7.3	0
	2-6	20-30	6.6-7.3	0
	6-14	20-50	6.6-7.3	0
	14-25	20-50	6.6-7.3	0
	25-41	15-35	6.6-7.8	0
	41-52	15-35	6.6-7.8	0
	52-60	15-35	6.6-7.8	0
636: Hann, stony surface--	0-4	20-30	6.1-7.3	0
	4-11	20-35	6.1-7.3	0
	11-20	25-35	6.1-7.3	0
	20-27	30-40	6.1-7.3	0
	27-38	30-45	6.1-7.3	0
	38-41	30-45	6.1-7.3	0
	41-52	30-45	6.6-7.8	0
	52-60	30-45	6.6-7.8	0
McDesh, very stony loam, extremely bouldery surface----	0-3	15-25	6.6-7.3	0
	3-12	20-30	6.6-7.3	0
	12-17	20-30	6.6-7.3	0
	17-21	30-45	6.6-7.8	0
	21-32	30-45	6.6-7.8	0
	32-37	30-45	6.6-7.8	0
	37-39	20-25	6.6-7.8	0
	39-41	---	---	---
Robbscreek, moist----	0-10	12-25	5.6-6.5	0
	10-22	14-20	6.1-7.3	0
	22-30	14-20	6.1-7.3	0
	30-40	---	---	---
638: Yad-----	0-2	20-30	6.6-7.3	0
	2-6	20-30	6.6-7.3	0
	6-14	20-50	6.6-7.3	0
	14-25	20-50	6.6-7.3	0
	25-41	15-35	6.6-7.8	0
	41-52	15-35	6.6-7.8	0
	52-60	15-35	6.6-7.8	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
638:				
Cranegulch-----	0-3	14-25	6.1-7.3	0
	3-10	14-25	6.1-7.3	0
	10-14	15-25	6.1-7.3	0
	14-21	25-35	6.1-7.3	0
	21-33	25-35	6.1-7.3	0
	33-50	25-35	6.1-7.3	0
	50-60	25-35	6.1-7.3	0
Duco, stony loam, very stony surface--	0-3	12-25	6.6-7.8	0
	3-15	20-25	6.6-7.8	0
	15-25	---	---	---
640:				
Timberbutte-----	0-2	---	4.5-5.5	0
	2-12	11-25	6.1-6.5	0
	12-21	11-25	6.1-6.5	0
	21-29	7.0-14	6.1-6.5	0
	29-39	6.0-10	5.6-6.5	0
	39-60	4.0-9.0	5.6-6.5	0
641:				
Aradaran-----	0-3	20-30	5.6-6.5	0
	3-9	20-30	5.6-6.5	0
	9-14	20-30	5.6-6.5	0
	14-23	25-35	5.6-6.5	0
	23-29	25-35	5.6-6.5	0
	29-42	25-35	5.6-6.5	0
	42-55	20-30	5.6-6.5	0
	55-60	20-30	5.6-6.5	0
Yad-----	0-2	20-30	6.6-7.3	0
	2-6	20-30	6.6-7.3	0
	6-14	20-50	6.6-7.3	0
	14-25	20-50	6.6-7.3	0
	25-41	15-35	6.6-7.8	0
	41-52	15-35	6.6-7.8	0
	52-60	15-35	6.6-7.8	0
650:				
Longs-----	0-1	---	4.5-5.5	0
	1-9	14-30	5.6-6.5	0
	9-29	12-20	5.6-6.5	0
	29-44	14-20	5.6-6.5	0
	44-49	14-20	5.6-6.5	0
	49-59	---	---	---
Highvalley-----	0-1	---	4.5-5.5	0
	1-5	15-30	5.6-6.5	0
	5-10	15-35	5.6-6.5	0
	10-24	15-25	5.6-6.5	0
	24-48	15-20	5.6-6.5	0
	48-66	10-20	5.6-6.5	0
Hoff-----	0-6	13-25	6.1-7.3	0
	6-11	11-25	6.1-7.3	0
	11-19	20-30	5.6-7.3	0
	19-29	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
651:				
Hess-----	0-1	---	4.5-5.5	0
	1-4	20-35	5.6-6.5	0
	4-10	20-35	5.6-6.5	0
	10-15	16-25	5.6-6.5	0
	15-20	19-27	5.6-6.5	0
	20-29	20-27	5.6-6.5	0
	29-38	20-27	5.6-6.5	0
	38-44	20-27	5.6-6.5	0
	44-54	---	---	---
Lidos-----	0-1	---	4.5-5.5	0
	1-9	6.0-16	5.6-6.5	0
	9-16	14-30	5.6-6.5	0
	16-22	20-27	5.6-6.5	0
	22-40	20-27	5.6-6.5	0
	40-47	20-27	5.6-6.5	0
	47-53	20-27	5.6-6.5	0
	53-60	8.0-15	5.6-6.5	0
Cleymor-----	0-1	---	4.5-5.5	0
	1-4	20-35	5.6-6.5	0
	4-7	20-35	5.6-6.5	0
	7-11	30-45	5.6-6.5	0
	11-18	30-45	5.6-6.5	0
	18-31	25-40	5.6-6.5	0
	31-37	25-40	5.6-6.5	0
	37-45	30-40	5.6-6.5	0
	45-60	30-40	5.6-6.5	0
652:				
Hess-----	0-1	---	4.5-5.5	0
	1-4	20-35	5.6-6.5	0
	4-10	20-35	5.6-6.5	0
	10-15	16-25	5.6-6.5	0
	15-20	19-27	5.6-6.5	0
	20-29	20-27	5.6-6.5	0
	29-38	20-27	5.6-6.5	0
	38-44	20-27	5.6-6.5	0
	44-54	---	---	---
Lidos-----	0-1	---	4.5-5.5	0
	1-9	6.0-16	5.6-6.5	0
	9-16	14-30	5.6-6.5	0
	16-22	20-27	5.6-6.5	0
	22-40	20-27	5.6-6.5	0
	40-47	20-27	5.6-6.5	0
	47-53	20-27	5.6-6.5	0
	53-60	8.0-15	5.6-6.5	0
Klicker-----	0-1	---	4.5-5.5	0
	1-8	13-25	6.1-6.5	0
	8-12	14-30	6.1-6.5	0
	12-17	20-25	5.6-6.5	0
	17-26	20-30	5.6-6.5	0
	26-36	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
653:				
Lidos-----	0-1	---	4.5-5.5	0
	1-9	6.0-16	5.6-6.5	0
	9-16	14-30	5.6-6.5	0
	16-22	20-27	5.6-6.5	0
	22-40	20-27	5.6-6.5	0
	40-47	20-27	5.6-6.5	0
	47-53	20-27	5.6-6.5	0
	53-60	8.0-15	5.6-6.5	0
Klicker-----	0-1	---	4.5-5.5	0
	1-8	13-25	6.1-6.5	0
	8-12	14-30	6.1-6.5	0
	12-17	20-25	5.6-6.5	0
	17-26	20-30	5.6-6.5	0
	26-36	---	---	---
Hess-----	0-1	---	4.5-5.5	0
	1-4	20-35	5.6-6.5	0
	4-10	20-35	5.6-6.5	0
	10-15	16-25	5.6-6.5	0
	15-20	19-27	5.6-6.5	0
	20-29	20-27	5.6-6.5	0
	29-38	20-27	5.6-6.5	0
	38-44	20-27	5.6-6.5	0
	44-54	---	---	---
654:				
Shilling-----	0-1	---	4.5-5.5	0
	1-5	13-25	5.6-6.5	0
	5-10	15-30	5.6-6.5	0
	10-19	15-25	5.6-6.5	0
	19-35	14-20	5.6-6.5	0
	35-54	14-20	5.6-6.5	0
	54-60	14-20	5.6-6.5	0
Highvalley-----	0-1	---	4.5-5.5	0
	1-5	15-30	5.6-6.5	0
	5-10	15-35	5.6-6.5	0
	10-24	15-25	5.6-6.5	0
	24-48	15-20	5.6-6.5	0
	48-66	10-20	5.6-6.5	0
Hoff-----	0-6	13-25	6.1-7.3	0
	6-11	11-25	6.1-7.3	0
	11-19	20-30	5.6-7.3	0
	19-29	---	---	---
655:				
Shilling, moist-----	0-2	---	4.5-5.5	0
	2-9	13-25	5.6-6.5	0
	9-15	15-30	5.6-6.5	0
	15-25	15-25	5.6-6.5	0
	25-45	15-25	5.6-6.5	0
	45-60	14-20	5.6-6.5	0
Highvalley, moist----	0-1	---	4.5-5.5	0
	1-10	15-30	5.6-6.5	0
	10-35	15-25	5.6-6.5	0
	35-60	12-20	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
656:				
Shilling, moist-----	0-2	---	4.5-5.5	0
	2-9	13-25	5.6-6.5	0
	9-15	15-30	5.6-6.5	0
	15-25	15-25	5.6-6.5	0
	25-45	15-25	5.6-6.5	0
	45-60	14-20	5.6-6.5	0
Highvalley, moist----	0-1	---	4.5-5.5	0
	1-10	15-30	5.6-6.5	0
	10-35	15-25	5.6-6.5	0
	35-60	12-20	5.6-6.5	0
657:				
Pumpkin, stony surface-----	0-1	---	4.5-5.5	0
	1-3	20-30	5.1-6.0	0
	3-9	20-30	5.1-6.0	0
	9-14	0.0-25	5.1-6.0	0
	14-22	20-25	5.1-6.0	0
	22-44	8.0-12	5.1-6.0	0
	44-60	8.0-12	5.1-6.0	0
658:				
Cleymor-----	0-1	---	4.5-5.5	0
	1-4	20-35	5.6-6.5	0
	4-7	20-35	5.6-6.5	0
	7-11	30-45	5.6-6.5	0
	11-18	30-45	5.6-6.5	0
	18-31	25-40	5.6-6.5	0
	31-37	25-40	5.6-6.5	0
	37-45	30-40	5.6-6.5	0
	45-60	30-40	5.6-6.5	0
Pumpkin, stony surface-----	0-1	---	4.5-5.5	0
	1-3	20-30	5.1-6.0	0
	3-9	20-30	5.1-6.0	0
	9-14	0.0-25	5.1-6.0	0
	14-22	20-25	5.1-6.0	0
	22-44	8.0-12	5.1-6.0	0
	44-60	8.0-12	5.1-6.0	0
659:				
Hoff, south slope----	0-7	13-25	6.1-7.3	0
	7-12	20-30	5.6-7.3	0
	12-22	---	---	---
660:				
Longs-----	0-1	---	4.5-5.5	0
	1-9	14-30	5.6-6.5	0
	9-29	12-20	5.6-6.5	0
	29-44	14-20	5.6-6.5	0
	44-49	14-20	5.6-6.5	0
	49-59	---	---	---
Highvalley-----	0-1	---	4.5-5.5	0
	1-5	15-30	5.6-6.5	0
	5-10	15-35	5.6-6.5	0
	10-24	15-25	5.6-6.5	0
	24-48	15-20	5.6-6.5	0
	48-66	10-20	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
661:				
Awley-----	0-1	---	4.5-5.5	0
	1-8	---	5.6-6.5	0
	8-18	---	5.6-6.5	0
	18-25	---	5.6-6.5	0
	25-37	---	5.6-6.5	0
	37-45	---	5.6-6.5	0
	45-60	---	5.6-6.5	0
Bo-----	0-1	---	4.5-5.5	0
	1-4	20-30	5.6-6.5	0
	4-10	20-30	5.6-6.5	0
	10-16	9.0-15	5.6-6.5	0
	16-25	8.0-15	5.6-6.5	0
	25-51	8.0-15	5.6-6.5	0
	51-60	7.0-12	5.6-6.5	0
662:				
Awley-----	0-1	---	4.5-5.5	0
	1-8	---	5.6-6.5	0
	8-18	---	5.6-6.5	0
	18-25	---	5.6-6.5	0
	25-37	---	5.6-6.5	0
	37-45	---	5.6-6.5	0
	45-60	---	5.6-6.5	0
Bo-----	0-1	---	4.5-5.5	0
	1-4	20-30	5.6-6.5	0
	4-10	20-30	5.6-6.5	0
	10-16	9.0-15	5.6-6.5	0
	16-25	8.0-15	5.6-6.5	0
	25-51	8.0-15	5.6-6.5	0
	51-60	7.0-12	5.6-6.5	0
663:				
Cleymor-----	0-1	---	4.5-5.5	0
	1-4	20-35	5.6-6.5	0
	4-7	20-35	5.6-6.5	0
	7-11	30-45	5.6-6.5	0
	11-18	30-45	5.6-6.5	0
	18-31	25-40	5.6-6.5	0
	31-37	25-40	5.6-6.5	0
	37-45	30-40	5.6-6.5	0
	45-60	30-40	5.6-6.5	0
Hoff-----	0-6	13-25	6.1-7.3	0
	6-11	11-25	6.1-7.3	0
	11-19	20-30	5.6-7.3	0
	19-29	---	---	---
666:				
Pachic Argixerolls, very stony surface--	0-1	---	4.5-5.5	0
	1-11	13-35	6.1-7.3	0
	11-18	11-30	6.1-7.3	0
	18-24	9.0-35	6.1-7.3	0
	24-30	8.0-30	6.1-7.3	0
	30-48	8.0-30	6.1-7.3	0
	48-60	8.0-30	6.1-7.3	0
Rubble land-----	0-60	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
666: Typic Haploxerolls, extremely stony surface-----	0-8	12-25	6.1-7.3	0
	8-18	10-20	6.1-7.3	0
	18-26	11-20	6.1-7.3	0
	26-60	11-20	6.1-7.3	0
700: Drybuck-----	0-1	---	4.5-5.5	0
	1-7	10-20	5.6-7.3	0
	7-15	10-20	5.6-7.3	0
	15-31	5.0-15	5.6-7.3	0
	31-43	4.0-12	5.6-7.3	0
	43-53	4.0-12	5.6-7.3	0
	53-63	---	---	---
Whisk, moist-----	0-7	8.0-20	5.6-6.5	0
	7-15	5.0-10	5.6-6.5	0
	15-25	---	---	---
701: Drybuck-----	0-1	---	4.5-5.5	0
	1-7	10-20	5.6-7.3	0
	7-15	10-20	5.6-7.3	0
	15-31	5.0-15	5.6-7.3	0
	31-43	4.0-12	5.6-7.3	0
	43-53	4.0-12	5.6-7.3	0
	53-63	---	---	---
Whisk, moist-----	0-7	8.0-20	5.6-6.5	0
	7-15	5.0-10	5.6-6.5	0
	15-25	---	---	---
702: Deerrun-----	0-1	---	4.5-5.5	0
	1-11	7.0-20	5.6-7.3	0
	11-19	4.0-12	5.6-7.3	0
	19-33	4.0-12	5.6-7.3	0
	33-43	---	---	---
Kisky, fine gravelly sandy loam, moist---	0-1	---	4.5-5.5	0
	1-8	4.0-15	6.1-6.5	0
	8-14	2.0-8.0	6.1-6.5	0
	14-24	---	---	---
Drybuck, dry-----	0-1	---	4.5-5.5	0
	1-6	10-20	5.6-7.3	0
	6-25	5.0-20	5.6-7.3	0
	25-45	4.0-12	5.6-7.3	0
	45-57	4.0-12	5.6-7.3	0
	57-67	---	---	---
704: Drybuck-----	0-1	---	4.5-5.5	0
	1-7	10-20	5.6-7.3	0
	7-15	10-20	5.6-7.3	0
	15-31	5.0-15	5.6-7.3	0
	31-43	4.0-12	5.6-7.3	0
	43-53	4.0-12	5.6-7.3	0
	53-63	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
704:				
Northfork, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	12-25	6.1-7.3	0
	4-14	10-20	6.1-7.3	0
	14-44	7.0-12	5.6-6.5	0
	44-56	4.0-12	5.6-6.5	0
	56-60	4.0-12	5.6-6.5	0
Whisk, moist-----	0-7	8.0-20	5.6-6.5	0
	7-15	5.0-10	5.6-6.5	0
	15-25	---	---	---
705:				
Northfork, sandy loam	0-1	---	4.5-5.5	0
	1-7	12-25	6.1-7.3	0
	7-18	7.0-12	5.6-6.5	0
	18-34	4.0-12	5.6-6.5	0
	34-39	4.0-10	5.6-6.5	0
	39-60	2.0-8.0	5.6-6.5	0
Shirts, sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-5	9.0-25	5.6-6.5	0
	5-12	8.0-25	5.6-6.5	0
	12-21	5.0-14	5.6-6.5	0
	21-33	4.0-10	5.6-6.5	0
	33-39	2.0-6.0	5.6-6.5	0
	39-49	---	---	---
706:				
Northfork, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	12-25	6.1-7.3	0
	4-14	10-20	6.1-7.3	0
	14-44	7.0-12	5.6-6.5	0
	44-56	4.0-12	5.6-6.5	0
	56-60	4.0-12	5.6-6.5	0
Shirts, coarse sandy loam-----	0-1	---	4.5-5.5	0
	1-3	9.0-25	5.6-6.5	0
	3-10	7.0-20	5.6-6.5	0
	10-15	4.0-10	5.6-6.5	0
	15-25	4.0-10	5.6-6.5	0
	25-29	2.0-7.0	5.6-6.5	0
	29-39	---	---	---
Zimmer-----	0-7	7.0-20	5.6-6.5	0
	7-14	4.0-10	5.6-6.5	0
	14-24	---	---	---
707:				
Packerjohn, ashy coarse sandy loam---	0-2	---	4.5-5.5	0
	2-10	7.0-20	6.1-7.3	0
	10-19	5.0-15	6.1-7.3	0
	19-33	3.0-8.0	5.6-6.5	0
	33-44	2.0-5.0	5.6-6.5	0
	44-60	2.0-5.0	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-	Soil	Calcium
		exchange capacity		reaction
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
707:				
Shirts, coarse sandy loam-----	0-1	---	4.5-5.5	0
	1-3	9.0-25	5.6-6.5	0
	3-10	7.0-20	5.6-6.5	0
	10-15	4.0-10	5.6-6.5	0
	15-25	4.0-10	5.6-6.5	0
	25-29	2.0-7.0	5.6-6.5	0
	29-39	---	---	---
Zimmer-----	0-7	7.0-20	5.6-6.5	0
	7-14	4.0-10	5.6-6.5	0
	14-24	---	---	---
708:				
Zimmer-----	0-7	7.0-20	5.6-6.5	0
	7-14	4.0-10	5.6-6.5	0
	14-24	---	---	---
Northfork, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	12-25	6.1-7.3	0
	4-14	10-20	6.1-7.3	0
	14-44	7.0-12	5.6-6.5	0
	44-56	4.0-12	5.6-6.5	0
	56-60	4.0-12	5.6-6.5	0
Rock outcrop-----	0-60	---	---	---
709:				
Shirts, sandy loam, south slope-----	0-1	---	4.5-5.5	0
	1-5	9.0-25	5.6-6.5	0
	5-11	7.0-15	5.6-6.5	0
	11-23	4.0-10	5.6-6.5	0
	23-35	2.0-7.0	5.6-6.5	0
	35-45	---	---	---
Charters, sandy loam	0-2	---	4.5-5.5	0
