United States Department of Agriculture

Natural Resources Conservation Service

United States Department of Agriculture

Forest Service

In cooperation with the Utah Agricultural Experiment Station

Soil Survey of Summit Area, Utah, parts of Summit, Salt Lake, and Wasatch Counties

How to Use This Soil Survey

Detailed Soil Maps

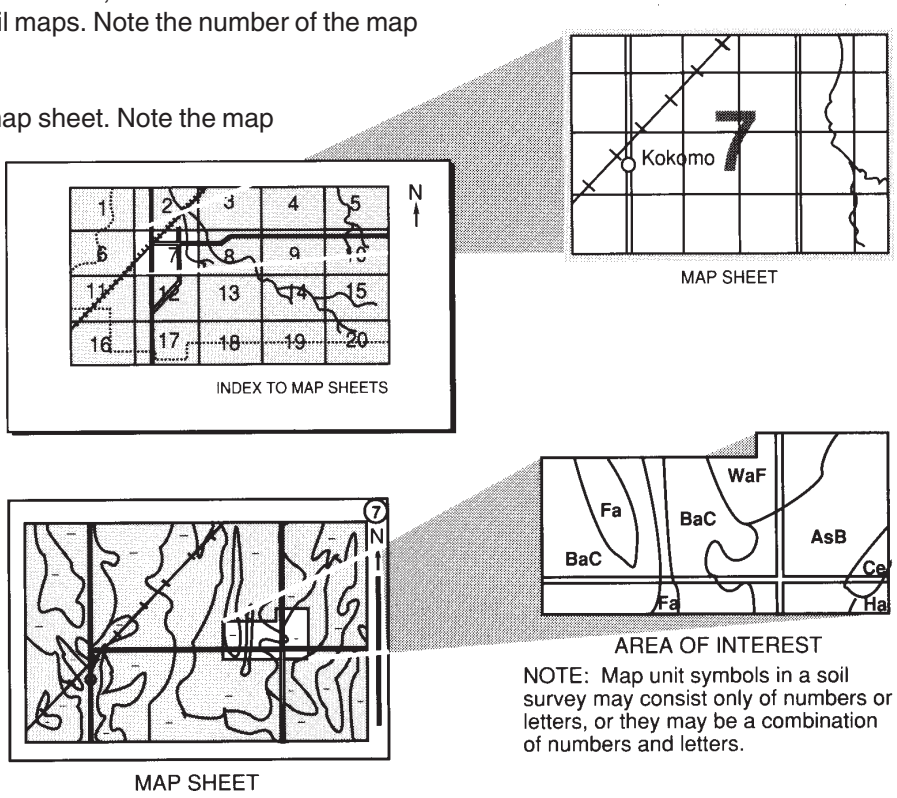
The detailed soil maps follow the general information about the survey area. These maps can be useful in planning the use and management of small areas.

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

Locate your area of interest on the map sheet. Note the map units 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.

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.

A **State Soil Geographic Data Base (STATSGO)** is available for this survey area. This data base consists of a soils map at a scale of 1 to 250,000 and descriptions of groups of associated soils. It replaces the general soil map published in older soil surveys. The map and the data base can be used for multicounty planning, and map output can be tailored for a specific use. More information about the STATSGO for this survey area, or for any portion of Utah, is available at the Utah State Office of the Natural Resources Conservation Service.



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.

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 1998. Soil names and descriptions were approved in 1999. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1999. This survey was made cooperatively by the Natural Resources Conservation Service, the Forest Service, and the Utah Agricultural Experiment Station. The survey is part of the technical assistance furnished to the Summit County and Salt Lake County Soil Conservation Districts.

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.

Cover: Golf course on Manila-Ant Flat loams, 2 to 8 percent slopes; condominiums on Manila-Henefer complex, 8 to 15 percent slopes; and ski runs on Parkcity-Dromedary gravelly loams, 30 to 70 percent slopes.

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

Contents

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.

Phillip J. Nelson
State Conservationist

Soil Survey of
Summit Area, Utah,
Parts of Summit, Salt Lake, and Wasatch Counties

By John L. Harvey and Darryl L. Trickler
Fieldwork by Terry Dallian, John L. Harvey, and Darryl L. Trickler

United States Department of Agriculture, Natural Resources Conservation Service and Forest Service,
in cooperation with
the Utah Agricultural Experiment Station

General Nature of the Survey Area

The survey area is located in north-central Utah. It consists of parts of Summit, Wasatch, and Salt Lake Counties, Utah. The survey area is bordered on the northwest by Morgan and Rich Counties, Utah; on the northeast by Uinta County, Wyoming; and on the southeast by Duchesne County, Utah (Fig. 1).

The survey area has about 725,877 acres, or about 1,134 square miles: 638,961 acres, or 998 square miles, is in Summit County; 84,047 acres, or 131 square miles, is in Salt Lake County; and 2,869 acres, or 5 square miles, is in Wasatch County. The survey area is located in the valleys and mountains of the Wasatch and Uinta mountain ranges, and is drained by the Bear, Weber, and Provo Rivers.

The area mainly is used for rangeland, cropland, and timber; as wildlife habitat; and for recreation. The communities of Park City, Coalville (Summit County seat), Kamas, Oakley, Wanship, and Henefer serve as the main population centers of the area.

Soil scientists have identified about 35 different kinds of soil in the survey area. The soils range widely in texture, natural drainage, and other characteristics.

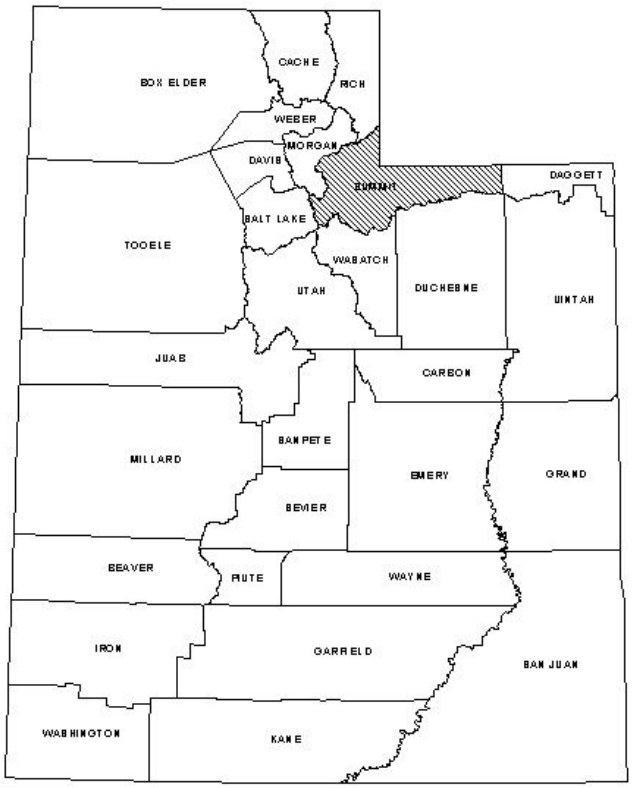


Figure 1.—Location of Summit County, Utah.

History

The survey area served as traditional hunting grounds for the Shoshone and Ute Native American tribes. Later, famous mountain men such as Jim Bridger, lived and worked in this area as fur trappers. In 1846 the Reed-Donner party blazed a trail through the area leading into the Great Basin and on to California. A year later the Mormons adopted part of the same trail, which became the main route for the migration of Mormons to Utah. These trails later became major routes into the Great Basin by railroads and highways.

The first pioneer settlement in the area was Parley's Park, now Snyderville, established in 1850. Summit County was recognized by the Utah Legislature in 1854. Coalville was established in 1859 soon after coal was discovered nearby, and it later became the Summit County seat. Coalville supplied much of the coal used by the Salt Lake Valley settlements for

many years. Silver was discovered near Snyderville in 1863, and mining became an important activity in the area until the 1950's. Silver, gold, lead, and zinc were mined in the area, supplying resources to help build the state and intermountain west. The construction of the first transcontinental railroad through Echo Canyon and finished at Promintory Summit in 1869 was a significant event in the development of the area. The railroad allowed importing and exporting of goods quickly and efficiently, greatly changing the economy of the area.

The varied terrain and climatic conditions of the area have fostered prosperous farming communities, extensive sheep and cattle production, dairies, and the raising of poultry and mink.

In the 1950's when mining became no longer profitable, Park City was on the verge of becoming a ghost town, but the area's rugged terrain and deep snow led to its rebirth as a winter sports center. Skiing is now a major economic activity in the area. Park City attracted worldwide attention hosting many of the 2002 Salt Lake City Winter Olympic events. Other recreational opportunities such as boating, fishing, and tourism have added to the county's diversified economy (Utah State Historical Society, 1988).

Climate

The climate of the survey area is markedly influenced by the topography. The mountain valley areas and lower mountain slopes receive about 16 to 22 inches of average annual precipitation, and have an annual frost-free period of about 80 to 100 days. The mid slopes of the mountain areas receive from 22 to 35 inches of average annual precipitation, and have an annual freeze-free period of about 20 to 60 days. The upper portions of the mountain areas can receive over 35 inches of precipitation. Weather station sites at Coalville, Echo Dam, and Wanship Dam are in valley areas, while Silver Lake Brighton is in a high mountain area.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Coalville, Echo Dam, Silver Lake Brighton, and Wanship Dam in the period 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

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.

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 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.

The descriptions, names, and delineations of the soils in this survey area do not full 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.

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 dominant soils. 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 and gives the principal hazards and limitations to be considered in planning for specific uses.

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, Ant Flat loam, 2 to 8 percent slopes is a phase of the Ant Flat 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. Ayoub-Dunford-Melling complex, 15 to 30 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. Skutum-Uinta association, 30 to 60 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.

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.

101—Agassiz-Rock outcrop complex, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,200 to 8,200 feet (1,585 to 2,500 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Agassiz and similar soils: 60 percent
Rock outcrop: 25 percent
Minor components: 15 percent

Component Descriptions

Agassiz soils

Landform: Mountain slopes
Parent material: Colluvium derived from limestone
Slope: 30 to 70 percent, southwest to southeast aspects
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.3 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, antelope bitterbrush, muttongrass, Indian ricegrass, arrowleaf balsamroot, bottlebrush squirreltail, mountain snowberry, western wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; very cobbly loam
A2—6 to 14 inches; very cobbly loam
R—14 to 24 inches; bedrock

Rock outcrop

Landforms: Escarpments, ridges
Seasonal water table minimum depth: Greater than 6 feet
Land capability subclass (nonirrigated): 8

Minor Components

Horrocks and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Hades and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

102—Ant Flat loam, 2 to 8 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,300 to 8,000 feet (1,920 to 2,438 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Ant Flat and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Ant Flat soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate, sandstone, and shale
Slope: 2 to 8 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.9 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 3e
Land capability subclass (nonirrigated): 3e

Typical Profile:
A—0 to 13 inches; loam
Bt1—13 to 19 inches; clay loam
Bt2—19 to 30 inches; clay
Bk1—30 to 45 inches; clay loam
Bk2—45 to 60 inches; clay loam

Minor Components

Dastrup and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 2 to 5 percent
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

Manila and similar soils
Composition: About 5 percent
Landforms: Fan remnants
Slope: 2 to 8 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Fewkes and similar soils
Composition: About 3 percent
Landform: Fan remnants
Slope: 2 to 8 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Henefer and similar soils
Composition: About 2 percent
Landform: Fan remnants
Slope: 3 to 15 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

103—Ant Flat loam, 8 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,700 to 8,100 feet (1,738 to 2,470 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Ant Flat and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Ant Flat soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, shale, and conglomerate
Slope: 8 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.9 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)

Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A—0 to 13 inches; loam
Bt1—13 to 19 inches; clay loam
Bt2—19 to 30 inches; clay
Bk1—30 to 45 inches; clay loam
Bk2—45 to 60 inches; clay loam

Minor Components

Dastrup and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 5 to 15 percent
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

Manila and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Fewkes and similar soils
Composition: About 3 percent
Landform: Fan remnants
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Henefer and similar soils
Composition: About 2 percent
Landform: Fan remnants
Slope: 8 to 15 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

104—Ant Flat loam, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,200 to 7,400 feet (1,890 to 2,255 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Ant Flat and similar soils: 90 percent
Minor components: 10 percent

Component Descriptions

Ant Flat soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, shale, and conglomerate
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.9 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 13 inches; loam
Bt1—13 to 19 inches; clay loam
Bt2—19 to 30 inches; clay

Bk1—30 to 45 inches; clay loam
Bk2—45 to 60 inches; clay loam

Minor Components

Henefer and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Yeates Hollow and similar soils
Composition: About 5 percent
Landforms: Mountain slopes, ridges
Slope: 15 to 30 percent, northwest to northeast aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