	2-7	11-25	6.1-7.3	0
	7-16	9.0-20	6.1-7.3	0
	16-29	6.0-12	6.1-7.3	0
	29-39	5.0-10	5.6-6.5	0
	39-50	4.0-8.0	5.6-6.5	0
	50-60	2.0-6.0	5.6-6.5	0
710:				
Charters, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-13	9.0-20	6.1-7.3	0
	13-19	7.0-12	6.1-7.3	0
	19-34	5.0-10	5.6-6.5	0
	34-52	5.0-10	5.6-6.5	0
	52-60	5.0-10	5.6-6.5	0
Northfork, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	12-25	6.1-7.3	0
	4-14	10-20	6.1-7.3	0
	14-44	7.0-12	5.6-6.5	0
	44-56	4.0-12	5.6-6.5	0
	56-60	4.0-12	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	pH	Pct
710:				
Shirts, coarse sandy loam-----	0-1	---	4.5-5.5	0
	1-3	9.0-25	5.6-6.5	0
	3-10	7.0-20	5.6-6.5	0
	10-15	4.0-10	5.6-6.5	0
	15-25	4.0-10	5.6-6.5	0
	25-29	2.0-7.0	5.6-6.5	0
	29-39	---	---	---
711:				
Charters, fine gravelly sandy loam, dry-----	0-1	---	4.5-5.5	0
	1-11	11-25	6.1-7.3	0
	11-16	9.0-20	6.1-7.3	0
	16-33	7.0-12	6.1-7.3	0
	33-41	5.0-10	5.6-6.5	0
	41-60	5.0-10	5.6-6.5	0
Shirts, sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-5	9.0-25	5.6-6.5	0
	5-12	8.0-25	5.6-6.5	0
	12-21	5.0-14	5.6-6.5	0
	21-33	4.0-10	5.6-6.5	0
	33-39	2.0-6.0	5.6-6.5	0
	39-49	---	---	---
Zimmer-----	0-7	7.0-20	5.6-6.5	0
	7-14	4.0-10	5.6-6.5	0
	14-24	---	---	---
712:				
Charters, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-13	9.0-20	6.1-7.3	0
	13-19	7.0-12	6.1-7.3	0
	19-34	5.0-10	5.6-6.5	0
	34-52	5.0-10	5.6-6.5	0
	52-60	5.0-10	5.6-6.5	0
Shirts, coarse sandy loam-----	0-1	---	4.5-5.5	0
	1-3	9.0-25	5.6-6.5	0
	3-10	7.0-20	5.6-6.5	0
	10-15	4.0-10	5.6-6.5	0
	15-25	4.0-10	5.6-6.5	0
	25-29	2.0-7.0	5.6-6.5	0
	29-39	---	---	---
Zimmer-----	0-7	7.0-20	5.6-6.5	0
	7-14	4.0-10	5.6-6.5	0
	14-24	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
		<i>In</i> <i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
714: Shirts, sandy loam, south slope-----	0-1	---	4.5-5.5	0
	1-5	9.0-25	5.6-6.5	0
	5-11	7.0-15	5.6-6.5	0
	11-23	4.0-10	5.6-6.5	0
	23-35	2.0-7.0	5.6-6.5	0
	35-45	---	---	---
Eagleson, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-12	9.0-20	5.6-6.5	0
	12-17	6.0-12	5.6-6.5	0
	17-25	2.0-5.0	5.6-6.5	0
	25-35	---	---	---
Charters, sandy loam	0-2	---	4.5-5.5	0
	2-7	11-25	6.1-7.3	0
	7-16	9.0-20	6.1-7.3	0
	16-29	6.0-12	6.1-7.3	0
	29-39	5.0-10	5.6-6.5	0
	39-50	4.0-8.0	5.6-6.5	0
	50-60	2.0-6.0	5.6-6.5	0
715: Eagleson, fine gravelly sandy loam, dry-----	0-1	---	4.5-5.5	0
	1-10	9.0-20	5.6-6.5	0
	10-16	6.0-20	5.6-6.5	0
	16-27	5.0-10	5.6-6.5	0
	27-37	---	---	---
Kosh-----	0-10	7.0-20	5.6-6.5	0
	10-18	2.0-8.0	5.6-6.5	0
	18-28	---	---	---
716: Zan-----	0-1	---	4.5-5.5	0
	1-3	9.0-25	5.6-6.5	0
	3-14	7.0-20	5.6-6.5	0
	14-24	5.0-13	5.6-6.5	0
	24-35	2.0-8.0	5.6-6.5	0
	35-60	2.0-5.0	5.6-6.5	0
Belsh-----	0-1	---	4.5-5.5	0
	1-7	9.0-23	5.6-6.5	0
	7-15	7.0-19	5.6-6.5	0
	15-21	4.0-9.0	5.6-6.5	0
	21-37	2.0-5.0	5.6-6.5	0
	37-60	2.0-5.0	5.6-6.5	0
Montchief-----	0-1	---	4.5-5.5	0
	1-11	9.0-25	6.1-7.3	0
	11-16	7.0-20	6.1-7.3	0
	16-25	4.0-10	6.1-7.3	0
	25-33	2.0-5.0	6.1-7.3	0
	33-43	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
718: Charters, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-13	9.0-20	6.1-7.3	0
	13-19	7.0-12	6.1-7.3	0
	19-34	5.0-10	5.6-6.5	0
	34-52	5.0-10	5.6-6.5	0
	52-60	5.0-10	5.6-6.5	0
Crumley-----	0-2	---	4.5-5.5	0
	2-4	9.0-25	6.1-7.3	0
	4-12	5.0-11	6.1-7.3	0
	12-18	5.0-11	5.6-6.5	0
	18-30	2.0-5.0	5.1-6.5	0
	30-60	2.0-5.0	5.1-6.5	0
Eagleson, sandy loam	0-1	---	4.5-5.5	0
	1-4	9.0-20	5.6-6.5	0
	4-15	7.0-20	5.6-6.5	0
	15-19	5.0-10	5.6-6.5	0
	19-37	2.0-8.0	5.6-6.5	0
	37-47	---	---	---
720: Drybuck, dry-----	0-1	---	4.5-5.5	0
	1-6	10-20	5.6-7.3	0
	6-25	5.0-20	5.6-7.3	0
	25-45	4.0-12	5.6-7.3	0
	45-57	4.0-12	5.6-7.3	0
	57-67	---	---	---
Deerrun-----	0-1	---	4.5-5.5	0
	1-11	7.0-20	5.6-7.3	0
	11-19	4.0-12	5.6-7.3	0
	19-33	4.0-12	5.6-7.3	0
	33-43	---	---	---
Kisky, fine gravelly sandy loam, moist---	0-1	---	4.5-5.5	0
	1-8	4.0-15	6.1-6.5	0
	8-14	2.0-8.0	6.1-6.5	0
	14-24	---	---	---
721: Shirts, fine gravelly sandy loam-----	0-2	---	4.5-5.5	0
	2-7	9.0-25	5.6-6.5	0
	7-11	7.0-15	5.6-6.5	0
	11-25	4.0-10	5.6-6.5	0
	25-29	2.0-7.0	5.6-6.5	0
	29-39	---	---	---
Kosh-----	0-10	7.0-20	5.6-6.5	0
	10-18	2.0-8.0	5.6-6.5	0
	18-28	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
721: Charters, fine gravelly sandy loam, dry-----	0-1	---	4.5-5.5	0
	1-11	11-25	6.1-7.3	0
	11-16	9.0-20	6.1-7.3	0
	16-33	7.0-12	6.1-7.3	0
	33-41	5.0-10	5.6-6.5	0
	41-60	5.0-10	5.6-6.5	0
726: Garval-----	0-1	---	4.5-5.5	0
	1-5	5.0-15	5.6-6.5	0
	5-13	3.0-11	5.6-6.5	0
	13-19	2.0-9.0	6.1-7.3	0
	19-29	2.0-6.0	6.1-7.3	0
	29-39	---	---	---
Kisky, fine gravelly loamy coarse sand---	0-4	5.0-15	5.6-6.5	0
	4-10	2.0-8.0	5.6-6.5	0
	10-16	2.0-8.0	5.6-6.5	0
	16-26	---	---	---
730: Hellake-----	0-3	15-30	5.6-6.5	0
	3-10	15-25	5.6-6.5	0
	10-22	20-25	5.1-6.0	0
	22-36	20-25	5.1-6.0	0
	36-43	20-25	5.1-6.0	0
	43-53	11-20	5.1-6.0	0
	53-60	4.0-15	5.1-6.0	0
	60-66	4.0-15	5.1-6.0	0
Stardust-----	0-1	---	4.5-5.5	0
	1-3	14-30	5.6-6.5	0
	3-9	12-30	5.6-6.5	0
	9-18	14-25	5.6-6.5	0
	18-38	14-25	5.6-6.5	0
	38-54	15-20	5.6-6.5	0
	54-67	7.0-15	5.6-6.5	0
731: Shirts, sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-5	9.0-25	5.6-6.5	0
	5-12	8.0-25	5.6-6.5	0
	12-21	5.0-14	5.6-6.5	0
	21-33	4.0-10	5.6-6.5	0
	33-39	2.0-6.0	5.6-6.5	0
	39-49	---	---	---
Charters, fine gravelly sandy loam, dry-----	0-1	---	4.5-5.5	0
	1-11	11-25	6.1-7.3	0
	11-16	9.0-20	6.1-7.3	0
	16-33	7.0-12	6.1-7.3	0
	33-41	5.0-10	5.6-6.5	0
	41-60	5.0-10	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-	Soil	Calcium
		exchange capacity	reaction	carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
731:				
Zimmer-----	0-7	7.0-20	5.6-6.5	0
	7-14	4.0-10	5.6-6.5	0
	14-24	---	---	---
733:				
Shirts, fine gravelly sandy loam-----	0-2	---	4.5-5.5	0
	2-7	9.0-25	5.6-6.5	0
	7-11	7.0-15	5.6-6.5	0
	11-25	4.0-10	5.6-6.5	0
	25-29	2.0-7.0	5.6-6.5	0
	29-39	---	---	---
Kosh-----	0-10	7.0-20	5.6-6.5	0
	10-18	2.0-8.0	5.6-6.5	0
	18-28	---	---	---
734:				
Shirts, sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-5	9.0-25	5.6-6.5	0
	5-12	8.0-25	5.6-6.5	0
	12-21	5.0-14	5.6-6.5	0
	21-33	4.0-10	5.6-6.5	0
	33-39	2.0-6.0	5.6-6.5	0
	39-49	---	---	---
Kosh-----	0-10	7.0-20	5.6-6.5	0
	10-18	2.0-8.0	5.6-6.5	0
	18-28	---	---	---
735:				
Shirts, coarse sandy loam-----	0-1	---	4.5-5.5	0
	1-3	9.0-25	5.6-6.5	0
	3-10	7.0-20	5.6-6.5	0
	10-15	4.0-10	5.6-6.5	0
	15-25	4.0-10	5.6-6.5	0
	25-29	2.0-7.0	5.6-6.5	0
	29-39	---	---	---
Zimmer-----	0-7	7.0-20	5.6-6.5	0
	7-14	4.0-10	5.6-6.5	0
	14-24	---	---	---
Charters, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-13	9.0-20	6.1-7.3	0
	13-19	7.0-12	6.1-7.3	0
	19-34	5.0-10	5.6-6.5	0
	34-52	5.0-10	5.6-6.5	0
	52-60	5.0-10	5.6-6.5	0
738:				
Tripod-----	0-1	---	4.5-5.5	0
	1-6	7.0-20	6.1-7.3	0
	6-13	5.0-15	6.1-7.3	0
	13-23	2.0-7.0	5.6-6.5	0
	23-50	1.0-5.0	5.6-6.5	0
	50-60	1.0-5.0	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
738:				
Packerjohn, ashy coarse sandy loam---	0-2	---	4.5-5.5	0
	2-10	7.0-20	6.1-7.3	0
	10-19	5.0-15	6.1-7.3	0
	19-33	3.0-8.0	5.6-6.5	0
	33-44	2.0-5.0	5.6-6.5	0
	44-60	2.0-5.0	5.6-6.5	0
	Pajo, fine gravelly ashy coarse sandy loam-----			
0-1	---	4.5-5.5	0	
1-8	8.0-20	6.1-7.3	0	
8-16	4.0-12	6.1-7.3	0	
16-27	1.0-3.0	5.6-6.5	0	
27-37	---	---	---	
739:				
Shirts, sandy loam, moist-----	0-2	---	4.5-5.5	0
	2-12	9.0-25	5.6-6.5	0
	12-25	5.0-15	5.6-6.5	0
	25-34	4.0-10	5.6-6.5	0
	34-39	2.0-7.0	5.6-6.5	0
	39-49	---	---	---
	Zimmer-----			
0-7	7.0-20	5.6-6.5	0	
7-14	4.0-10	5.6-6.5	0	
14-24	---	---	---	
Packerjohn, ashy coarse sandy loam---				
0-2	---	4.5-5.5	0	
2-10	7.0-20	6.1-7.3	0	
10-19	5.0-15	6.1-7.3	0	
19-33	3.0-8.0	5.6-6.5	0	
33-44	2.0-5.0	5.6-6.5	0	
44-60	2.0-5.0	5.6-6.5	0	
740:				
Charters, sandy loam	0-2	---	4.5-5.5	0
	2-7	11-25	6.1-7.3	0
	7-16	9.0-20	6.1-7.3	0
	16-29	6.0-12	6.1-7.3	0
	29-39	5.0-10	5.6-6.5	0
	39-50	4.0-8.0	5.6-6.5	0
	50-60	2.0-6.0	5.6-6.5	0
	Eagleson, fine gravelly sandy loam			
0-1	---	4.5-5.5	0	
1-12	9.0-20	5.6-6.5	0	
12-17	6.0-12	5.6-6.5	0	
17-25	2.0-5.0	5.6-6.5	0	
25-35	---	---	---	
741:				
Zan-----	0-1	---	4.5-5.5	0
	1-3	9.0-25	5.6-6.5	0
	3-14	7.0-20	5.6-6.5	0
	14-24	5.0-13	5.6-6.5	0
	24-35	2.0-8.0	5.6-6.5	0
	35-60	2.0-5.0	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
742:				
Crumley-----	0-2	---	4.5-5.5	0
	2-4	9.0-25	6.1-7.3	0
	4-12	5.0-11	6.1-7.3	0
	12-18	5.0-11	5.6-6.5	0
	18-30	2.0-5.0	5.1-6.5	0
	30-60	2.0-5.0	5.1-6.5	0
Eagleson, sandy loam	0-1	---	4.5-5.5	0
	1-4	9.0-20	5.6-6.5	0
	4-15	7.0-20	5.6-6.5	0
	15-19	5.0-10	5.6-6.5	0
	19-37	2.0-8.0	5.6-6.5	0
	37-47	---	---	---
743:				
Packerjohn, ashy coarse sandy loam---	0-2	---	4.5-5.5	0
	2-10	7.0-20	6.1-7.3	0
	10-19	5.0-15	6.1-7.3	0
	19-33	3.0-8.0	5.6-6.5	0
	33-44	2.0-5.0	5.6-6.5	0
	44-60	2.0-5.0	5.6-6.5	0
Shirts, sandy loam, moist-----	0-2	---	4.5-5.5	0
	2-12	9.0-25	5.6-6.5	0
	12-25	5.0-15	5.6-6.5	0
	25-34	4.0-10	5.6-6.5	0
	34-39	2.0-7.0	5.6-6.5	0
	39-49	---	---	---
744:				
Packerjohn, ashy sandy loam, cool----	0-1	---	4.5-5.5	0
	1-9	7.0-20	6.6-7.3	0
	9-15	4.0-12	5.6-6.5	0
	15-31	3.0-8.0	5.6-6.5	0
	31-60	2.0-5.0	5.6-6.5	0
Shirts, sandy loam, moist-----	0-2	---	4.5-5.5	0
	2-12	9.0-25	5.6-6.5	0
	12-25	5.0-15	5.6-6.5	0
	25-34	4.0-10	5.6-6.5	0
	34-39	2.0-7.0	5.6-6.5	0
	39-49	---	---	---
Tripod, cool-----	0-1	---	4.5-5.5	0
	1-6	7.0-20	6.1-7.3	0
	6-20	3.0-11	6.1-7.3	0
	20-60	1.0-5.0	5.6-6.5	0
745:				
Tripod, moist-----	0-1	---	4.5-5.5	0
	1-4	7.0-20	6.1-7.3	0
	4-16	3.0-11	5.6-6.5	0
	16-38	1.0-5.0	5.6-6.5	0
	38-60	1.0-5.0	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
745: Packerjohn, ashy sandy loam-----	0-2	---	4.5-5.5	0
	2-5	7.0-20	6.1-7.3	0
	5-16	5.0-15	6.1-7.3	0
	16-23	3.0-8.0	5.6-6.5	0
	23-39	3.0-8.0	5.6-6.5	0
	39-60	2.0-5.0	5.6-6.5	0
746: Packerjohn, ashy sandy loam-----	0-2	---	4.5-5.5	0
	2-5	7.0-20	6.1-7.3	0
	5-16	5.0-15	6.1-7.3	0
	16-23	3.0-8.0	5.6-6.5	0
	23-39	3.0-8.0	5.6-6.5	0
	39-60	2.0-5.0	5.6-6.5	0
747: Pinney, moist-----	0-1	---	4.5-5.5	0
	1-4	15-35	5.6-6.5	0
	4-10	14-30	5.6-6.5	0
	10-21	15-25	5.6-6.5	0
	21-32	15-25	5.6-6.5	0
	32-45	15-25	5.6-6.5	0
	45-60	15-25	5.6-6.5	0
Charters, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-13	9.0-20	6.1-7.3	0
	13-19	7.0-12	6.1-7.3	0
	19-34	5.0-10	5.6-6.5	0
	34-52	5.0-10	5.6-6.5	0
	52-60	5.0-10	5.6-6.5	0
Shirts, sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-5	9.0-25	5.6-6.5	0
	5-12	8.0-25	5.6-6.5	0
	12-21	5.0-14	5.6-6.5	0
	21-33	4.0-10	5.6-6.5	0
	33-39	2.0-6.0	5.6-6.5	0
	39-49	---	---	---
748: Belsh, moist-----	0-1	---	4.5-5.5	0
	1-6	9.0-25	5.6-6.5	0
	6-20	7.0-20	5.6-6.5	0
	20-34	4.0-9.0	5.6-6.5	0
	34-60	2.0-5.0	5.6-6.5	0
Zan, moist-----	0-1	---	4.5-5.5	0
	1-6	9.0-25	5.6-6.5	0
	6-12	7.0-20	5.6-6.5	0
	12-25	2.0-8.0	5.6-6.5	0
	25-41	2.0-8.0	5.6-6.5	0
	41-60	2.0-5.0	5.6-6.5	0