105—Ant Flat-Henefer-Skutum complex, 8 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,800 to 8,200 feet (2,073 to 2,500 meters)
Mean annual precipitation: 16 to 35 inches (405 to 890 millimeters)
Average annual air temperature: 35 to 45 degrees F. (2 to 7 degrees C.)
Frost-free period: 20 to 90 days

Map Unit Composition

Ant Flat and similar soils: 40 percent
Henefer and similar soils: 30 percent
Skutum and similar soils: 20 percent
Minor components: 10 percent

Component Descriptions

Ant Flat soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate, sandstone, and shale
Slope: 8 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.9 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 13 inches; loam
Bt1—13 to 19 inches; clay loam
Bt2—19 to 30 inches; clay
Bk1—30 to 45 inches; clay loam
Bk2—45 to 60 inches; clay loam

Henefer soils

Landforms: Fan remnants, mountain slopes
Parent material: Slope alluvium derived from quartzite, sandstone, and shale
Slope: 8 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.0 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 7 inches; gravelly loam
A2—7 to 12 inches; gravelly loam
Bt1—12 to 21 inches; cobbly clay
Bt2—21 to 30 inches; cobbly clay
Bt3—30 to 37 inches; very gravelly clay loam
Bt4—37 to 43 inches; very gravelly clay loam

Bt5—43 to 50 inches; very cobbly sandy clay loam
BC—50 to 60 inches; very cobbly sandy clay loam

Skutum soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from conglomerate, sandstone, siltstone, and claystone
Slope: 8 to 30 percent, northwest to northeast aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Aspen)
Potential native vegetation: mountain brome, slender wheatgrass, thickleaf peavine, Columbia needlegrass, Kentucky bluegrass, blue wildrye, butterweed groundsel, coneflower, elk sedge, mountain snowberry, nodding bluegrass, sticky geranium, western sweetroot
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 5 inches; loam
A2—5 to 17 inches; loam
Bt1—17 to 32 inches; gravelly clay
Bt2—32 to 44 inches; gravelly clay
Bt3—44 to 48 inches; gravelly clay
2C—48 to 56 inches; gravelly sandy loam
Cr—56 to 60 inches; bedrock

Minor Components

Fewkes and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Harter and similar soils
Composition: About 3 percent
Landforms: Fan remnants, mountain slopes
Slope: 8 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Yeates Hollow and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

106—Ayoub cobbly loam, 2 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,800 to 8,000 feet (1,768 to 2,438 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Ayoub and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Ayoub soils

Landform: Mountain slopes
Parent material: Slope alluvium derived from andesite over residuum weathered from andesite
Slope: 2 to 15 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)

Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass, Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 6s

Typical Profile:
A—0 to 6 inches; cobbly loam
Bt1—6 to 12 inches; gravelly clay loam
Bt2—12 to 18 inches; gravelly clay loam
Bt3—18 to 23 inches; gravelly clay loam
C—23 to 35 inches; very cobbly loam
R—35 to 45 inches; bedrock

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Dunford and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Gravelly Loam (Oak)

Melling and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 12 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)

107—Ayoub-Dunford-Melling complex, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,800 to 7,800 feet (1,768 to 2,378 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Ayoub and similar soils: 45 percent
Melling and similar soils: 20 percent
Dunford and similar soils: 20 percent
Minor components: 15 percent

Component Descriptions

Ayoub soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from andesite
Slope: 15 to 30 percent, southeast to southwest aspects
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass,

Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 6 inches; cobbly loam
Bt1—6 to 12 inches; gravelly clay loam
Bt2—12 to 18 inches; gravelly clay loam
Bt3—18 to 23 inches; gravelly clay loam
C—23 to 35 inches; very cobbly loam
R—35 to 45 inches; bedrock

Dunford soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from andesite
Slope: 15 to 30 percent, southeast to southwest aspects
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.4 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Oak)
Potential native vegetation: Gambel's oak, bluebunch wheatgrass, mountain snowberry, slender wheatgrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, elk sedge, mountain brome, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 10 inches; cobbly loam
Bt1—10 to 21 inches; gravelly clay loam
Bt2—21 to 36 inches; gravelly clay loam
R—36 to 46 inches; bedrock

Melling soils

Landform: Mountain slopes
Parent material: Colluvium and/or slope alluvium
Slope: 15 to 30 percent, southeast to southwest aspects
Depth to restrictive feature: 12 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 1.5 inches (very low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, antelope bitterbrush, muttongrass, Indian ricegrass, arrowleaf balsamroot, bottlebrush squirreltail, mountain snowberry, western wheatgrass
Land capability subclass (nonirrigated): 7s

Typical Profile:
A—0 to 6 inches; extremely stony loam
Bt—6 to 19 inches; very cobbly clay loam
R—19 to 29 inches; bedrock

Minor Components

Fewkes and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Echocreek and similar soils
Composition: About 4 percent
Landform: Stream terraces
Slope: 2 to 10 percent
Drainage class: Well drained
Ecological site: Upland Loam (Basin Wildrye)

Rock outcrop
Composition: About 3 percent
Landforms: Ridges, escarpments

Hades and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

108—Ayoub-Dunford-Melling complex, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,800 to 7,800 feet (1,768 to 2,378 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Ayoub and similar soils: 45 percent
Melling and similar soils: 20 percent
Dunford and similar soils: 20 percent
Minor components: 15 percent

Component Descriptions

Ayoub soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite
Slope: 30 to 60 percent, south aspect
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass, Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 6 inches; cobbly loam
Bt1—6 to 12 inches; gravelly clay loam
Bt2—12 to 18 inches; gravelly clay loam
Bt3—18 to 23 inches; gravelly clay loam
C—23 to 35 inches; very cobbly loam
R—35 to 45 inches; bedrock

Dunford soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite
Slope: 30 to 60 percent, south aspect
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.4 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Oak)
Potential native vegetation: Gambel's oak, bluebunch wheatgrass, mountain snowberry, slender wheatgrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, elk sedge, mountain brome, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 10 inches; cobbly loam
Bt1—10 to 21 inches; gravelly clay loam
Bt2—21 to 36 inches; gravelly clay loam
R—36 to 46 inches; bedrock

Melling soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite
Slope: 30 to 60 percent, south aspect
Depth to restrictive feature: 12 to 20 inches to bedrock (lithic)

Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 1.5 inches (very low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, antelope bitterbrush, muttongrass, Indian ricegrass, arrowleaf balsamroot, bottlebrush squirreltail, mountain snowberry, western wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 6 inches; extremely stony loam
Bt—6 to 19 inches; very cobbly clay loam
R—19 to 29 inches; bedrock

Minor Components

Fewkes and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Echocreek and similar soils
Composition: About 4 percent
Landform: Stream terraces
Slope: 2 to 10 percent
Drainage class: Well drained
Ecological site: Upland Loam (Basin Wildrye)

Rock outcrop
Composition: About 3 percent
Landforms: Ridges, escarpments

Hades and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

109—Cluff loam, 8 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,800 to 10,200 feet (2,072 to 3,110 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Cluff and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Cluff soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from quartzite, sandstone, and conglomerate
Slope: 8 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.7 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Mixed Conifer)
Potential native vegetation: elk sedge, slender wheatgrass, Oregongrape, Wheeler bluegrass, blue wildrye, boxleaf myrtle, common juniper, heartleaf arnica, kinnikinnick, mallow ninebark, mountain snowberry, spike trisetum
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 4 inches; loam
A2—4 to 9 inches; gravelly loam
E—9 to 16 inches; very gravelly loam
BtE—16 to 20 inches; very cobbly clay loam
Bt1—20 to 33 inches; very cobbly clay

Bt2—33 to 54 inches; very cobbly clay
R—54 to 60 inches; bedrock

Minor Components

Lucky Star and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Crandall and similar soils
Composition: About 5 percent
Landforms: Mountain slopes, kame moraines
Slope: 8 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

110—Cluff loam, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,000 to 10,600 feet (2,135 to 3,230 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Cluff and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Cluff soils

Landform: Mountain slopes
Parent material: Colluvium derived from quartzite, sandstone, and conglomerate
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.7 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Mixed Conifer)
Potential native vegetation: elk sedge, slender wheatgrass, Oregongrape, Wheeler bluegrass, blue wildrye, boxleaf myrtle, common juniper, heartleaf arnica, kinnikinnick, mallow ninebark, mountain snowberry, spike trisetum
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 4 inches; loam
A2—4 to 9 inches; gravelly loam
E—9 to 16 inches; very gravelly loam
BtE—16 to 20 inches; very cobbly clay loam
Bt1—20 to 33 inches; very cobbly clay
Bt2—33 to 54 inches; very cobbly clay
R—54 to 60 inches; bedrock

Minor Components

Lucky Star and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Crandall and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

111—Crandall gravelly loam, 2 to 8 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 9,800 to 11,000 feet (2,988 to 3,353 meters)

Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Crandall and similar soils: 90 percent
Minor components: 10 percent

Component Descriptions

Crandall soils

Landform: Till plains
Parent material: Till derived from sandstone and conglomerate
Slope: 2 to 8 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.7 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 15 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Alpine Meadow (Alpine Timothy)
Potential native vegetation: alpine timothy, tufted hairgrass, alpine bentgrass, aster, fringed brome, sulphur wildbuckwheat, timber oatgrass
Land capability subclass (nonirrigated): 6s

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 14 inches; gravelly loam
Bt—14 to 45 inches; very cobbly clay loam
Bk—45 to 55 inches; very cobbly loam
R—55 to 60 inches; bedrock

Minor Components

Duchesne and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Sandy Loam (Lodgepole Pine)

Sessions and similar soils
Composition: About 5 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

112—Crandall-Lucky Star gravelly loams, 5 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,400 to 9,900 feet (2,257 to 3,018 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Crandall and similar soils: 55 percent
Lucky Star and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Crandall soils

Landforms: Mountain slopes, kame moraines
Parent material: Till and slope alluvium derived from sandstone and conglomerate
Slope: 5 to 30 percent (Fig. 2)

Figure 2.—Sheep on Crandall-Lucky Star gravelly loams, 5 to 30 percent slopes. Duchesne very cobbly sandy loam, 15 to 30 percent slopes under conifer trees in the background.

Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.7 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 15 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: slender wheatgrass, mountain brome, Columbia needlegrass, mountain big sagebrush, sheep fescue
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 14 inches; gravelly loam
Bt—14 to 45 inches; very cobbly clay loam
Bk—45 to 55 inches; very cobbly loam
R—55 to 60 inches; bedrock

Lucky Star soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from sandstone, conglomerate, and siltstone
Slope: 5 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.2 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Aspen)
Potential native vegetation: mountain brome, nodding brome, sticky geranium, Columbia needlegrass, Fendler's meadowrue, Nevada bluegrass, elk sedge, mountain big sagebrush, mountain snowberry, quaking aspen
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 6 inches; gravelly loam
A2—6 to 12 inches; gravelly loam
E—12 to 25 inches; very gravelly fine sandy loam
E/Bt—25 to 47 inches; very cobbly sandy loam
Bt/E—47 to 62 inches; very cobbly sandy clay loam
Bt—62 to 80 inches; very cobbly sandy clay loam

Minor Components

Uinta and similar soils
Composition: About 8 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Starley Family and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 5 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Mountain Big Sagebrush)

Rock outcrop
Composition: About 2 percent
Landforms: Ridges, escarpments

113—Crandall-Lucky Star-Starley Family complex, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,300 to 10,800 feet (2,225 to 3,293 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Crandall and similar soils: 50 percent
Lucky Star and similar soils: 20 percent
Starley Family and similar soils: 15 percent
Minor components: 15 percent

Component Descriptions

Crandall soils

Landform: Mountain slopes

Parent material: Colluvium derived from sandstone and conglomerate
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.7 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 15 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: slender wheatgrass, mountain brome, Columbia needlegrass, mountain big sagebrush, sheep fescue
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 14 inches; gravelly loam
Bt—14 to 45 inches; very cobbly clay loam
Bk—45 to 55 inches; very cobbly loam
R—55 to 60 inches; bedrock

Lucky Star soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone and conglomerate
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.2 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Aspen)
Potential native vegetation: mountain brome, nodding brome, sticky geranium, Columbia needlegrass, Fendler's meadowrue, Nevada bluegrass, elk sedge, mountain big sagebrush, mountain snowberry, quaking aspen
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; gravelly loam
A2—6 to 12 inches; gravelly loam
E—12 to 25 inches; very gravelly fine sandy loam
E/Bt—25 to 47 inches; very cobbly sandy loam
Bt/E—47 to 62 inches; very cobbly sandy clay loam
Bt—62 to 80 inches; very cobbly sandy clay loam