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
		<i>In</i> <i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
749:				
Quartzburg-----	0-1	---	4.5-5.5	0
	1-5	6.0-15	5.6-7.3	0
	5-10	4.0-12	5.6-7.3	0
	10-25	2.0-7.0	5.6-7.3	0
	25-37	2.0-7.0	5.6-7.3	0
	37-42	---	---	---
	42-52	---	---	---
Charters, sandy loam	0-2	---	4.5-5.5	0
	2-7	11-25	6.1-7.3	0
	7-16	9.0-20	6.1-7.3	0
	16-29	6.0-12	6.1-7.3	0
	29-39	5.0-10	5.6-6.5	0
	39-50	4.0-8.0	5.6-6.5	0
	50-60	2.0-6.0	5.6-6.5	0
750:				
Garval-----	0-1	---	4.5-5.5	0
	1-5	5.0-15	5.6-6.5	0
	5-13	3.0-11	5.6-6.5	0
	13-19	2.0-9.0	6.1-7.3	0
	19-29	2.0-6.0	6.1-7.3	0
	29-39	---	---	---
Kisky, fine gravelly loamy coarse sand---	0-4	5.0-15	5.6-6.5	0
	4-10	2.0-8.0	5.6-6.5	0
	10-16	2.0-8.0	5.6-6.5	0
	16-26	---	---	---
Rock outcrop-----	0-60	---	---	---
751:				
Belsh, moist-----	0-1	---	4.5-5.5	0
	1-6	9.0-25	5.6-6.5	0
	6-20	7.0-20	5.6-6.5	0
	20-34	4.0-9.0	5.6-6.5	0
	34-60	2.0-5.0	5.6-6.5	0
Zan, moist-----	0-1	---	4.5-5.5	0
	1-6	9.0-25	5.6-6.5	0
	6-12	7.0-20	5.6-6.5	0
	12-25	2.0-8.0	5.6-6.5	0
	25-41	2.0-8.0	5.6-6.5	0
	41-60	2.0-5.0	5.6-6.5	0
752:				
Josie-----	0-2	9.0-25	5.1-6.0	0
	2-12	7.0-20	5.1-6.0	0
	12-33	4.0-9.0	5.1-6.0	0
	33-44	4.0-9.0	5.1-6.0	0
	44-60	1.0-5.0	5.1-6.0	0
Zimmer, fine gravelly surface-----	0-7	7.0-20	5.6-6.5	0
	7-12	4.0-10	5.6-6.5	0
	12-15	2.0-7.0	5.6-6.5	0
	15-25	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-	Soil	Calcium
		exchange capacity		reaction
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
753:				
Tripod, cool-----	0-1	---	4.5-5.5	0
	1-6	7.0-20	6.1-7.3	0
	6-20	3.0-11	6.1-7.3	0
	20-60	1.0-5.0	5.6-6.5	0
Packerjohn, ashy sandy loam, cool----				
0-1	0-1	---	4.5-5.5	0
	1-9	7.0-20	6.6-7.3	0
	9-15	4.0-12	5.6-6.5	0
	15-31	3.0-8.0	5.6-6.5	0
	31-60	2.0-5.0	5.6-6.5	0
Shirts, sandy loam, moist-----				
0-2	0-2	---	4.5-5.5	0
	2-12	9.0-25	5.6-6.5	0
	12-25	5.0-15	5.6-6.5	0
	25-34	4.0-10	5.6-6.5	0
	34-39	2.0-7.0	5.6-6.5	0
	39-49	---	---	---
754:				
Packerjohn, ashy sandy loam-----				
0-2	0-2	---	4.5-5.5	0
	2-5	7.0-20	6.1-7.3	0
	5-16	5.0-15	6.1-7.3	0
	16-23	3.0-8.0	5.6-6.5	0
	23-39	3.0-8.0	5.6-6.5	0
	39-60	2.0-5.0	5.6-6.5	0
Shirts, sandy loam, moist-----				
0-2	0-2	---	4.5-5.5	0
	2-12	9.0-25	5.6-6.5	0
	12-25	5.0-15	5.6-6.5	0
	25-34	4.0-10	5.6-6.5	0
	34-39	2.0-7.0	5.6-6.5	0
	39-49	---	---	---
755:				
Zimmer-----				
0-7	0-7	7.0-20	5.6-6.5	0
	7-14	4.0-10	5.6-6.5	0
	14-24	---	---	---
Quartzburg-----				
0-1	0-1	---	4.5-5.5	0
	1-5	6.0-15	5.6-7.3	0
	5-10	4.0-12	5.6-7.3	0
	10-25	2.0-7.0	5.6-7.3	0
	25-37	2.0-7.0	5.6-7.3	0
	37-42	---	---	---
	42-52	---	---	---
Rock outcrop-----				
0-60	---	---	---	---
756:				
Pajo, fine gravelly ashy coarse sandy loam-----				
0-1	0-1	---	4.5-5.5	0
	1-8	8.0-20	6.1-7.3	0
	8-16	4.0-12	6.1-7.3	0
	16-27	1.0-3.0	5.6-6.5	0
	27-37	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-	Soil	Calcium
		exchange capacity		reaction
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
756:				
Tripod-----	0-1	---	4.5-5.5	0
	1-6	7.0-20	6.1-7.3	0
	6-13	5.0-15	6.1-7.3	0
	13-23	2.0-7.0	5.6-6.5	0
	23-50	1.0-5.0	5.6-6.5	0
	50-60	1.0-5.0	5.6-6.5	0
Kosh, moist-----	0-4	6.0-20	5.6-6.5	0
	4-9	2.0-7.0	5.6-6.5	0
	9-18	0.0-4.0	5.6-6.5	0
	18-28	---	---	---
758:				
Eagleson, sandy loam	0-1	---	4.5-5.5	0
	1-4	9.0-20	5.6-6.5	0
	4-15	7.0-20	5.6-6.5	0
	15-19	5.0-10	5.6-6.5	0
	19-37	2.0-8.0	5.6-6.5	0
	37-47	---	---	---
Kosh, moist-----	0-4	6.0-20	5.6-6.5	0
	4-9	2.0-7.0	5.6-6.5	0
	9-18	0.0-4.0	5.6-6.5	0
	18-28	---	---	---
Charters, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-13	9.0-20	6.1-7.3	0
	13-19	7.0-12	6.1-7.3	0
	19-34	5.0-10	5.6-6.5	0
	34-52	5.0-10	5.6-6.5	0
	52-60	5.0-10	5.6-6.5	0
759:				
Charters, sandy loam	0-2	---	4.5-5.5	0
	2-7	11-25	6.1-7.3	0
	7-16	9.0-20	6.1-7.3	0
	16-29	6.0-12	6.1-7.3	0
	29-39	5.0-10	5.6-6.5	0
	39-50	4.0-8.0	5.6-6.5	0
	50-60	2.0-6.0	5.6-6.5	0
Shirts, sandy loam, south slope-----	0-1	---	4.5-5.5	0
	1-5	9.0-25	5.6-6.5	0
	5-11	7.0-15	5.6-6.5	0
	11-23	4.0-10	5.6-6.5	0
	23-35	2.0-7.0	5.6-6.5	0
	35-45	---	---	---
Kosh, moist-----	0-4	6.0-20	5.6-6.5	0
	4-9	2.0-7.0	5.6-6.5	0
	9-18	0.0-4.0	5.6-6.5	0
	18-28	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
761: Charters, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-13	9.0-20	6.1-7.3	0
	13-19	7.0-12	6.1-7.3	0
	19-34	5.0-10	5.6-6.5	0
	34-52	5.0-10	5.6-6.5	0
	52-60	5.0-10	5.6-6.5	0
Middlefork, moist----	0-2	---	4.5-5.5	0
	2-5	15-30	6.1-6.5	0
	5-13	12-25	6.1-6.5	0
	13-28	13-20	5.6-6.0	0
	28-36	12-25	5.6-6.0	0
	36-47	15-25	5.6-6.0	0
	47-62	15-25	5.6-6.0	0
762: Drybuck, dry-----	0-1	---	4.5-5.5	0
	1-6	10-20	5.6-7.3	0
	6-25	5.0-20	5.6-7.3	0
	25-45	4.0-12	5.6-7.3	0
	45-57	4.0-12	5.6-7.3	0
	57-67	---	---	---
Hellake-----	0-3	15-30	5.6-6.5	0
	3-10	15-25	5.6-6.5	0
	10-22	20-25	5.1-6.0	0
	22-36	20-25	5.1-6.0	0
	36-43	20-25	5.1-6.0	0
	43-53	11-20	5.1-6.0	0
	53-60	4.0-15	5.1-6.0	0
	60-66	4.0-15	5.1-6.0	0
Deerrun-----	0-1	---	4.5-5.5	0
	1-11	7.0-20	5.6-7.3	0
	11-19	4.0-12	5.6-7.3	0
	19-33	4.0-12	5.6-7.3	0
	33-43	---	---	---
763: Eagleson, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-12	9.0-20	5.6-6.5	0
	12-17	6.0-12	5.6-6.5	0
	17-25	2.0-5.0	5.6-6.5	0
	25-35	---	---	---
Kosh-----	0-10	7.0-20	5.6-6.5	0
	10-18	2.0-8.0	5.6-6.5	0
	18-28	---	---	---
Rock outcrop-----	0-60	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	pH	Pct
765:				
Backswitch, coarse sandy loam-----	0-2	---	4.5-5.5	0
	2-8	8.0-25	5.6-7.3	0
	8-14	5.0-13	5.6-7.3	0
	14-25	5.0-13	5.6-7.3	0
	25-35	2.0-9.0	5.6-7.3	0
	35-38	---	---	---
	38-48	---	---	---
Zimmer, warm-----	0-4	7.0-20	5.6-6.5	0
	4-10	4.0-10	5.6-6.5	0
	10-16	2.0-7.0	5.6-6.5	0
	16-26	---	---	---
Rock outcrop-----	0-60	---	---	---
766:				
Backswitch, coarse sandy loam-----	0-2	---	4.5-5.5	0
	2-8	8.0-25	5.6-7.3	0
	8-14	5.0-13	5.6-7.3	0
	14-25	5.0-13	5.6-7.3	0
	25-35	2.0-9.0	5.6-7.3	0
	35-38	---	---	---
	38-48	---	---	---
Charters, coarse sandy loam-----	0-1	---	4.5-5.5	0
	1-4	11-25	6.1-7.3	0
	4-8	6.0-12	6.1-7.3	0
	8-15	7.0-12	6.1-7.3	0
	15-32	7.0-12	5.6-6.5	0
	32-48	7.0-12	5.6-6.5	0
	48-60	5.0-10	5.6-6.5	0
Zimmer, dry-----	0-2	8.0-25	5.6-6.5	0
	2-7	4.0-9.0	5.6-6.5	0
	7-11	4.0-9.0	5.6-6.5	0
	11-16	4.0-9.0	5.6-6.5	0
	16-26	---	---	---
767:				
Shirts, sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-5	9.0-25	5.6-6.5	0
	5-12	8.0-25	5.6-6.5	0
	12-21	5.0-14	5.6-6.5	0
	21-33	4.0-10	5.6-6.5	0
	33-39	2.0-6.0	5.6-6.5	0
	39-49	---	---	---
Kosh-----	0-10	7.0-20	5.6-6.5	0
	10-18	2.0-8.0	5.6-6.5	0
	18-28	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
	<i>In</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
767: Charters, fine gravelly sandy loam, dry-----	0-1	---	4.5-5.5	0
	1-11	11-25	6.1-7.3	0
	11-16	9.0-20	6.1-7.3	0
	16-33	7.0-12	6.1-7.3	0
	33-41	5.0-10	5.6-6.5	0
	41-60	5.0-10	5.6-6.5	0
768: Shirts, sandy loam, south slope-----	0-1	---	4.5-5.5	0
	1-5	9.0-25	5.6-6.5	0
	5-11	7.0-15	5.6-6.5	0
	11-23	4.0-10	5.6-6.5	0
	23-35	2.0-7.0	5.6-6.5	0
	35-45	---	---	---
Kosh, moist-----	0-4	6.0-20	5.6-6.5	0
	4-9	2.0-7.0	5.6-6.5	0
	9-18	0.0-4.0	5.6-6.5	0
	18-28	---	---	---
Eagleson, fine gravelly sandy loam	0-1	---	4.5-5.5	0
	1-12	9.0-20	5.6-6.5	0
	12-17	6.0-12	5.6-6.5	0
	17-25	2.0-5.0	5.6-6.5	0
	25-35	---	---	---
770: Shirts, sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-5	9.0-25	5.6-6.5	0
	5-12	8.0-25	5.6-6.5	0
	12-21	5.0-14	5.6-6.5	0
	21-33	4.0-10	5.6-6.5	0
	33-39	2.0-6.0	5.6-6.5	0
	39-49	---	---	---
Charters, fine gravelly sandy loam, dry-----	0-1	---	4.5-5.5	0
	1-11	11-25	6.1-7.3	0
	11-16	9.0-20	6.1-7.3	0
	16-33	7.0-12	6.1-7.3	0
	33-41	5.0-10	5.6-6.5	0
	41-60	5.0-10	5.6-6.5	0
Kosh, moist-----	0-4	6.0-20	5.6-6.5	0
	4-9	2.0-7.0	5.6-6.5	0
	9-18	0.0-4.0	5.6-6.5	0
	18-28	---	---	---