Starley Family soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone and conglomerate
Slope: 30 to 70 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.5 inches (very low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: slender wheatgrass, Columbia needlegrass, mountain big sagebrush, mountain brome, sheep fescue, mountain snowberry, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; very cobbly loam
A2—6 to 15 inches; extremely cobbly loam
Bk—15 to 19 inches; extremely cobbly loam
R—19 to 29 inches; bedrock

Minor Components

Uinta and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Rock outcrop
Composition: About 5 percent
Landforms: Ridges, escarpments

114—Crandall-Starley Family-Rock outcrop complex, 5 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 8,100 to 10,600 feet (2,470 to 3,230 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Crandall and similar soils: 50 percent
Starley Family and similar soils: 30 percent
Rock outcrop: 10 percent
Minor components: 10 percent

Component Descriptions

Crandall soils

Landforms: Mountain slopes, kame moraines
Parent material: Till and slope alluvium derived from sandstone and conglomerate
Slope: 5 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.7 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 15 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: slender wheatgrass, mountain brome, Columbia needlegrass, mountain big sagebrush, sheep fescue
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 14 inches; gravelly loam
Bt—14 to 45 inches; very cobbly clay loam
Bk—45 to 55 inches; very cobbly loam
R—55 to 60 inches; bedrock

Starley Family soils

Landform: Mountain slopes
Parent material: Colluvium over residuum, both derived from sandstone and conglomerate
Slope: 5 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.5 inches (very low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: slender wheatgrass, Columbia needlegrass, mountain big sagebrush, mountain brome, sheep fescue, mountain snowberry, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 6 inches; very cobbly loam
A2—6 to 15 inches; extremely cobbly loam
Bk—15 to 19 inches; extremely cobbly loam
R—19 to 29 inches; bedrock

Rock outcrop

Landforms: Ridges, mountains, escarpments
Seasonal water table minimum depth: Greater than 6 feet
Land capability subclass (nonirrigated): 8

Minor Components

Dromedary and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained

Figure 3.—Pasture along Chalk Creek on Dastrup loam, 2 to 5 percent slopes. Jana-Richsum-Rock outcrop complex, 30 to 70 percent slopes, is in the background.

Ecological site: High Mountain Stony Loam (Douglas-fir)

Lucky Star and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 5 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

115—Dastrup loam, 2 to 5 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 6,500 feet (1,708 to 1,980 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 70 to 100 days

Map Unit Composition

Dastrup and similar soils: 90 percent
Minor components: 10 percent

Component Descriptions

Dastrup soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, siltstone, and conglomerate
Slope: 2 to 5 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Low
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, Indian ricegrass, basin wildrye, mountain big sagebrush, needleandthread, Oregongrape, antelope bitterbrush, aster, tapertip hawksbeard, western wheatgrass (Fig. 3)
Land capability subclass (irrigated): 3c
Land capability subclass (nonirrigated): 4s

Typical Profile:
A—0 to 12 inches; loam
Bw—12 to 16 inches; clay loam
Bk1—16 to 36 inches; loam
Bk2—36 to 48 inches; loam
Bk3—48 to 60 inches; loam

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 2 to 8 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Richsum and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 4 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

Cutoff and similar soils
Composition: About 2 percent
Landform: Mountain slopes

Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)

116—Dastrup loam, 5 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 6,600 feet (1,707 to 2,012 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 70 to 100 days

Map Unit Composition

Dastrup and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Dastrup soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, siltstone, and conglomerate
Slope: 5 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, Indian ricegrass, basin wildrye, mountain big sagebrush, needleandthread, Oregongrape, antelope bitterbrush, aster, tapertip hawksbeard, western wheatgrass
Land capability subclass (irrigated): 3e
Land capability subclass (nonirrigated): 4s

Typical Profile:
A—0 to 12 inches; loam
Bw—12 to 16 inches; clay loam
Bk1—16 to 36 inches; loam
Bk2—36 to 48 inches; loam
Bk3—48 to 60 inches; loam

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 8 to 15 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Cutoff and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)

Richsum and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 4 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

117—Dastrup loam, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,400 to 6,600 feet (1,645 to 2,012 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)

Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 70 to 100 days

Map Unit Composition

Dastrup and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Dastrup soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, siltstone, and conglomerate
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, Indian ricegrass, basin wildrye, mountain big sagebrush, needleandthread, Oregongrape, antelope bitterbrush, aster, tapertip hawksbeard, western wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 12 inches; loam
Bw—12 to 16 inches; clay loam
Bk1—16 to 36 inches; loam
Bk2—36 to 48 inches; loam
Bk3—48 to 60 inches; loam

Minor Components

Cutoff and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 22 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)

Hades and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Richsum and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

118—Dromedary-Rock outcrop complex, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,800 to 10,200 feet (1,768 to 3,110 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Dromedary and similar soils: 70 percent
Rock outcrop: 15 percent
Minor components: 15 percent

Component Descriptions

Dromedary soils

Landform: Mountain slopes
Parent material: Colluvium and till derived from sandstone, shale, and conglomerate
Slope: 30 to 70 percent, northwest to northeast aspects
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.6 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)

Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Douglas-fir)
Potential native vegetation: mountain snowberry, Oregongrape, boxleaf myrtle, elk sedge, quaking aspen, Nevada bluegrass, common juniper, heartleaf arnica, slender wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 6 inches; gravelly loam
E—6 to 22 inches; very cobbly sandy loam
Bt/E—22 to 44 inches; very cobbly sandy clay loam
Bt1—44 to 51 inches; very cobbly sandy clay loam
Bt2—51 to 60 inches; very cobbly sandy clay loam

Rock outcrop

Landforms: Escarpments, ridges
Seasonal water table minimum depth: Greater than 6 feet
Land capability subclass (nonirrigated): 8

Minor Components

Parkcity and similar soils
Composition: About 6 percent
Landform: Mountain slopes
Slope: 30 to 70 percent, northeast to northwest aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Starley Family and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 70 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Mountain Big Sagebrush)

Crandall and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, southeast to southwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

119—Duchesne very cobbly sandy loam, 2 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 8,400 to 10,600 feet (2,560 to 3,230 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Duchesne and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Duchesne soils