Table 20.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate
		<i>In</i> <i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
771: Backswitch, sandy loam-----	0-1	---	4.5-5.5	0
	1-7	9.0-25	5.6-7.3	0
	7-11	4.0-11	5.6-7.3	0
	11-21	4.0-13	5.6-7.3	0
	21-33	4.0-13	5.6-7.3	0
	33-40	1.0-7.0	5.6-6.5	0
	40-50	---	---	---
	50-60	---	---	---
Shirts, sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-5	9.0-25	5.6-6.5	0
	5-12	8.0-25	5.6-6.5	0
	12-21	5.0-14	5.6-6.5	0
	21-33	4.0-10	5.6-6.5	0
	33-39	2.0-6.0	5.6-6.5	0
	39-49	---	---	---
772: Pajo, fine gravelly ashy sandy loam-----	0-1	---	4.5-5.5	0
	1-12	8.0-20	6.1-7.3	0
	12-16	4.0-12	6.1-7.3	0
	16-28	1.0-4.0	5.6-6.5	0
	28-38	1.0-4.0	5.6-6.5	0
	38-48	---	---	---
Packerjohn, ashy sandy loam, dry-----	0-2	---	4.5-5.5	0
	2-10	7.0-20	6.1-7.3	0
	10-17	5.0-20	6.1-7.3	0
	17-34	4.0-10	5.6-6.5	0
	34-50	2.0-5.0	5.6-6.5	0
	50-60	2.0-5.0	5.6-6.5	0
Kosh, moist-----	0-4	6.0-20	5.6-6.5	0
	4-9	2.0-7.0	5.6-6.5	0
	9-18	0.0-4.0	5.6-6.5	0
	18-28	---	---	---
900: Pits, gravel-----	---	---	---	---
Dumps, gravel-----	---	---	---	---
901: Dumps, landfill-----	---	---	---	---
999: Water-----	---	---	---	---

Table 21.--Water Features

(Depths of layers are in inches. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			In	In			
220: Oxyaquic Xerofluvents-----	C	January	30-50	>72	None	Brief	Occasional
		February	20-50	>72	None	Brief	Occasional
		March	20-40	>72	None	Brief	Occasional
		April	20-40	>72	None	Brief	Occasional
		May	20-40	>72	None	Brief	Occasional
		June	20-40	>72	None	---	None
		July	20-50	>72	None	---	None
		August	30-60	>72	None	---	None
		September	30-60	>72	None	---	None
		October	40-60	>72	None	---	None
		November	40-60	>72	None	---	None
		December	30-60	>72	None	Brief	Occasional
Cumulic Haploxerolls-----	B	January	50-72	>72	None	---	Rare
		February	50-70	>72	None	---	Rare
		March	40-70	>72	None	---	Rare
		April	40-60	>72	None	---	Rare
		May	40-60	>72	None	---	Rare
		June	40-70	>72	None	---	None
		July	50-72	>72	None	---	None
		August	60-72	>72	None	---	None
		September	60-72	>72	None	---	None
		October	60-72	>72	None	---	None
		November	60-72	>72	None	---	None
		December	60-72	>72	None	---	Rare
221: Bissell-----	B	Jan-Dec	---	---	None	---	None
222: Bissell-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
223: Staircase, dry-----	B		<i>In</i>	<i>In</i>			
		January	50-70	>72	None	---	Rare
		February	50-70	>72	None	---	Rare
		March	40-70	>72	None	---	Rare
		April	40-60	>72	None	---	Rare
		May	40-60	>72	None	---	Rare
		June	40-60	>72	None	---	Rare
		July	40-70	>72	None	---	None
		August	50-72	>72	None	---	None
		September	50-72	>72	None	---	None
		October	50-72	>72	None	---	None
		November	50-72	>72	None	---	None
		December	50-72	>72	None	---	Rare
224: Porter-----	B	January	50-72	>72	None	---	Rare
		February	50-70	>72	None	---	Rare
		March	40-70	>72	None	---	Rare
		April	40-60	>72	None	---	Rare
		May	40-60	>72	None	---	Rare
		June	40-70	>72	None	---	None
		July	50-72	>72	None	---	None
		August	60-72	>72	None	---	None
		September	60-72	>72	None	---	None
		October	60-72	>72	None	---	None
		November	60-72	>72	None	---	None
		December	60-72	>72	None	---	Rare
		225: Boise-----	B	Jan-Dec	---	---	None
226: Flofeather, very rarely flooded-----	B	January	---	---	None	---	Very rare
		February	---	---	None	---	Very rare
		March	---	---	None	---	Very rare
		April	---	---	None	---	Very rare
		May	---	---	None	---	Very rare
		December	---	---	None	---	Very rare

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
226: Shawmount, stony surface-----	B	January	---	---	None	---	Very rare
		February	---	---	None	---	Very rare
		March	---	---	None	---	Very rare
		April	---	---	None	---	Very rare
		May	---	---	None	---	Very rare
		December	---	---	None	---	Very rare
227: Piercepark, loam-----	B	Jan-Dec	---	---	None	---	None
228: Piercepark, loam-----	B	Jan-Dec	---	---	None	---	None
229: Piercepark, coarse sandy loam-----	B	Jan-Dec	---	---	None	---	None
230: Hann-----	D	Jan-Dec	---	---	None	---	None
	D	Jan-Dec	---	---	None	---	None
232: Jasseek-----	C	Jan-Dec	---	---	None	---	None
233: Jasseek-----	C	Jan-Dec	---	---	None	---	None
238: Adaboi-----	C	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			In	In			
240: Collister-----	B	January	50-72	>72	None	---	Rare
		February	50-70	>72	None	---	Rare
		March	40-70	>72	None	---	Rare
		April	40-60	>72	None	---	Rare
		May	40-60	>72	None	---	Rare
		June	40-70	>72	None	---	None
		July	50-72	>72	None	---	None
		August	60-72	>72	None	---	None
		September	60-72	>72	None	---	None
		October	60-72	>72	None	---	None
		November	60-72	>72	None	---	None
		December	60-72	>72	None	---	Rare
Flofeather-----	B	January	---	---	None	---	Rare
		February	---	---	None	---	Rare
		March	---	---	None	---	Rare
		April	---	---	None	---	Rare
		May	---	---	None	---	Rare
		December	---	---	None	---	Rare
300: Shawmount, stony surface-----	B	Jan-Dec	---	---	None	---	None
301: Breadloaf-----	D	Jan-Dec	---	---	None	---	None
Doubledia, silty clay loam-----	D	Jan-Dec	---	---	None	---	None
302: Breadloaf-----	D	Jan-Dec	---	---	None	---	None
Doubledia, silty clay loam-----	D	Jan-Dec	---	---	None	---	None
Hann-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
303: Doubledia, silty clay loam-----	D	Jan-Dec	---	---	None	---	None
Hann-----	D	Jan-Dec	---	---	None	---	None
Breadloaf-----	D	Jan-Dec	---	---	None	---	None
304: Breadloaf-----	D	Jan-Dec	---	---	None	---	None
Doubledia, silty clay loam-----	D	Jan-Dec	---	---	None	---	None
Hullsgulch, loam-----	B	Jan-Dec	---	---	None	---	None
305: Siphonlake, south slope-----	B	Jan-Dec	---	---	None	---	None
Solarview-----	C	Jan-Dec	---	---	None	---	None
306: Van Dusen-----	B	Jan-Dec	---	---	None	---	None
Siphonlake-----	B	Jan-Dec	---	---	None	---	None
307: Adaboi-----	C	Jan-Dec	---	---	None	---	None
Meclo-----	D	Jan-Dec	---	---	None	---	None
308: Breadloaf-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
308: Crawley, silt loam-----	D	Jan-Dec	---	---	None	---	None
Doubledia, clay loam-----	D	Jan-Dec	---	---	None	---	None
309: Hullsgulch, sandy loam-----	B	Jan-Dec	---	---	None	---	None
Solarview-----	C	Jan-Dec	---	---	None	---	None
311: Meclo-----	D	Jan-Dec	---	---	None	---	None
Crawley, silt loam-----	D	Jan-Dec	---	---	None	---	None
Adaboi-----	C	Jan-Dec	---	---	None	---	None
328: Gacey, extremely stony surface-----	D	Jan-Dec	---	---	None	---	None
329: Ayette-----	C	Jan-Dec	---	---	None	---	None
Duco, stony loam, very stony surface-----	D	Jan-Dec	---	---	None	---	None
330: Breadloaf-----	D	Jan-Dec	---	---	None	---	None
Ayette, moist-----	C	Jan-Dec	---	---	None	---	None
Immig, rubbly surface-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
331: Ayette, moist-----	C	Jan-Dec	---	---	None	---	None
Yad-----	D	Jan-Dec	---	---	None	---	None
332: Hann-----	D	Jan-Dec	---	---	None	---	None
Ayette, moist-----	C	Jan-Dec	---	---	None	---	None
Picketpin-----	B	Jan-Dec	---	---	None	---	None
333: Ayette-----	C	Jan-Dec	---	---	None	---	None
Crawley, loam-----	D	Jan-Dec	---	---	None	---	None
Hullsgulch, loam-----	B	Jan-Dec	---	---	None	---	None
335: Gimmi, very stony surface-----	C	Jan-Dec	---	---	None	---	None
Ayette, moist-----	C	Jan-Dec	---	---	None	---	None
Doubledia, silty clay loam-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
400: Ralsen-----	D		In	In			
		January	20-50	>72	None	Brief	Occasional
		February	10-40	>72	None	Brief	Occasional
		March	0-30	>72	None	Brief	Occasional
		April	0-20	>72	None	Brief	Occasional
		May	0-20	>72	None	Brief	Occasional
		June	0-30	>72	None	Brief	Occasional
		July	10-40	>72	None	---	None
		August	20-50	>72	None	---	None
		September	20-50	>72	None	---	None
		October	20-50	>72	None	---	None
		November	20-50	>72	None	---	None
		December	20-50	>72	None	Brief	Occasional
Foxlane-----	B	January	50-70	>72	None	---	Rare
		February	50-70	>72	None	---	Rare
		March	40-70	>72	None	---	Rare
		April	40-60	>72	None	---	Rare
		May	40-60	>72	None	---	Rare
		June	40-60	>72	None	---	Rare
		July	40-70	>72	None	---	None
		August	50-72	>72	None	---	None
		September	50-72	>72	None	---	None
		October	50-72	>72	None	---	None
		November	50-72	>72	None	---	None
		December	50-72	>72	None	---	Rare
		Pay-----	D	January	20-50	>72	None
February	10-40			>72	None	Brief	Occasional
March	0-30			>72	None	Brief	Occasional
April	0-20			>72	None	Brief	Occasional
May	0-20			>72	None	Brief	Occasional
June	0-30			>72	None	Brief	Occasional
July	10-40			>72	None	---	None
August	20-50			>72	None	---	None
September	20-50			>72	None	---	None
October	20-50			>72	None	---	None
November	20-50			>72	None	---	None
December	20-50			>72	None	Brief	Occasional

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
401: Staircase-----	B		In	In			
		January	50-70	>72	None	---	Rare
		February	50-70	>72	None	---	Rare
		March	40-70	>72	None	---	Rare
		April	40-60	>72	None	---	Rare
		May	40-60	>72	None	---	Rare
		June	40-60	>72	None	---	Rare
		July	40-70	>72	None	---	None
		August	50-72	>72	None	---	None
		September	50-72	>72	None	---	None
		October	50-72	>72	None	---	None
		November	50-72	>72	None	---	None
		December	50-72	>72	None	---	Rare
402: Crossbow-----	C	January	20-60	>72	None	Brief	Occasional
		February	20-60	>72	None	Brief	Occasional
		March	20-40	>72	None	Brief	Occasional
		April	20-30	>72	None	Brief	Occasional
		May	20-30	>72	None	Brief	Occasional
		June	20-40	>72	None	Brief	Occasional
		July	20-40	>72	None	---	None
		August	30-60	>72	None	---	None
		September	20-60	>72	None	---	None
		October	30-60	>72	None	---	None
		November	30-60	>72	None	---	None
		December	30-60	>72	None	Brief	Occasional
		Foxlane-----	B	January	50-70	>72	None
February	50-70			>72	None	---	Rare
March	40-70			>72	None	---	Rare
April	40-60			>72	None	---	Rare
May	40-60			>72	None	---	Rare
June	40-60			>72	None	---	Rare
July	40-70			>72	None	---	None
August	50-72			>72	None	---	None
September	50-72			>72	None	---	None
October	50-72			>72	None	---	None
November	50-72			>72	None	---	None
December	50-72			>72	None	---	Rare

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
403: Ralsen-----	D		In	In			
		January	20-50	>72	None	Brief	Occasional
		February	10-40	>72	None	Brief	Occasional
		March	0-30	>72	None	Brief	Occasional
		April	0-20	>72	None	Brief	Occasional
		May	0-20	>72	None	Brief	Occasional
		June	0-30	>72	None	Brief	Occasional
		July	10-40	>72	None	---	None
		August	20-50	>72	None	---	None
		September	20-50	>72	None	---	None
		October	20-50	>72	None	---	None
		November	20-50	>72	None	---	None
		December	20-50	>72	None	Brief	Occasional
Pay-----	D	January	20-50	>72	None	Brief	Occasional
		February	10-40	>72	None	Brief	Occasional
		March	0-30	>72	None	Brief	Occasional
		April	0-20	>72	None	Brief	Occasional
		May	0-20	>72	None	Brief	Occasional
		June	0-30	>72	None	Brief	Occasional
		July	10-40	>72	None	---	None
		August	20-50	>72	None	---	None
		September	20-50	>72	None	---	None
		October	20-50	>72	None	---	None
		November	20-50	>72	None	---	None
		December	20-50	>72	None	Brief	Occasional
		Crossbow-----	C	January	20-60	>72	None
February	20-60			>72	None	Brief	Occasional
March	20-40			>72	None	Brief	Occasional
April	20-30			>72	None	Brief	Occasional
May	20-30			>72	None	Brief	Occasional
June	20-40			>72	None	Brief	Occasional
July	20-40			>72	None	---	None
August	30-60			>72	None	---	None
September	20-60			>72	None	---	None
October	30-60			>72	None	---	None
November	30-60			>72	None	---	None
December	30-60			>72	None	Brief	Occasional