Landform: Mountain slopes
Parent material: Till and slope alluvium derived from sandstone, quartzite, and shale
Slope: 2 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.4 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Sandy Loam (Lodgepole Pine)
Potential native vegetation: elk sedge, nodding bluegrass, nodding brome, pinegrass, Oregongrape, boxleaf myrtle, common juniper, fleabane, grouse whortleberry, heartleaf arnica
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 4 inches; very cobbly sandy loam
E—4 to 11 inches; gravelly fine sandy loam
E/Bt—11 to 18 inches; gravelly fine sandy loam
Bt/E—18 to 30 inches; very cobbly sandy clay loam

Bt1—30 to 42 inches; very cobbly sandy clay loam
Bt2—42 to 60 inches; very cobbly sandy clay loam

Minor Components

Uinta and similar soils
Composition: About 6 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Skutum and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 2 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: High Mountain Loam (Aspen)

Sessions and similar soils
Composition: About 3 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Haydenfork and similar soils
Composition: About 2 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

120—Duchesne very cobbly sandy loam, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 8,200 to 10,200 feet (2,500 to 3,110 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Duchesne and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Duchesne soils

Landform: Mountain slopes
Parent material: Till and slope alluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.4 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Sandy Loam (Lodgepole Pine)
Potential native vegetation: elk sedge, nodding bluegrass, nodding brome, pinegrass, Oregongrape, boxleaf myrtle, common juniper, fleabane, grouse whortleberry, heartleaf arnica
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 4 inches; very cobbly sandy loam
E—4 to 11 inches; gravelly fine sandy loam
E/Bt—11 to 18 inches; gravelly fine sandy loam
Bt/E—18 to 30 inches; very cobbly sandy clay loam
Bt1—30 to 42 inches; very cobbly sandy clay loam
Bt2—42 to 60 inches; very cobbly sandy clay loam

Minor Components

Uinta and similar soils
Composition: About 6 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Skutum and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: High Mountain Loam (Aspen)

Sessions and similar soils
Composition: About 3 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Haydenfork and similar soils
Composition: About 2 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

121—Duchesne very cobbly sandy loam, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 8,700 to 10,800 feet (2,653 to 3,293 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Duchesne and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Duchesne soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.4 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Sandy Loam (Lodgepole Pine)
Potential native vegetation: elk sedge, nodding bluegrass, nodding brome, pinegrass, Oregongrape, boxleaf myrtle, common juniper, fleabane, grouse whortleberry, heartleaf arnica
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 4 inches; very cobbly sandy loam
E—4 to 11 inches; gravelly fine sandy loam
E/Bt—11 to 18 inches; gravelly fine sandy loam
Bt/E—18 to 30 inches; very cobbly sandy clay loam
Bt1—30 to 42 inches; very cobbly sandy clay loam
Bt2—42 to 60 inches; very cobbly sandy clay loam

Minor Components

Uinta and similar soils
Composition: About 6 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Skutum and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: High Mountain Loam (Aspen)

Sessions and similar soils
Composition: About 3 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Haydenfork and similar soils
Composition: About 2 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

122—Duchesne-Haydenfork complex, 0 to 40 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 8,100 to 10,800 feet (2,470 to 3,293 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Duchesne and similar soils: 60 percent
Haydenfork and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Duchesne soils

Landform: Kame moraines
Parent material: Till derived from sandstone, quartzite, and shale
Slope: 2 to 40 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.4 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Sandy Loam (Lodgepole Pine)
Potential native vegetation: elk sedge, nodding bluegrass, nodding brome, pinegrass, Oregongrape, boxleaf myrtle, common juniper, fleabane, grouse whortleberry, heartleaf arnica
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 4 inches; very cobbly sandy loam
E—4 to 11 inches; gravelly fine sandy loam
E/Bt—11 to 18 inches; gravelly fine sandy loam
Bt/E—18 to 30 inches; very cobbly sandy clay loam
Bt1—30 to 42 inches; very cobbly sandy clay loam
Bt2—42 to 60 inches; very cobbly sandy clay loam

Haydenfork soils

Landform: Kettles
Parent material: Outwash derived from sandstone and quartzite
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.8 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Ponding hazard: Occasional
Seasonal water table minimum depth: About 15 inches
Runoff class: Low
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Wet Fresh Meadow (Sedge)
Potential native vegetation: sedge, mountain rush, tufted hairgrass, shrubby cinquefoil, white marshmarigold, willow
Land capability subclass (nonirrigated): 7w

Typical Profile:
Oi—0 to 3 inches; slightly decomposed plant material
A1—3 to 9 inches; clay loam
A2—9 to 17 inches; clay loam
A3—17 to 21 inches; clay loam
Bg—21 to 25 inches; clay loam
Cg—25 to 36 inches; sandy clay loam
C1—36 to 55 inches; sandy clay loam
C2—55 to 63 inches; gravelly sandy clay loam

Minor Components

Sessions and similar soils
Composition: About 5 percent
Landform: Till plains

Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Uinta and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Skutum and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 2 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: High Mountain Loam (Aspen)

123—Dumps, mines

Map Unit Setting

MLRA: 47

Map Unit Composition

Dumps, mines: 100 percent

Component Descriptions

Dumps, mines

Description: Mine spoil or earthy fill
Land capability subclass (nonirrigated): 8

124—Dunford-Ayoub-Melling complex, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,400 to 7,700 feet (1,950 to 2,348 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Dunford and similar soils: 45 percent
Ayoub and similar soils: 20 percent
Melling and similar soils: 20 percent
Minor components: 15 percent

Component Descriptions

Dunford soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from andesite
Slope: 15 to 30 percent, north aspect
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.4 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Oak)
Potential native vegetation: Gambel's oak, bluebunch wheatgrass, mountain snowberry, slender wheatgrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, elk sedge, mountain brome, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 10 inches; cobbly loam
Bt1—10 to 21 inches; gravelly clay loam
Bt2—21 to 36 inches; gravelly clay loam
R—36 to 46 inches; bedrock

Ayoub soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from andesite
Slope: 15 to 30 percent, north aspect
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None

Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass, Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 6 inches; cobbly loam
Bt1—6 to 12 inches; gravelly clay loam
Bt2—12 to 18 inches; gravelly clay loam
Bt3—18 to 23 inches; gravelly clay loam
C—23 to 35 inches; very cobbly loam
R—35 to 45 inches; bedrock

Melling soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite over residuum weathered from andesite
Slope: 15 to 30 percent, north aspect
Depth to restrictive feature: 12 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 1.5 inches (very low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, antelope bitterbrush, muttongrass, Indian ricegrass, arrowleaf balsamroot, bottlebrush squirreltail, mountain snowberry, western wheatgrass
Land capability subclass (nonirrigated): 7s