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
404: Riverpoint-----	B	Jan-Dec	---	---	None	---	None
Hellake-----	B	Jan-Dec	---	---	None	---	None
405: Hellake-----	B	Jan-Dec	---	---	None	---	None
Staircase-----	B	January	50-70	>72	None	---	Rare
		February	50-70	>72	None	---	Rare
		March	40-70	>72	None	---	Rare
		April	40-60	>72	None	---	Rare
		May	40-60	>72	None	---	Rare
		June	40-60	>72	None	---	Rare
		July	40-70	>72	None	---	None
		August	50-72	>72	None	---	None
		September	50-72	>72	None	---	None
		October	50-72	>72	None	---	None
		November	50-72	>72	None	---	None
		December	50-72	>72	None	---	Rare
406: Hellake-----	B	Jan-Dec	---	---	None	---	None
407: Hellake-----	B	Jan-Dec	---	---	None	---	None
408: Stardust-----	B	Jan-Dec	---	---	None	---	None
409: Stardust-----	B	Jan-Dec	---	---	None	---	None
410: Stardust-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
410: Riverpoint, very stony surface-----	B	Jan-Dec	---	---	None	---	None
411: Huston, very stony surface-----	B	Jan-Dec	---	---	None	---	None
Zeb, gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
412: Huston, very stony surface-----	B	Jan-Dec	---	---	None	---	None
Stardust-----	B	Jan-Dec	---	---	None	---	None
413: Cloudyway-----	B	Jan-Dec	---	---	None	---	None
414: Hellake-----	B	Jan-Dec	---	---	None	---	None
Middlefork-----	B	Jan-Dec	---	---	None	---	None
415: Middlefork-----	B	Jan-Dec	---	---	None	---	None
Pinney-----	B	Jan-Dec	---	---	None	---	None
416: Pinney, moist-----	B	Jan-Dec	---	---	None	---	None
Middlefork, moist-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
416: Zeb, gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
417: Middlefork-----	B	Jan-Dec	---	---	None	---	None
Zeb, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
418: Middlefork-----	B	Jan-Dec	---	---	None	---	None
Zeb, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
419: Charters, fine gravelly sandy loam, dry--	B	Jan-Dec	---	---	None	---	None
Zeb, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
420: Pioneervil-----	B	January	50-70	>72	None	---	Rare
		February	50-70	>72	None	---	Rare
		March	40-70	>72	None	---	Rare
		April	40-60	>72	None	---	Rare
		May	40-60	>72	None	---	Rare
		June	40-60	>72	None	---	Rare
		July	40-70	>72	None	---	None
		August	50-72	>72	None	---	None
		September	50-72	>72	None	---	None
		October	50-72	>72	None	---	None
		November	50-72	>72	None	---	None
		December	50-72	>72	None	---	Rare

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
420: Grimescreek-----	C		In	In			
		January	20-60	>72	None	Brief	Occasional
		February	20-60	>72	None	Brief	Occasional
		March	20-40	>72	None	Brief	Occasional
		April	20-30	>72	None	Brief	Occasional
		May	20-30	>72	None	Brief	Occasional
		June	20-40	>72	None	Brief	Occasional
		July	20-40	>72	None	---	None
		August	30-60	>72	None	---	None
		September	20-60	>72	None	---	None
		October	30-60	>72	None	---	None
		November	30-60	>72	None	---	None
		December	30-60	>72	None	Brief	Occasional
421: Dumps, dredge tailings-----	C	January	50-70	>72	None	Brief	Occasional
		February	50-70	>72	None	Brief	Occasional
		March	40-70	>72	None	Brief	Occasional
		April	30-60	>72	None	Brief	Occasional
		May	20-60	>72	None	Brief	Occasional
		June	30-60	>72	None	Brief	Occasional
		July	20-40	>72	None	---	None
		August	20-60	>72	None	---	None
		September	20-50	>72	None	---	None
		October	20-50	>72	None	---	None
		November	20-50	>72	None	---	None
		December	50-72	>72	None	Brief	Occasional
		Oxyaquic Xerorthents, very stony surface	C	January	50-70	>72	None
February	50-70			>72	None	---	Rare
March	30-70			>72	None	---	Rare
April	20-60			>72	None	---	Rare
May	20-60			>72	None	---	Rare
June	40-60			>72	None	---	Rare
July	40-70			>72	None	---	None
August	50-72			>72	None	---	None
September	50-72			>72	None	---	None
October	50-72			>72	None	---	None
November	50-72			>72	None	---	None
December	50-72			>72	None	---	Rare

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
422: Lithic Xerorthents, very stony surface---	C	Jan-Dec	---	---	None	---	None
Dumps, placer tailings-----	B	Jan-Dec	---	---	None	---	None
Dystric Xeropsamments, very stony surface	B	Jan-Dec	---	---	None	---	None
423: Dystric Xeropsamments, very stony surface	B	Jan-Dec	---	---	None	---	None
Ultic Haploxeralfs-----	B	Jan-Dec	---	---	None	---	None
Lithic Xerorthents-----	C	Jan-Dec	---	---	None	---	None
424: Middlefork-----	B	Jan-Dec	---	---	None	---	None
Charters, coarse sandy loam-----	B	Jan-Dec	---	---	None	---	None
425: Middlefork-----	B	Jan-Dec	---	---	None	---	None
Brassey-----	B	Jan-Dec	---	---	None	---	None
426: Middlefork, moist-----	B	Jan-Dec	---	---	None	---	None
427: Middlefork, moist-----	B	Jan-Dec	---	---	None	---	None
428: Zeb, gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
428: Republic-----	B	Jan-Dec	---	---	None	---	None
429: Huston, very stony surface-----	B	Jan-Dec	---	---	None	---	None
503: Cartwright, dry-----	B	Jan-Dec	---	---	None	---	None
504: Cartwright, dry-----	B	Jan-Dec	---	---	None	---	None
505: Brownlee-----	B	Jan-Dec	---	---	None	---	None
506: Brownlee-----	B	Jan-Dec	---	---	None	---	None
Robbscreek-----	C	Jan-Dec	---	---	None	---	None
Whisk-----	D	Jan-Dec	---	---	None	---	None
507: Shoebend-----	C	Jan-Dec	---	---	None	---	None
Dobson-----	D	Jan-Dec	---	---	None	---	None
Jerusalem-----	B	Jan-Dec	---	---	None	---	None
509: Arrowrock-----	C	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
509: Borid-----	D	Jan-Dec	---	---	None	---	None
Rock outcrop-----	D	Jan-Dec	---	---	None	---	None
511: Olaton, north slope, moist-----	B	Jan-Dec	---	---	None	---	None
Roney, moist-----	C	Jan-Dec	---	---	None	---	None
513: Shimo, fine gravelly loamy sand, north slope-----	B	Jan-Dec	---	---	None	---	None
Cartwright-----	B	Jan-Dec	---	---	None	---	None
Robbscreek, moist-----	C	Jan-Dec	---	---	None	---	None
516: Shimo, extremely stony surface-----	B	Jan-Dec	---	---	None	---	None
Olaton, south slope-----	B	Jan-Dec	---	---	None	---	None
Schiller, south slope-----	B	Jan-Dec	---	---	None	---	None
525: Robbscreek-----	C	Jan-Dec	---	---	None	---	None
Dobson-----	D	Jan-Dec	---	---	None	---	None
Brownlee-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
526: Cartwright-----	B	Jan-Dec	---	---	None	---	None
Brownlee, moist-----	B	Jan-Dec	---	---	None	---	None
Robbscreek, moist-----	C	Jan-Dec	---	---	None	---	None
527: Dobson-----	D	Jan-Dec	---	---	None	---	None
Roney, dry-----	C	Jan-Dec	---	---	None	---	None
528: Roney, dry-----	C	Jan-Dec	---	---	None	---	None
Dobson-----	D	Jan-Dec	---	---	None	---	None
Olaton, south slope-----	B	Jan-Dec	---	---	None	---	None
529: Roney-----	C	Jan-Dec	---	---	None	---	None
Kisky, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
Olaton, south slope-----	B	Jan-Dec	---	---	None	---	None
532: Schiller, north slope-----	B	Jan-Dec	---	---	None	---	None
Shimo, fine gravelly loamy sand, north slope-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
533: Olaton, north slope, dry-----	B	Jan-Dec	---	---	None	---	None
Roney, moist-----	C	Jan-Dec	---	---	None	---	None
534: Shimo, fine gravelly loamy sand-----	B	Jan-Dec	---	---	None	---	None
Kisky, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
Schiller-----	B	Jan-Dec	---	---	None	---	None
538: Borid-----	D	Jan-Dec	---	---	None	---	None
Shimo, fine gravelly loamy sand-----	B	Jan-Dec	---	---	None	---	None
541: Roney-----	C	Jan-Dec	---	---	None	---	None
Kisky, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
544: Arrowrock-----	C	Jan-Dec	---	---	None	---	None
Borid-----	D	Jan-Dec	---	---	None	---	None
Painter-----	B	Jan-Dec	---	---	None	---	None
551: Shimo, fine gravelly loamy sand, north slope-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
551: Kisky, fine gravelly loamy sand-----	C	Jan-Dec	---	---	None	---	None
555: Brownlee-----	B	Jan-Dec	---	---	None	---	None
Schiller-----	B	Jan-Dec	---	---	None	---	None
556: Kisky, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
Shimo, fine gravelly loamy sand-----	B	Jan-Dec	---	---	None	---	None
Brownlee-----	B	Jan-Dec	---	---	None	---	None
558: Kisky, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
Whisk-----	D	Jan-Dec	---	---	None	---	None
Roney, dry-----	C	Jan-Dec	---	---	None	---	None
560: Robbscreek, moist-----	C	Jan-Dec	---	---	None	---	None
Hellake-----	B	Jan-Dec	---	---	None	---	None
Shimo, fine gravelly loamy sand, north slope-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
561: Shimo, fine gravelly sandy loam, north slope-----	B	Jan-Dec	---	---	None	---	None
Kisky, fine gravelly loamy sand-----	C	Jan-Dec	---	---	None	---	None
Olaton, north slope, moist-----	B	Jan-Dec	---	---	None	---	None
562: Kisky, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
Shimo, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Roney-----	C	Jan-Dec	---	---	None	---	None
600: McDesh-----	C	Jan-Dec	---	---	None	---	None
Immig, rubbly surface-----	D	Jan-Dec	---	---	None	---	None
Gwin, very stony loam, extremely stony surface-----	D	Jan-Dec	---	---	None	---	None
601: Hann-----	D	Jan-Dec	---	---	None	---	None
Gwin, very stony loam, extremely stony surface-----	D	Jan-Dec	---	---	None	---	None
Shafer-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
602: Hillcreek-----	B	Jan-Dec	---	---	None	---	None
Hovelton, cobbly ashy loam, moist, very stony surface-----	C	Jan-Dec	---	---	None	---	None
Hann-----	D	Jan-Dec	---	---	None	---	None
604: Shafer-----	D	Jan-Dec	---	---	None	---	None
Hann-----	D	Jan-Dec	---	---	None	---	None
605: Gwin, very stony loam, extremely stony surface-----	D	Jan-Dec	---	---	None	---	None
Flybow-----	D	Jan-Dec	---	---	None	---	None
606: Hillcreek-----	B	Jan-Dec	---	---	None	---	None
Hovelton, cobbly ashy loam, moist, very stony surface-----	C	Jan-Dec	---	---	None	---	None
607: Duco, stony loam, very stony surface-----	D	Jan-Dec	---	---	None	---	None
Immig, very stony surface-----	D	Jan-Dec	---	---	None	---	None
Rubble land-----	C	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
608: Duco, very gravelly loam, stony surface--	D	Jan-Dec	---	---	None	---	None
Hovelton, gravelly ashy loam-----	C	Jan-Dec	---	---	None	---	None
McDesh, south slope-----	C	Jan-Dec	---	---	None	---	None
610: Hovelton, cobbly ashy loam, very stony surface-----	C	Jan-Dec	---	---	None	---	None
Duco, stony loam, very stony surface-----	D	Jan-Dec	---	---	None	---	None
McDesh, south slope-----	C	Jan-Dec	---	---	None	---	None
612: Hann-----	D	Jan-Dec	---	---	None	---	None
Hillcreek, dry-----	B	Jan-Dec	---	---	None	---	None
613: Duco, stony loam, very stony surface-----	D	Jan-Dec	---	---	None	---	None
Searles, very stony surface-----	C	Jan-Dec	---	---	None	---	None
McDesh, south slope-----	C	Jan-Dec	---	---	None	---	None
618: McDesh, south slope-----	C	Jan-Dec	---	---	None	---	None
Duco, very gravelly loam, stony surface--	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
618: Shafer-----	D	Jan-Dec	---	---	None	---	None
619: McDesh-----	C	Jan-Dec	---	---	None	---	None
Gwin, gravelly loam, stony surface-----	D	Jan-Dec	---	---	None	---	None
Shafer-----	D	Jan-Dec	---	---	None	---	None
620: Immig, very stony surface-----	D	Jan-Dec	---	---	None	---	None
McDesh, south slope-----	C	Jan-Dec	---	---	None	---	None
Duco, stony loam, very stony surface-----	D	Jan-Dec	---	---	None	---	None
621: McDaniel-----	B	Jan-Dec	---	---	None	---	None
Hovelton, gravelly ashy loam-----	C	Jan-Dec	---	---	None	---	None
622: Hovelton, gravelly ashy loam-----	C	Jan-Dec	---	---	None	---	None
Gwin, very stony loam, extremely stony surface-----	D	Jan-Dec	---	---	None	---	None
630: Gwin, very gravelly loam-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
630: Flybow-----	D	Jan-Dec	---	---	None	---	None
Rock outcrop-----	D	Jan-Dec	---	---	None	---	None
631: Flybow-----	D	Jan-Dec	---	---	None	---	None
Rock outcrop-----	D	Jan-Dec	---	---	None	---	None
Rubble land-----	C	Jan-Dec	---	---	None	---	None
634: Gwin, very stony loam, extremely stony surface-----	D	Jan-Dec	---	---	None	---	None
McDesh, very stony loam, very stony surface-----	C	Jan-Dec	---	---	None	---	None
Rock outcrop-----	D	Jan-Dec	---	---	None	---	None
635: Shafer, very stony surface-----	D	Jan-Dec	---	---	None	---	None
Karney-----	D	Jan-Dec	---	---	None	---	None
Yad-----	D	Jan-Dec	---	---	None	---	None
636: Hann, stony surface-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
636: McDesh, very stony loam, extremely bouldery surface-----	C	Jan-Dec	---	---	None	---	None
Robbscreek, moist-----	C	Jan-Dec	---	---	None	---	None
638: Yad-----	D	Jan-Dec	---	---	None	---	None
Cranegulch-----	C	Jan-Dec	---	---	None	---	None
Duco, stony loam, very stony surface----	D	Jan-Dec	---	---	None	---	None
640: Timberbutte-----	B	Jan-Dec	---	---	None	---	None
641: Aradaran-----	C	Jan-Dec	---	---	None	---	None
Yad-----	D	Jan-Dec	---	---	None	---	None
650: Longs-----	B	Jan-Dec	---	---	None	---	None
Highvalley-----	B	Jan-Dec	---	---	None	---	None
Hoff-----	D	Jan-Dec	---	---	None	---	None
651: Hess-----	B	Jan-Dec	---	---	None	---	None
Lidos-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
651: Cleymor-----	D	Jan-Dec	---	---	None	---	None
652: Hess-----	B	Jan-Dec	---	---	None	---	None
Lidos-----	B	Jan-Dec	---	---	None	---	None
Klicker-----	C	Jan-Dec	---	---	None	---	None
653: Lidos-----	B	Jan-Dec	---	---	None	---	None
Klicker-----	C	Jan-Dec	---	---	None	---	None
Hess-----	B	Jan-Dec	---	---	None	---	None
654: Shilling-----	B	Jan-Dec	---	---	None	---	None
Highvalley-----	B	Jan-Dec	---	---	None	---	None
Hoff-----	D	Jan-Dec	---	---	None	---	None
655: Shilling, moist-----	B	Jan-Dec	---	---	None	---	None
Highvalley, moist-----	B	Jan-Dec	---	---	None	---	None
656: Shilling, moist-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
656: Highvalley, moist-----	B	Jan-Dec	---	---	None	---	None
657: Pumpkin, stony surface-----	B	Jan-Dec	---	---	None	---	None
658: Cleymor-----	D	Jan-Dec	---	---	None	---	None
Pumpkin, stony surface-----	B	Jan-Dec	---	---	None	---	None
659: Hoff, south slope-----	D	Jan-Dec	---	---	None	---	None
660: Longs-----	B	Jan-Dec	---	---	None	---	None
Highvalley-----	B	Jan-Dec	---	---	None	---	None
661: Awley-----	B	Jan-Dec	---	---	None	---	None
Bo-----	B	Jan-Dec	---	---	None	---	None
662: Awley-----	B	Jan-Dec	---	---	None	---	None
Bo-----	B	Jan-Dec	---	---	None	---	None
663: Cleymor-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
663: Hoff-----	D	Jan-Dec	---	---	None	---	None
666: Pachic Argixerolls, very stony surface---	B	Jan-Dec	---	---	None	---	None
Rubble land-----	A	Jan-Dec	---	---	None	---	None
Typic Haploxerolls, extremely stony surface-----	B	Jan-Dec	---	---	None	---	None
700: Drybuck-----	B	Jan-Dec	---	---	None	---	None
Whisk, moist-----	D	Jan-Dec	---	---	None	---	None
701: Drybuck-----	B	Jan-Dec	---	---	None	---	None
Whisk, moist-----	D	Jan-Dec	---	---	None	---	None
702: Deerrun-----	C	Jan-Dec	---	---	None	---	None
Kisky, fine gravelly sandy loam, moist---	C	Jan-Dec	---	---	None	---	None
Drybuck, dry-----	B	Jan-Dec	---	---	None	---	None
704: Drybuck-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
704: Northfork, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Whisk, moist-----	D	Jan-Dec	---	---	None	---	None
705: Northfork, sandy loam-----	B	Jan-Dec	---	---	None	---	None
Shirts, sandy loam, dry-----	C	Jan-Dec	---	---	None	---	None
706: Northfork, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Shirts, coarse sandy loam-----	C	Jan-Dec	---	---	None	---	None
Zimmer-----	D	Jan-Dec	---	---	None	---	None
707: Packerjohn, ashy coarse sandy loam-----	A	Jan-Dec	---	---	None	---	None
Shirts, coarse sandy loam-----	C	Jan-Dec	---	---	None	---	None
Zimmer-----	D	Jan-Dec	---	---	None	---	None
708: Zimmer-----	D	Jan-Dec	---	---	None	---	None
Northfork, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Rock outcrop-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
709: Shirts, sandy loam, south slope-----	C	Jan-Dec	---	---	None	---	None
Charters, sandy loam-----	B	Jan-Dec	---	---	None	---	None
710: Charters, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Northfork, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Shirts, coarse sandy loam-----	C	Jan-Dec	---	---	None	---	None
711: Charters, fine gravelly sandy loam, dry--	B	Jan-Dec	---	---	None	---	None
Shirts, sandy loam, dry-----	C	Jan-Dec	---	---	None	---	None
Zimmer-----	D	Jan-Dec	---	---	None	---	None
712: Charters, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Shirts, coarse sandy loam-----	C	Jan-Dec	---	---	None	---	None
Zimmer-----	D	Jan-Dec	---	---	None	---	None
714: Shirts, sandy loam, south slope-----	C	Jan-Dec	---	---	None	---	None
Eagleson, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
714: Charters, sandy loam-----	B	Jan-Dec	---	---	None	---	None
715: Eagleson, fine gravelly sandy loam, dry--	C	Jan-Dec	---	---	None	---	None
Kosh-----	C	Jan-Dec	---	---	None	---	None
716: Zan-----	A	Jan-Dec	---	---	None	---	None
Belsh-----	A	Jan-Dec	---	---	None	---	None
Montchief-----	B	Jan-Dec	---	---	None	---	None
718: Charters, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Crumley-----	B	Jan-Dec	---	---	None	---	None
Eagleson, sandy loam-----	C	Jan-Dec	---	---	None	---	None
720: Drybuck, dry-----	B	Jan-Dec	---	---	None	---	None
Deerrun-----	C	Jan-Dec	---	---	None	---	None
Kisky, fine gravelly sandy loam, moist---	C	Jan-Dec	---	---	None	---	None
721: Shirts, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
721: Kosh-----	C	Jan-Dec	---	---	None	---	None
Charters, fine gravelly sandy loam, dry--	B	Jan-Dec	---	---	None	---	None
726: Garval-----	C	Jan-Dec	---	---	None	---	None
Kisky, fine gravelly loamy coarse sand---	C	Jan-Dec	---	---	None	---	None
730: Hellake-----	B	Jan-Dec	---	---	None	---	None
Stardust-----	B	Jan-Dec	---	---	None	---	None
731: Shirts, sandy loam, dry-----	C	Jan-Dec	---	---	None	---	None
Charters, fine gravelly sandy loam, dry--	B	Jan-Dec	---	---	None	---	None
Zimmer-----	D	Jan-Dec	---	---	None	---	None
733: Shirts, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
Kosh-----	C	Jan-Dec	---	---	None	---	None
734: Shirts, sandy loam, dry-----	C	Jan-Dec	---	---	None	---	None
Kosh-----	C	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
735: Shirts, coarse sandy loam-----	C	Jan-Dec	---	---	None	---	None
Zimmer-----	D	Jan-Dec	---	---	None	---	None
Charters, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
738: Tripod-----	A	Jan-Dec	---	---	None	---	None
Packerjohn, ashy coarse sandy loam-----	A	Jan-Dec	---	---	None	---	None
Pajo, fine gravelly ashy coarse sandy loam-----	B	Jan-Dec	---	---	None	---	None
739: Shirts, sandy loam, moist-----	C	Jan-Dec	---	---	None	---	None
Zimmer-----	D	Jan-Dec	---	---	None	---	None
Packerjohn, ashy coarse sandy loam-----	A	Jan-Dec	---	---	None	---	None
740: Charters, sandy loam-----	B	Jan-Dec	---	---	None	---	None
Eagleson, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
741: Zan-----	A	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
742: Crumley-----	B	Jan-Dec	---	---	None	---	None
Eagleson, sandy loam-----	C	Jan-Dec	---	---	None	---	None
743: Packerjohn, ashy coarse sandy loam-----	A	Jan-Dec	---	---	None	---	None
Shirts, sandy loam, moist-----	C	Jan-Dec	---	---	None	---	None
744: Packerjohn, ashy sandy loam, cool-----	A	Jan-Dec	---	---	None	---	None
Shirts, sandy loam, moist-----	C	Jan-Dec	---	---	None	---	None
Tripod, cool-----	A	Jan-Dec	---	---	None	---	None
745: Tripod, moist-----	A	Jan-Dec	---	---	None	---	None
Packerjohn, ashy sandy loam-----	A	Jan-Dec	---	---	None	---	None
746: Packerjohn, ashy sandy loam-----	A	Jan-Dec	---	---	None	---	None
747: Pinney, moist-----	B	Jan-Dec	---	---	None	---	None
Charters, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Shirts, sandy loam, dry-----	C	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
748: Belsh, moist-----	A	Jan-Dec	---	---	None	---	None
Zan, moist-----	A	Jan-Dec	---	---	None	---	None
749: Quartzburg-----	B	Jan-Dec	---	---	None	---	None
Charters, sandy loam-----	B	Jan-Dec	---	---	None	---	None
750: Garval-----	C	Jan-Dec	---	---	None	---	None
Kisky, fine gravelly loamy coarse sand---	C	Jan-Dec	---	---	None	---	None
Rock outcrop-----	D	Jan-Dec	---	---	None	---	None
751: Belsh, moist-----	A	Jan-Dec	---	---	None	---	None
Zan, moist-----	A	Jan-Dec	---	---	None	---	None
752: Josie-----	B	Jan-Dec	---	---	None	---	None
Zimmer, fine gravelly sandy loam-----	D	Jan-Dec	---	---	None	---	None
753: Tripod, cool-----	A	Jan-Dec	---	---	None	---	None
Packerjohn, ashy sandy loam, cool-----	A	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
753: Shirts, sandy loam, moist-----	C	Jan-Dec	---	---	None	---	None
754: Packerjohn, ashy sandy loam-----	A	Jan-Dec	---	---	None	---	None
Shirts, sandy loam, moist-----	C	Jan-Dec	---	---	None	---	None
755: Zimmer-----	D	Jan-Dec	---	---	None	---	None
Quartzburg-----	B	Jan-Dec	---	---	None	---	None
Rock outcrop-----	D	Jan-Dec	---	---	None	---	None
756: Pajo, fine gravelly ashy coarse sandy loam-----	B	Jan-Dec	---	---	None	---	None
Tripod-----	A	Jan-Dec	---	---	None	---	None
Kosh, moist-----	C	Jan-Dec	---	---	None	---	None
758: Eagleson, sandy loam-----	C	Jan-Dec	---	---	None	---	None
Kosh, moist-----	C	Jan-Dec	---	---	None	---	None
Charters, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
759: Charters, sandy loam-----	B	Jan-Dec	---	---	None	---	None
Shirts, sandy loam, south slope-----	C	Jan-Dec	---	---	None	---	None
Kosh, moist-----	C	Jan-Dec	---	---	None	---	None
761: Charters, fine gravelly sandy loam-----	B	Jan-Dec	---	---	None	---	None
Middlefork, moist-----	B	Jan-Dec	---	---	None	---	None
762: Drybuck, dry-----	B	Jan-Dec	---	---	None	---	None
Hellake-----	B	Jan-Dec	---	---	None	---	None
Deerrun-----	C	Jan-Dec	---	---	None	---	None
763: Eagleson, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
Kosh-----	C	Jan-Dec	---	---	None	---	None
Rock outcrop-----	D	Jan-Dec	---	---	None	---	None
765: Backswitch, coarse sandy loam-----	C	Jan-Dec	---	---	None	---	None
Zimmer, warm-----	D	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
765: Rock outcrop-----	D	Jan-Dec	---	---	None	---	None
766: Backswitch, coarse sandy loam-----	C	Jan-Dec	---	---	None	---	None
Charters, coarse sandy loam-----	B	Jan-Dec	---	---	None	---	None
Zimmer, dry-----	D	Jan-Dec	---	---	None	---	None
767: Shirts, sandy loam, dry-----	C	Jan-Dec	---	---	None	---	None
Kosh-----	C	Jan-Dec	---	---	None	---	None
Charters, fine gravelly sandy loam, dry--	B	Jan-Dec	---	---	None	---	None
768: Shirts, sandy loam, south slope-----	C	Jan-Dec	---	---	None	---	None
Kosh, moist-----	C	Jan-Dec	---	---	None	---	None
Eagleson, fine gravelly sandy loam-----	C	Jan-Dec	---	---	None	---	None
770: Shirts, sandy loam, dry-----	C	Jan-Dec	---	---	None	---	None
Charters, fine gravelly sandy loam, dry--	B	Jan-Dec	---	---	None	---	None
Kosh, moist-----	C	Jan-Dec	---	---	None	---	None

Table 21.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Frequency of ponding	Flooding	
			Upper limit	Lower limit		Duration	Frequency
			<i>In</i>	<i>In</i>			
771: Backswitch, sandy loam-----	C	Jan-Dec	---	---	None	---	None
Shirts, sandy loam, dry-----	C	Jan-Dec	---	---	None	---	None
772: Pajo, fine gravelly ashy sandy loam-----	B	Jan-Dec	---	---	None	---	None
Packerjohn, ashy sandy loam, dry-----	A	Jan-Dec	---	---	None	---	None
Kosh, moist-----	C	Jan-Dec	---	---	None	---	None
900: Pits, gravel-----	---	---	---	---	---	---	---
Dumps, gravel-----	---	---	---	---	---	---	---
901: Dumps, landfill-----	---	---	---	---	---	---	---
999: Water-----	---	---	---	---	---	---	---

Table 22.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
220: Oxyaquic Xerofluvents--	---	---	---	---	0	---	Low	Moderate	Moderate
Cumulic Haploxerolls---	---	---	---	---	0	---	Moderate	Moderate	Moderate
221: Bissell-----	Strongly contrasting textural stratification	40-60	---	Noncemented	0	---	Moderate	Moderate	Low
222: Bissell-----	Strongly contrasting textural stratification	40-60	---	Noncemented	0	---	Moderate	Moderate	Low
223: Staircase, dry-----	---	---	---	---	0	---	Moderate	Low	Low
224: Porter-----	---	---	---	---	0	---	Moderate	Low	Low
225: Boise-----	---	---	---	---	0	---	Moderate	Low	Moderate
226: Flofeather, very rarely flooded-----	---	---	---	---	0	---	Moderate	Low	Low
Shawmount, stony surface-----	---	---	---	---	0	---	Moderate	Moderate	Low
227: Piercepark, loam-----	---	---	---	---	0	---	Moderate	Moderate	Low
228: Piercepark, loam-----	---	---	---	---	0	---	Moderate	Moderate	Low
229: Piercepark, coarse sandy loam-----	---	---	---	---	0	---	Moderate	Moderate	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
230: Hann-----	---	---	---	---	0	---	Moderate	High	Low
Doubledia, silty clay loam-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
232: Jassek-----	Strongly contrasting textural stratification	40-60	---	Noncemented	0	---	Moderate	High	Low
233: Jassek-----	Strongly contrasting textural stratification	40-60	---	Noncemented	0	---	Moderate	High	Low
238: Adaboi-----	---	---	---	---	0	---	High	High	Low
240: Collister-----	---	---	---	---	0	---	Moderate	Moderate	Low
Flofeather-----	---	---	---	---	0	---	Moderate	Low	Low
300: Shawmount, stony surface-----	---	---	---	---	0	---	Moderate	Moderate	Low
301: Breadloaf-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	Moderate	High	Low
Doubledia, silty clay loam-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
302: Breadloaf-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	Moderate	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
302: Doubledia, silty clay loam-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Hann-----	---	---	---	---	0	---	Moderate	High	Low
303: Doubledia, silty clay loam-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Hann-----	---	---	---	---	0	---	Moderate	High	Low
Breadloaf-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	Moderate	High	Low
304: Breadloaf-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	Moderate	High	Low
Doubledia, silty clay loam-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Hullsgulch, loam-----	---	---	---	---	0	---	Moderate	Moderate	Low
305: Siphonlake, south slope	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	Low	Low
Solarview-----	Paralithic bedrock	14-20	---	Moderately cemented	0	---	Low	Low	Low
306: Van Dusen-----	---	---	---	---	0	---	Moderate	Moderate	Low
Siphonlake-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	Low	Moderate
307: Adaboi-----	---	---	---	---	0	---	Moderate	High	Low
Meclo-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	Moderate	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
308: Breadloaf-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	Moderate	High	Low
Crawley, silt loam----	Paralithic bedrock	10-20	---	Moderately cemented	0	---	Moderate	Moderate	Low
Doubledia, clay loam---	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
309: Hullsgulch, sandy loam	---	---	---	---	0	---	Moderate	Moderate	Low
Solarview-----	Paralithic bedrock	14-20	---	Moderately cemented	0	---	Low	Low	Low
311: Meclo-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	Moderate	High	Low
Crawley, silt loam----	Paralithic bedrock	10-20	---	Moderately cemented	0	---	Moderate	Moderate	Low
Adaboi-----	---	---	---	---	0	---	Moderate	High	Low
328: Gacey, extremely stony surface-----	Duripan	10-20	4-12	Very strongly cemented	0	---	Low	High	Low
329: Ayette-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Duco, stony loam, very stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
330: Breadloaf-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	High	Moderate	Low
Ayette, moist-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Immig, rubbly surface--	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Moderate	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
331: Ayette, moist-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Yad-----	---	---	---	---	0	---	High	High	Low
332: Hann-----	---	---	---	---	0	---	Moderate	High	Low
Ayette, moist-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Picketpin-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
333: Ayette-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Crawley, loam-----	Paralithic bedrock	10-20	---	Moderately cemented	0	---	High	High	Moderate
Hullsgulch, loam-----	---	---	---	---	0	---	Moderate	Moderate	Low
335: Gimmi, very stony surface-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---	Moderate	High	Low
Ayette, moist-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	High	Low
Doubledia, silty clay loam-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	High	Moderate	Low
400: Ralsen-----	---	---	---	---	0	---	Moderate	High	Moderate
Foxlane-----	Strongly contrasting textural stratification	10-21	---	Noncemented	0	---	Low	Low	High
Pay-----	---	---	---	---	0	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
401: Staircase-----	---	---	---	---	0	---	Moderate	Low	Moderate
402: Crossbow-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Foxlane-----	Strongly contrasting textural stratification	10-21	---	Noncemented	0	---	Low	Low	High
403: Ralsen-----	---	---	---	---	0	---	Moderate	High	Moderate
Pay-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Crossbow-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
404: Riverpoint-----	Strongly contrasting textural stratification	15-40	---	Noncemented	0	---	Moderate	Moderate	Moderate
Hellake-----	Strongly contrasting textural stratification	30-60	---	Noncemented	0	---	Moderate	Moderate	Moderate
405: Hellake-----	Strongly contrasting textural stratification	30-60	---	Noncemented	0	---	Moderate	Moderate	Moderate
Staircase-----	---	---	---	---	0	---	Moderate	Low	Low
406: Hellake-----	Strongly contrasting textural stratification	30-60	---	Noncemented	0	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
407: Hellake-----	Strongly contrasting textural stratification	30-60	---	Noncemented	0	---	Moderate	Moderate	Moderate
408: Stardust-----	---	---	---	---	0	---	Moderate	Low	Moderate
409: Stardust-----	---	---	---	---	0	---	Moderate	Low	Moderate
410: Stardust-----	---	---	---	---	0	---	Moderate	Low	Moderate
Riverpoint, very stony surface-----	Strongly contrasting textural stratification	20-40	---	Noncemented	0	---	Moderate	Moderate	Moderate
411: Huston, very stony surface-----	---	---	---	---	0	---	Moderate	Low	Moderate
Zeb, gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
412: Huston, very stony surface-----	---	---	---	---	0	---	Moderate	Low	Moderate
Stardust-----	---	---	---	---	0	---	Moderate	Low	Moderate
413: Cloudyway-----	---	---	---	---	0	---	Moderate	Low	Moderate
414: Hellake-----	Strongly contrasting textural stratification	30-60	---	Noncemented	0	---	Moderate	Moderate	Moderate
Middlefork-----	---	---	---	---	0	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
415: Middlefork-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Pinney-----	---	---	---	---	0	---	Moderate	Low	Moderate
416: Pinney, moist-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Middlefork, moist-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Zeb, gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
417: Middlefork-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Zeb, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
418: Middlefork-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Zeb, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
419: Charters, fine gravelly sandy loam, dry-----	---	---	---	---	0	---	Moderate	Low	Moderate
Zeb, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
420: Pioneervil-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Grimescreek-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
421: Dumps, dredge tailings	---	---	---	---	0	---	---	---	---
Oxyaquic Xerorthents, very stony surface----	---	---	---	---	0	---	Low	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
422: Lithic Xerorthents, very stony surface----	Lithic bedrock	5-20	---	Indurated	0	---	Low	Low	Moderate
Dumps, placer tailings	Paralithic bedrock	20-60	4-40	Moderately cemented	0	---	---	---	---
	Lithic bedrock	22-60	---	Indurated					
Dystric Xeropsamments, very stony surface----	Paralithic bedrock	20-60	4-40	Moderately cemented	0	---	Low	Low	Moderate
	Lithic bedrock	22-60	---	Indurated					
423: Dystric Xeropsamments, very stony surface----	Paralithic bedrock	20-60	4-40	Moderately cemented	0	---	Low	Low	Moderate
	Lithic bedrock	22-60	---	Indurated					
Ultic Haploxeralfs-----	Lithic bedrock	30-80	---	Indurated	0	---	Moderate	Moderate	Moderate
Lithic Xerorthents-----	Lithic bedrock	5-20	---	Indurated	0	---	Low	Low	Moderate
424: Middlefork-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Charters, coarse sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
425: Middlefork-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Brassey-----	Strongly contrasting textural stratification	40-60	---	Noncemented	0	---	Moderate	Moderate	Moderate
426: Middlefork, moist-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
427: Middlefork, moist-----	---	---	---	---	0	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
428: Zeb, gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
Republic-----	---	---	---	---	0	---	Moderate	Low	Low
429: Huston, very stony surface-----	---	---	---	---	0	---	Moderate	Low	Moderate
503: Cartwright, dry-----	---	---	---	---	0	---	Moderate	Low	Low
504: Cartwright, dry-----	---	---	---	---	0	---	Moderate	Low	Low
505: Brownlee-----	Paralithic bedrock	40-50	3-10	Moderately cemented	0	---	Moderate	Moderate	Moderate
	Lithic bedrock	43-60	---	Indurated					
506: Brownlee-----	Paralithic bedrock	40-50	3-10	Moderately cemented	0	---	Moderate	Moderate	Moderate
	Lithic bedrock	43-60	---	Indurated					
Robbscreek-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Moderate	Moderate
Whisk-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
507: Shoebend-----	Paralithic bedrock	20-40	4-20	Moderately cemented	0	---	Moderate	Moderate	Low
	Lithic bedrock	30-60	---	Indurated					
Dobson-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Jerusalem-----	---	---	---	---	0	---	Moderate	Moderate	Low
509: Arrowrock-----	Paralithic bedrock	10-18	2-6	Moderately cemented	0	---	Low	Low	Low
	Lithic bedrock	15-20	---	Indurated					

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
509: Borid-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
511: Olaton, north slope, moist-----	---	---	---	---	0	---	Moderate	Low	Moderate
Roney, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
513: Shimo, fine gravelly loamy sand, north slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
Cartwright-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Robbscreek, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Moderate	Moderate
516: Shimo, extremely stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
Olaton, south slope----	---	---	---	---	0	---	Moderate	Low	Moderate
Schiller, south slope--	---	---	---	---	0	---	Moderate	Low	Low
525: Robbscreek-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Moderate	Moderate
Dobson-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Brownlee-----	Paralithic bedrock	40-50	3-10	Moderately cemented	0	---	Moderate	Moderate	Moderate
	Lithic bedrock	43-60	---	Indurated					
526: Cartwright-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Brownlee, moist-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Robbscreek, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Moderate	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
527: Dobson-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Roney, dry-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
528: Roney, dry-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Dobson-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Olaton, south slope----	---	---	---	---	0	---	Moderate	Low	Moderate
529: Roney-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kisky, fine gravelly sandy loam-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Olaton, south slope----	---	---	---	---	0	---	Moderate	Low	Moderate
532: Schiller, north slope--	---	---	---	---	0	---	Moderate	Low	Low
Shimo, fine gravelly loamy sand, north slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
533: Olaton, north slope, dry-----	---	---	---	---	0	---	Moderate	Moderate	Low
Roney, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
534: Shimo, fine gravelly loamy sand-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
Kisky, fine gravelly sandy loam-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Schiller-----	---	---	---	---	0	---	Moderate	Low	Low
538: Borid-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
538: Shimo, fine gravelly loamy sand-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
541: Roney-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kisky, fine gravelly sandy loam-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
544: Arrowrock-----	Paralithic bedrock	10-18	2-6	Moderately cemented	0	---	Low	Low	Low
	Lithic bedrock	15-20	---	Indurated					
Borid-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Painter-----	Paralithic bedrock	20-30	4-15	Moderately cemented	0	---	Low	Low	Low
	Lithic bedrock	24-40	---	Indurated					
551: Shimo, fine gravelly loamy sand, north slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
Kisky, fine gravelly loamy sand-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Low
555: Brownlee-----	Paralithic bedrock	40-50	3-10	Moderately cemented	0	---	Moderate	Moderate	Moderate
	Lithic bedrock	43-60	---	Indurated					
Schiller-----	---	---	---	---	0	---	Moderate	Low	Low
556: Kisky, fine gravelly sandy loam-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Shimo, fine gravelly loamy sand-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
Brownlee-----	Paralithic bedrock	40-50	3-10	Moderately cemented	0	---	Moderate	Moderate	Moderate
	Lithic bedrock	43-60	---	Indurated					

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
558: Kisky, fine gravelly sandy loam-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Whisk-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
Roney, dry-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
560: Robbscreek, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Moderate	Moderate
Hellake-----	Strongly contrasting textural stratification	30-60	---	Noncemented	0	---	Moderate	Moderate	Moderate
Shimo, fine gravelly loamy sand, north slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
561: Shimo, fine gravelly sandy loam, north slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
Kisky, fine gravelly loamy sand-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Low
Olaton, north slope, moist-----	---	---	---	---	0	---	Moderate	Low	Moderate
562: Kisky, fine gravelly sandy loam-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Shimo, fine gravelly sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Low
Roney-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
600: McDesh-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
Immig, rubbly surface--	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
600: Gwin, very stony loam, extremely stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
601: Hann-----	---	---	---	---	0	---	Moderate	High	Low
Gwin, very stony loam, extremely stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Shafer-----	Paralithic bedrock	20-38	0-5	Moderately cemented	0	---	High	Moderate	Low
	Lithic bedrock	20-40	---	Indurated					
602: Hillcreek-----	---	---	---	---	0	---	Moderate	Moderate	Low
Hovelton, cobbly ashy loam, moist, very stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
Hann-----	---	---	---	---	0	---	Moderate	High	Low
604: Shafer-----	Paralithic bedrock	20-38	0-5	Moderately cemented	0	---	High	Moderate	Low
	Lithic bedrock	20-40	---	Indurated					
Hann-----	---	---	---	---	0	---	Moderate	High	Low
605: Gwin, very stony loam, extremely stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Flybow-----	Lithic bedrock	4-10	---	Indurated	0	---	Moderate	Low	Low
606: Hillcreek-----	---	---	---	---	0	---	Moderate	Moderate	Low
Hovelton, cobbly ashy loam, moist, very stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
607: Duco, stony loam, very stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Immig, very stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	High	Low
Rubble land-----	Lithic bedrock	4-40	---	Indurated	0	---	---	---	---
608: Duco, very gravelly loam, stony surface---	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Hovelton, gravelly ashy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
McDesh, south slope---	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
610: Hovelton, cobbly ashy loam, very stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
Duco, stony loam, very stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
McDesh, south slope---	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
612: Hann-----	---	---	---	---	0	---	Moderate	High	Low
Hillcreek, dry-----	---	---	---	---	0	---	Moderate	Moderate	Low
613: Duco, stony loam, very stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Searles, very stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
McDesh, south slope---	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
618: McDesh, south slope---	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
618: Duco, very gravelly loam, stony surface---	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
Shafer-----	Paralithic bedrock	20-38	0-5	Moderately cemented	0	---	High	Moderate	Low
	Lithic bedrock	20-40	---	Indurated					
619: McDesh-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Gwin, gravelly loam, stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Moderate	Low
Shafer-----	Paralithic bedrock	20-38	0-5	Moderately cemented	0	---	Moderate	Moderate	Low
	Lithic bedrock	20-40	---	Indurated					
620: Immig, very stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	High	Low
McDesh, south slope---	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
Duco, stony loam, very stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
621: McDaniel-----	---	---	---	---	0	---	Moderate	Low	Low
Hovelton, gravelly ashy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
622: Hovelton, gravelly ashy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Low
Gwin, very stony loam, extremely stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
630: Gwin, very gravelly loam-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
630: Flybow-----	Lithic bedrock	4-10	---	Indurated	0	---	Moderate	Low	Low
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
631: Flybow-----	Lithic bedrock	4-10	---	Indurated	0	---	Moderate	Low	Low
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
Rubble land-----	Lithic bedrock	4-40	---	Indurated	0	---	---	---	---
634: Gwin, very stony loam, extremely stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
McDesh, very stony loam, very stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	High	Low
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
635: Shafer, very stony surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	High	Low
Karney-----	Paralithic bedrock	20-40	12-30	Moderately cemented	0	---	Moderate	High	Low
	Lithic bedrock	40-60	---	Indurated					
Yad-----	---	---	---	---	0	---	Moderate	High	Low
636: Hann, stony surface----	---	---	---	---	0	---	Moderate	High	Low
McDesh, very stony loam, extremely bouldery surface-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	High	Low
Robbscreek, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Moderate	Moderate
638: Yad-----	---	---	---	---	0	---	High	High	Low
Cranegulch-----	---	---	---	---	0	---	Moderate	High	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
638: Duco, stony loam, very stony surface-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
640: Timberbutte-----	---	---	---	---	0	---	Moderate	Low	Moderate
641: Aradaran-----	---	---	---	---	0	---	Moderate	High	Moderate
Yad-----	---	---	---	---	0	---	High	High	Low
650: Longs-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Low	Moderate
Highvalley-----	---	---	---	---	0	---	Moderate	Low	Moderate
Hoff-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
651: Hess-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Moderate	Moderate
Lidos-----	---	---	---	---	0	---	Moderate	Low	Moderate
Cleymor-----	---	---	---	---	0	---	Moderate	High	Moderate
652: Hess-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Moderate	Moderate
Lidos-----	---	---	---	---	0	---	Moderate	Low	Moderate
Klicker-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
653: Lidos-----	---	---	---	---	0	---	Moderate	Low	Moderate
Klicker-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Hess-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Moderate	Moderate
654: Shilling-----	---	---	---	---	0	---	Moderate	Low	Moderate
Highvalley-----	---	---	---	---	0	---	Moderate	Low	Moderate
Hoff-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action	Risk of corrosion		
	Kind	Depth to top	Thickness	Hardness	Initial		Total	Uncoated steel	Concrete
		In	In		In	In			
655: Shilling, moist-----	---	---	---	---	0	---	Moderate	Low	Moderate
Highvalley, moist-----	---	---	---	---	0	---	Moderate	Low	Moderate
656: Shilling, moist-----	---	---	---	---	0	---	Moderate	Low	Moderate
Highvalley, moist-----	---	---	---	---	0	---	Moderate	Low	Moderate
657: Pumpkin, stony surface	---	---	---	---	0	---	Moderate	Low	Moderate
658: Cleymor-----	---	---	---	---	0	---	Moderate	High	Moderate
Pumpkin, stony surface	---	---	---	---	0	---	Moderate	Low	Moderate
659: Hoff, south slope-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low
660: Longs-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Low	Moderate
Highvalley-----	---	---	---	---	0	---	Moderate	Low	Moderate
661: Awley-----	---	---	---	---	0	---	Moderate	Low	Moderate
Bo-----	Strongly contrasting textural stratification	40-60	---	Noncemented	0	---	Moderate	Low	Moderate
662: Awley-----	---	---	---	---	0	---	Moderate	Low	Moderate
Bo-----	Strongly contrasting textural stratification	40-60	---	Noncemented	0	---	Moderate	Low	Moderate
663: Cleymor-----	---	---	---	---	0	---	Moderate	High	Moderate
Hoff-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Low