Typical Profile:
A—0 to 6 inches; extremely stony loam
Bt—6 to 19 inches; very cobbly clay loam
R—19 to 29 inches; bedrock

Minor Components

Rock outcrop
Composition: About 5 percent
Landforms: Escarpments, ridges

Hades and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, west to east aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Echocreek and similar soils
Composition: About 3 percent
Landform: Stream terraces
Slope: 2 to 10 percent
Drainage class: Well drained
Ecological site: Upland Loam (Basin Wildrye)

Fewkes and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

125—Dunford-Ayoub-Melling complex, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,200 to 8,000 feet (1,890 to 2,438 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Dunford and similar soils: 45 percent
Ayoub and similar soils: 20 percent

Melling and similar soils: 20 percent
Minor components: 15 percent

Component Descriptions

Dunford soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite
Slope: 30 to 60 percent, north aspect
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.4 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Oak)
Potential native vegetation: Gambel's oak, bluebunch wheatgrass, mountain snowberry, slender wheatgrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, elk sedge, mountain brome, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 10 inches; cobbly loam
Bt1—10 to 21 inches; gravelly clay loam
Bt2—21 to 36 inches; gravelly clay loam
R—36 to 46 inches; bedrock

Ayoub soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite
Slope: 30 to 60 percent, north aspect
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass, Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 6 inches; cobbly loam
Bt1—6 to 12 inches; gravelly clay loam
Bt2—12 to 18 inches; gravelly clay loam
Bt3—18 to 23 inches; gravelly clay loam
C—23 to 35 inches; very cobbly loam
R—35 to 45 inches; bedrock

Melling soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite
Slope: 30 to 60 percent, north aspect
Depth to restrictive feature: 12 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 1.5 inches (very low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, antelope bitterbrush, muttongrass, Indian ricegrass, arrowleaf balsamroot, bottlebrush squirreltail, mountain snowberry, western wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 6 inches; extremely stony loam

Bt—6 to 19 inches; very cobbly clay loam
R—19 to 29 inches; bedrock

Minor Components

Rock outcrop
Composition: About 5 percent
Landforms: Escarpments, ridges

Hades and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, west to east aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Echocreek and similar soils
Composition: About 3 percent
Landform: Stream terraces
Slope: 2 to 10 percent
Drainage class: Well drained
Ecological site: Upland Loam (Basin Wildrye)

Fewkes and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

126—Echocreek loam, 2 to 10 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,400 to 7,400 feet (1,647 to 2,257 meters)
Mean annual precipitation: 14 to 18 inches (355 to 455 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 70 to 100 days

Map Unit Composition

Echocreek and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Echocreek soils

Landform: Stream terraces
Parent material: Alluvium derived from sandstone, quartzite, and shale
Slope: 2 to 10 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 9.4 inches (high)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Low
Calcium carbonate maximum: About 15 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loam (Basin Wildrye)
Potential native vegetation: basin wildrye, basin big sagebrush, Nevada bluegrass, rubber rabbitbrush, tapertip hawksbeard, western wheatgrass
Land capability subclass (irrigated): 3e
Land capability subclass (nonirrigated): 4s

Typical Profile:
Ap—0 to 7 inches; loam
A1—7 to 18 inches; loam
A2—18 to 26 inches; loam
Bk1—26 to 38 inches; loam
Bk2—38 to 45 inches; loam
Bk3—45 to 60 inches; loam

Minor Components

Kovich and similar soils
Composition: About 4 percent
Landform: Flood plains
Slope: 0 to 3 percent
Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Toddspan and similar soils
Composition: About 3 percent
Landform: Flood plains
Slope: 0 to 3 percent
Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Wanship and similar soils
Composition: About 3 percent
Landform: Stream terraces
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Ecological site: Semiwet Fresh Meadow (Redtop)

Snyderville and similar soils
Composition: About 3 percent
Landforms: Outwash terraces, stream terraces

Slope: 1 to 5 percent
Drainage class: Well drained
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)

Dastrup and similar soils
Composition: About 2 percent
Landform: Fan remnants
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

127—Echocreek-Kovich loams, 0 to 10 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,200 to 8,000 feet (1,585 to 2,438 meters)
Mean annual precipitation: 14 to 22 inches (355 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 100 days

Map Unit Composition

Echocreek and similar soils: 65 percent
Kovich and similar soils: 20 percent
Minor components: 15 percent

Component Descriptions

Echocreek soils

Landform: Stream terraces
Parent material: Alluvium derived from sandstone, quartzite, and shale
Slope: 2 to 10 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 9.4 inches (high)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 15 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loam (Basin Wildrye)
Potential native vegetation: basin wildrye, basin big sagebrush, Nevada bluegrass, rubber rabbitbrush, tapertip hawksbeard, western wheatgrass
Land capability subclass (irrigated): 3e
Land capability subclass (nonirrigated): 4s

Typical Profile:
Ap—0 to 7 inches; loam
A1—7 to 18 inches; loam
A2—18 to 26 inches; loam
Bk1—26 to 38 inches; loam
Bk2—38 to 45 inches; loam
Bk3—45 to 60 inches; loam

Kovich soils

Landform: Flood plains
Parent material: Alluvium derived from sandstone, quartzite, and shale
Slope: 0 to 3 percent
Drainage class: Poorly drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 7.1 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: Occasional
Seasonal water table minimum depth: About 18 inches
Runoff class: Low
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Wet Fresh Meadow (Sedge)
Potential native vegetation: sedge, mountain rush, tufted hairgrass, shrubby cinquefoil, white marshmarigold, willow
Land capability subclass (irrigated): 6w
Land capability subclass (nonirrigated): 7w

Typical Profile:
A1—0 to 9 inches; loam
A2—9 to 22 inches; clay loam
A3—22 to 29 inches; clay loam
2C—29 to 44 inches; fine sandy loam
3C—44 to 60 inches; very gravelly loamy fine sand

Minor Components

Toddspan and similar soils
Composition: About 10 percent
Landform: Flood plains
Slope: 0 to 3 percent

Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Wanship and similar soils
Composition: About 5 percent
Landform: Stream terraces
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Ecological site: Semiwet Fresh Meadow (Redtop)