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
666: Pachic Argixerolls, very stony surface----	Lithic bedrock	40-80	---	Indurated	0	---	Moderate	Low	Low
Rubble land-----	---	---	---	---	0	---	---	---	---
Typic Haploxerolls, extremely stony surface-----	Lithic bedrock	30-80	---	Indurated	0	---	Moderate	Low	Low
700: Drybuck-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Low	Moderate
Whisk, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
701: Drybuck-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Low	Moderate
Whisk, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
702: Deerrun-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kisky, fine gravelly sandy loam, moist----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Drybuck, dry-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Low	Moderate
704: Drybuck-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Low	Moderate
Northfork, fine gravelly sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate
Whisk, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
705: Northfork, sandy loam--	---	---	---	---	0	---	Moderate	Low	Moderate
Shirts, sandy loam, dry	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
706: Northfork, fine gravelly sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
706: Shirts, coarse sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
707: Packerjohn, ashy coarse sandy loam-----	---	---	---	---	0	---	Low	Low	Moderate
Shirts, coarse sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
708: Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
Northfork, fine gravelly sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
709: Shirts, sandy loam, south slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Charters, sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate
710: Charters, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
Northfork, fine gravelly sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate
Shirts, coarse sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
711: Charters, fine gravelly sandy loam, dry-----	---	---	---	---	0	---	Moderate	Low	Moderate
Shirts, sandy loam, dry	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
712: Charters, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
Shirts, coarse sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
714: Shirts, sandy loam, south slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Eagleson, fine gravelly sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Charters, sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate
715: Eagleson, fine gravelly sandy loam, dry-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
716: Zan-----	---	---	---	---	0	---	Low	Low	Moderate
Belsh-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	---	Low	Low	Moderate
Montchief-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Moderate
718: Charters, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
Crumley-----	Strongly contrasting textural stratification	14-25	---	Noncemented	0	---	Low	Low	High
Eagleson, sandy loam---	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
720: Drybuck, dry-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Low	Moderate
Deerrun-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kisky, fine gravelly sandy loam, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
721: Shirts, fine gravelly sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Charters, fine gravelly sandy loam, dry-----	---	---	---	---	0	---	Moderate	Low	Moderate
726: Garval-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Moderate
Kisky, fine gravelly loamy coarse sand-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
730: Hellake-----	Strongly contrasting textural stratification	30-60	---	Noncemented	0	---	Moderate	Moderate	Moderate
Stardust-----	---	---	---	---	0	---	Moderate	Low	Moderate
731: Shirts, sandy loam, dry	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Charters, fine gravelly sandy loam, dry-----	---	---	---	---	0	---	Moderate	Low	Moderate
Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
733: Shirts, fine gravelly sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
734: Shirts, sandy loam, dry	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
735: Shirts, coarse sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
Charters, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
738: Tripod-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	---	Moderate	Low	Moderate
Packerjohn, ashy coarse sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
Pajo, fine gravelly ashy coarse sandy loam	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Moderate
739: Shirts, sandy loam, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
Packerjohn, ashy coarse sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
740: Charters, sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate
Eagleson, fine gravelly sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
741: Zan-----	---	---	---	---	0	---	Low	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
742: Crumley-----	Strongly contrasting textural stratification	14-25	---	Noncemented	0	---	Low	Low	High
Eagleson, sandy loam---	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
743: Packerjohn, ashy coarse sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
Shirts, sandy loam, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
744: Packerjohn, ashy sandy loam, cool-----	---	---	---	---	0	---	Low	Low	Moderate
Shirts, sandy loam, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Tripod, cool-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	---	Low	Low	Moderate
745: Tripod, moist-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	---	Low	Low	Moderate
Packerjohn, ashy sandy loam-----	---	---	---	---	0	---	Low	Low	Moderate
746: Packerjohn, ashy sandy loam-----	---	---	---	---	0	---	Low	Low	Moderate
747: Pinney, moist-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Charters, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
747: Shirts, sandy loam, dry	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
748: Belsh, moist-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	---	Low	Low	Moderate
Zan, moist-----	---	---	---	---	0	---	Low	Low	Moderate
749: Quartzburg-----	Paralithic bedrock	20-40	3-15	Moderately cemented	0	---	Low	Low	Moderate
	Lithic bedrock	23-55	---	Indurated					
Charters, sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate
750: Garval-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Moderate
Kisky, fine gravelly loamy coarse sand----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
751: Belsh, moist-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	---	Low	Low	Moderate
Zan, moist-----	---	---	---	---	0	---	Low	Low	Moderate
752: Josie-----	---	---	---	---	0	---	Moderate	Low	Moderate
Zimmer, fine gravelly sandy loam-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
753: Tripod, cool-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	---	Low	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
753: Packerjohn, ashy sandy loam, cool-----	---	---	---	---	0	---	Low	Low	Moderate
Shirts, sandy loam, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
754: Packerjohn, ashy sandy loam-----	---	---	---	---	0	---	Low	Low	Moderate
Shirts, sandy loam, moist-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
755: Zimmer-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
Quartzburg-----	Paralithic bedrock	20-40	3-15	Moderately cemented	0	---	Low	Low	Moderate
	Lithic bedrock	23-55	---	Indurated					
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
756: Pajo, fine gravelly ashy coarse sandy loam	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Moderate
Tripod-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	---	Moderate	Low	Moderate
Kosh, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
758: Eagleson, sandy loam---	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Charters, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
759: Charters, sandy loam---	---	---	---	---	0	---	Moderate	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
759: Shirts, sandy loam, south slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
761: Charters, fine gravelly sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
Middlefork, moist-----	---	---	---	---	0	---	Moderate	High	Moderate
762: Drybuck, dry-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate	Low	Moderate
Hellake-----	Strongly contrasting textural stratification	30-60	---	Noncemented	0	---	Moderate	Moderate	Moderate
Deerrun-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
763: Eagleson, fine gravelly sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
765: Backswitch, coarse sandy loam-----	Paralithic bedrock	20-40	2-10	Moderately cemented	0	---	Moderate	Low	Moderate
	Lithic bedrock	22-50	---	Indurated					
Zimmer, warm-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
Rock outcrop-----	Lithic bedrock	0-0	---	Indurated	0	---	---	---	---
766: Backswitch, coarse sandy loam-----	Paralithic bedrock	20-40	2-10	Moderately cemented	0	---	Moderate	Low	Moderate
	Lithic bedrock	22-50	---	Indurated					

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
766: Charters, coarse sandy loam-----	---	---	---	---	0	---	Moderate	Low	Moderate
Zimmer, dry-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate	Low	Moderate
767: Shirts, sandy loam, dry	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Charters, fine gravelly sandy loam, dry-----	---	---	---	---	0	---	Moderate	Low	Moderate
768: Shirts, sandy loam, south slope-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Kosh, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
Eagleson, fine gravelly sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
770: Shirts, sandy loam, dry	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
Charters, fine gravelly sandy loam, dry-----	---	---	---	---	0	---	Moderate	Low	Moderate
Kosh, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate
771: Backswitch, sandy loam-	Paralithic bedrock	20-40	2-10	Moderately cemented	0	---	Moderate	Low	Moderate
	Lithic bedrock	24-50	---	Indurated					
Shirts, sandy loam, dry	Lithic bedrock	20-40	---	Indurated	0	---	Moderate	Low	Moderate
772: Pajo, fine gravelly ashy sandy loam-----	Lithic bedrock	20-40	---	Indurated	0	---	Low	Low	Moderate
Packerjohn, ashy sandy loam, dry-----	---	---	---	---	0	---	Low	Low	Moderate
Kosh, moist-----	Lithic bedrock	10-20	---	Indurated	0	---	Low	Low	Moderate

Table 22.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		<i>In</i>	<i>In</i>		<i>In</i>	<i>In</i>			
900: Pits, gravel-----	---	---	---	---	---	---	---	---	---
Dumps, gravel-----	---	---	---	---	---	---	---	---	---
901: Dumps, landfill-----	---	---	---	---	---	---	---	---	---
999: Water-----	---	---	---	---	---	---	---	---	---

Table 23.--Taxonomic Classification of the Soils

Soil name	Family or higher taxonomic class
Adaboi-----	Fine, smectitic, mesic Pachic Argixerolls
Aradaran-----	Fine, smectitic, mesic Pachic Ultic Argixerolls
Arrowrock-----	Mixed, mesic, shallow Xeric Torripsamments
Awley-----	Loamy-skeletal, isotic Andic Haplocryolls
Ayette-----	Fine, smectitic, mesic Vertic Argixerolls
Backswitch-----	Coarse-loamy, mixed, superactive, frigid Typic Haploxerepts
Belsh-----	Sandy-skeletal, isotic Vitrandic Dystrocryepts
Bissell-----	Fine-loamy, mixed, superactive, mesic Aridic Argixerolls
Bo-----	Coarse-loamy, isotic Andic Haplocryolls
Boise-----	Coarse-loamy, mixed, superactive, mesic Cumulic Ultic Haploxerolls
Borid-----	Loamy-skeletal, mixed, superactive, mesic Lithic Ultic Haploxerolls
Brassey-----	Loamy-skeletal, mixed, superactive, frigid Ultic Argixerolls
Breadloaf-----	Fine, smectitic, mesic Leptic Haploxererts
Brownlee-----	Fine-loamy, mixed, superactive, mesic Ultic Argixerolls
Cartwright-----	Fine-loamy, mixed, superactive, mesic Pachic Ultic Argixerolls
Charters-----	Coarse-loamy, mixed, superactive, frigid Ultic Haploxerolls
Cleymor-----	Fine, smectitic, frigid Vertic Argixerolls
Cloudyway-----	Coarse-loamy, mixed, superactive, mesic Cumulic Ultic Haploxerolls
Collister-----	Fine-loamy, mixed, superactive, mesic Cumulic Haploxerolls
Cranegulch-----	Fine, smectitic, mesic Typic Argixerolls
Crawley-----	Loamy, mixed, superactive, mesic, shallow Aridic Argixerolls
Crossbow-----	Coarse-loamy, mixed, superactive, mesic Aquic Cumulic Haploxerolls
Crumley-----	Sandy-skeletal, mixed, frigid Ultic Haploxerolls
Cumulic Haploxerolls-----	Cumulic Haploxerolls
Deerrun-----	Coarse-loamy, mixed, superactive, mesic Ultic Haploxerolls
Dobson-----	Loamy, mixed, superactive, mesic Lithic Ultic Haploxerolls
Doubledia-----	Fine, smectitic, mesic Chromic Haploxererts
Drybuck-----	Coarse-loamy, mixed, superactive, mesic Pachic Ultic Haploxerolls
Duco-----	Loamy-skeletal, mixed, superactive, mesic Lithic Argixerolls
Dystric Xeropsamments-----	Dystric Xeropsamments
Eagleson-----	Loamy-skeletal, mixed, superactive, frigid Ultic Haploxerolls
Flofeather-----	Coarse-loamy, mixed, superactive, mesic Cumulic Haploxerolls
Flybow-----	Loamy-skeletal, mixed, superactive, nonacid, mesic Lithic Xerorthents
Foxlane-----	Sandy-skeletal, mixed, mesic Entic Ultic Haploxerolls
Gacey-----	Clayey-skeletal, smectitic, mesic, shallow Argiduridic Durixerolls
Garval-----	Sandy-skeletal, mixed, mesic Entic Ultic Haploxerolls
Gimmi-----	Fine, smectitic, mesic Vertic Argixerolls
Grimescreek-----	Coarse-loamy, mixed, superactive, frigid Aquic Cumulic Haploxerolls
Gwin-----	Loamy-skeletal, mixed, superactive, mesic Lithic Argixerolls
Hann-----	Fine, smectitic, mesic Vertic Argixerolls
Hellake-----	Fine-loamy, mixed, superactive, mesic Ultic Argixerolls
Hess-----	Fine-loamy, isotic, frigid Vitrandic Argixerolls
Highvalley-----	Fine-loamy, isotic, frigid Vitrandic Haploxerolls
Hillcreek-----	Fine-loamy, mixed, superactive, mesic Vitrandic Argixerolls
Hoff-----	Loamy-skeletal, isotic, frigid Lithic Ultic Argixerolls
Hovelton-----	Loamy-skeletal, mixed, superactive, mesic Vitrandic Argixerolls
Hullsgulch-----	Fine-loamy, mixed, superactive, mesic Aridic Argixerolls
Huston-----	Loamy-skeletal, mixed, superactive, mesic Ultic Haploxerolls
Immig-----	Clayey-skeletal, smectitic, mesic Typic Argixerolls
Jasseek-----	Fine, smectitic, mesic Aridic Argixerolls
Jerusalem-----	Fine-loamy, mixed, superactive, mesic Aridic Argixerolls
Josie-----	Coarse-loamy, isotic Vitrandic Dystrocryepts
Karney-----	Fine, smectitic, mesic Vertic Argixerolls
Kisky-----	Sandy-skeletal, mixed, mesic Lithic Ultic Haploxerolls
Klicker-----	Loamy-skeletal, isotic, frigid Vitrandic Argixerolls
Kosh-----	Sandy-skeletal, mixed, frigid Lithic Ultic Haploxerolls
Lidos-----	Fine-loamy, isotic, frigid Vitrandic Argixerolls
Lithic Xerorthents-----	Lithic Xerorthents
Longs-----	Loamy-skeletal, isotic, frigid Vitrandic Haploxerolls
McDaniel-----	Loamy-skeletal, mixed, superactive, mesic Vitrandic Argixerolls
McDesh-----	Fine, smectitic, mesic Vertic Argixerolls
Meclo-----	Fine, smectitic, mesic Calciargidic Argixerolls
Middlefork-----	Fine-loamy, mixed, superactive, frigid Ultic Argixerolls

Table 23.--Taxonomic Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Montchief-----	Sandy-skeletal, isotic Vitrandic Dystricrypts
Northfork-----	Coarse-loamy, mixed, superactive, frigid Pachic Ultic Haploxerolls
Olaton-----	Coarse-loamy, mixed, superactive, mesic Pachic Ultic Haploxerolls
Oxyaquic Xerofluvents----	Oxyaquic Xerofluvents
Oxyaquic Xerorthents----	Oxyaquic Xerorthents
Pachic Argixerolls-----	Pachic Argixerolls
Packerjohn-----	Sandy, isotic, frigid Vitrandic Dystricrypts
Painter-----	Mixed, mesic Xeric Torripsamments
Pajo-----	Sandy-skeletal, isotic, frigid Vitrandic Dystricrypts
Pay-----	Mixed, mesic Mollic Psammaquents
Picketpin-----	Fine-loamy, mixed, superactive, mesic Typic Argixerolls
Piercepark-----	Fine-loamy, mixed, superactive, mesic Pachic Argixerolls
Pinney-----	Fine-loamy, mixed, superactive, frigid Vitrandic Argixerolls
Pioneervil-----	Coarse-loamy, mixed, superactive, frigid Fluventic Haploxerolls
Porter-----	Coarse-loamy, mixed, superactive, mesic Cumulic Haploxerolls
Pumpkin-----	Loamy-skeletal, mixed, superactive, frigid Pachic Ultic Argixerolls
Quartzburg-----	Sandy-skeletal, mixed, frigid Dystric Xerorthents
Ralsen-----	Coarse-loamy, mixed, superactive, mesic Fluvaquentic Endoaquolls
Republic-----	Coarse-loamy, isotic, frigid Vitrandic Haploxerolls
Riverpoint-----	Loamy-skeletal, mixed, superactive, mesic Ultic Argixerolls
Robbscreek-----	Loamy-skeletal, mixed, superactive, mesic Ultic Argixerolls
Roney-----	Coarse-loamy, mixed, superactive, mesic Ultic Haploxerolls
Schiller-----	Loamy-skeletal, mixed, superactive, mesic Pachic Ultic Haploxerolls
Searles-----	Loamy-skeletal, mixed, superactive, mesic Aridic Argixerolls
Shafer-----	Fine, smectitic, mesic Leptic Haploxererts
Shawmount-----	Loamy-skeletal, mixed, superactive, mesic Aridic Argixerolls
Shilling-----	Loamy-skeletal, isotic, frigid Vitrandic Haploxerolls
Shimo-----	Sandy-skeletal, mixed, mesic Entic Ultic Haploxerolls
Shirts-----	Coarse-loamy, mixed, superactive, frigid Ultic Haploxerolls
Shoebend-----	Fine-loamy, mixed, superactive, mesic Aridic Argixerolls
Siphonlake-----	Coarse-loamy, mixed, superactive, mesic Typic Haploxerolls
Solarview-----	Mixed, mesic, shallow Xeric Torripsamments
Staircase-----	Coarse-loamy, mixed, superactive, mesic Cumulic Ultic Haploxerolls
Stardust-----	Fine-loamy, mixed, superactive, mesic Ultic Argixerolls
Timberbutte-----	Ashy-skeletal over loamy-skeletal, glassy over isotic, frigid Humic Vitrixerands
Tripod-----	Sandy-skeletal, isotic, frigid Vitrandic Dystricrypts
Typic Haploxerolls-----	Typic Haploxerolls
Ultic Haploxeralfs-----	Ultic Haploxeralfs
Van Dusen-----	Fine-loamy, mixed, superactive, mesic Pachic Argixerolls
Whisk-----	Loamy, mixed, superactive, mesic Lithic Ultic Haploxerolls
Yad-----	Fine, smectitic, mesic Chromic Haploxererts
Zan-----	Sandy, isotic Vitrandic Dystricrypts
Zeb-----	Loamy-skeletal, mixed, superactive, frigid Ultic Haploxerolls
Zimmer-----	Loamy, mixed, superactive, frigid Lithic Ultic Haploxerolls

# NRCS Accessibility Statement

---

The Natural Resources Conservation Service (NRCS) is committed to making its information accessible to all of its customers and employees. If you are experiencing accessibility issues and need assistance, please contact our Helpdesk by phone at 1-800-457-3642 or by e-mail at [helpdesk@helpdesk.itc.nrcs.usda.gov](mailto:helpdesk@helpdesk.itc.nrcs.usda.gov). For assistance with publications that include maps, graphs, or similar forms of information, you may also wish to contact our State or local office. You can locate the correct office and phone number at <http://offices.sc.egov.usda.gov/locator/app>.