128—Fewkes gravelly loam, 2 to 8 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 6,800 feet (1,708 to 2,073 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Fewkes and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Fewkes soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, quartzite, and shale
Slope: 2 to 8 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 3e
Land capability subclass (nonirrigated): 3e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 2 to 8 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Hades and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Lucky Star and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 5 to 30 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Yeates Hollow and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

129—Fewkes gravelly loam, 8 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 7,600 feet (1,708 to 2,317 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)

Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Fewkes and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Fewkes soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, quartzite, and shale
Slope: 8 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Hades and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Lucky Star and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 5 to 30 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Yeates Hollow and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

130—Fewkes gravelly loam, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 8,000 feet (1,707 to 2,438 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Fewkes and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Fewkes soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)

Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Hades and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Lucky Star and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, north to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Yeates Hollow and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

131—Fewkes-Heiners gravelly loams, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,400 to 7,500 feet (1,645 to 2,286 meters)
Mean annual precipitation: 14 to 22 inches (355 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 100 days

Map Unit Composition

Fewkes and similar soils: 60 percent
Heiners and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Fewkes soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent, south aspect
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Heiners soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, and shale
Slope: 30 to 70 percent, south aspect
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.7 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, Indian ricegrass, Nevada bluegrass, antelope bitterbrush, bottlebrush squirreltail, needleandthread
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 3 inches; gravelly loam
A2—3 to 8 inches; gravelly loam
Bw—8 to 12 inches; very gravelly loam
C—12 to 19 inches; very gravelly loam
Cr—19 to 29 inches; bedrock

Minor Components

Rock outcrop
Composition: About 5 percent
Landforms: Escarpments, ridges

Hades and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Horrocks and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Richsum and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

132—Fewkes-Hades complex, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47 (Fig. 4)
Elevation: 5,400 to 8,300 feet (1,645 to 2,530 meters)

Figure 4.—Water trough and corral on Fewkes-Hades complex, 15 to 30 percent slopes. Lucky Star-Fewkes gravelly loams, 30 to 60 percent slopes is under aspen in the background.

Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Fewkes and similar soils: 55 percent
Hades and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Fewkes soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Hades soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 3 inches; loam
A2—3 to 18 inches; loam
Bt1—18 to 33 inches; clay loam
Bt2—33 to 44 inches; clay loam
Bt3—44 to 60 inches; clay loam

Minor Components

Horrocks and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Yeates Hollow and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Ant Flat and similar soils
Composition: About 3 percent
Landform: Fan remnants
Slope: 15 to 30 percent
Drainage class: Well drained

Ecological site: Mountain Loam (Mountain Big Sagebrush)

Lucky Star and similar soils
Composition: About 2 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

133—Fewkes-Hades complex, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 8,000 feet (1,707 to 2,438 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Fewkes and similar soils: 55 percent
Hades and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Fewkes soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Hades soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, metaquartzite, and shale
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 3 inches; loam
A2—3 to 18 inches; loam
Bt1—18 to 33 inches; clay loam
Bt2—33 to 44 inches; clay loam
Bt3—44 to 60 inches; clay loam

Minor Components

Horrocks and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Yeates Hollow and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Ant Flat and similar soils
Composition: About 3 percent
Landform: Fan remnants
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Lucky Star and similar soils
Composition: About 2 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

134—Fewkes-Yeates Hollow complex, 5 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,000 to 7,600 feet (2,135 to 2,318 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Fewkes and similar soils: 55 percent
Yeates Hollow and similar soils: 30 percent
Ant Flat and similar soils: 5 percent
Minor components: 10 percent

Component Descriptions

Fewkes soils

Landform: Mountain slopes
Parent material: Slope alluvium derived from sandstone, quartzite, and shale
Slope: 5 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 4e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Yeates Hollow soils

Landform: Mountain slopes
Parent material: Slope alluvium derived from sandstone, conglomerate, and quartzite
Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 4.2 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet

Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, slender wheatgrass, Letterman's needlegrass, Nevada bluegrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, common yarrow, elk sedge, sheep fescue
Land capability subclass (nonirrigated): 6s

Typical Profile:
A—0 to 12 inches; very stony loam
Bt1—12 to 25 inches; very cobbly clay
Bt2—25 to 37 inches; very cobbly clay
Bt3—37 to 43 inches; extremely cobbly clay loam
R—43 to 53 inches; bedrock

Minor Components

Heiners and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 4 to 15 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

Richsum and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 4 to 15 percent, southeast to southwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

Component Descriptions

Ant Flat soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate and/or slope alluvium derived from sandstone and shale
Slope: 2 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.9 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A—0 to 13 inches; loam
Bt1—13 to 19 inches; clay loam
Bt2—19 to 30 inches; clay
Bk1—30 to 45 inches; clay loam
Bk2—45 to 60 inches; clay loam

135—Fewkes-Yeates Hollow complex, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,600 to 7,700 feet (2,012 to 2,348 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Fewkes and similar soils: 55 percent
Yeates Hollow and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Fewkes soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent

Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Yeates Hollow soils

Landform: Mountain slopes
Parent material: Colluvium and slope alluvium derived from sandstone, conglomerate, and quartzite
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 4.2 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, slender wheatgrass, Letterman's needlegrass, Nevada bluegrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, common yarrow, elk sedge, sheep fescue
Land capability subclass (nonirrigated): 6s

Typical Profile:
A—0 to 12 inches; very stony loam
Bt1—12 to 25 inches; very cobbly clay
Bt2—25 to 37 inches; very cobbly clay
Bt3—37 to 43 inches; extremely cobbly clay loam
R—43 to 53 inches; bedrock

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Heiners and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

Richsum and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, southeast to southwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

136—Hades-Agassiz-Rock outcrop complex, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,400 to 8,200 feet (1,645 to 2,500 meters)

Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Hades and similar soils: 50 percent
Agassiz and similar soils: 30 percent
Rock outcrop: 10 percent
Minor components: 10 percent

Component Descriptions

Hades soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 3 inches; loam
A2—3 to 18 inches; loam
Bt1—18 to 33 inches; clay loam
Bt2—33 to 44 inches; clay loam
Bt3—44 to 60 inches; clay loam

Agassiz soils

Landform: Mountain slopes
Parent material: Colluvium derived from limestone
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.3 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, antelope bitterbrush, muttongrass, Indian ricegrass, arrowleaf balsamroot, bottlebrush squirreltail, mountain snowberry, western wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; very cobbly loam
A2—6 to 14 inches; very cobbly loam
R—14 to 24 inches; bedrock

Rock outcrop

Landforms: Ridges, escarpments
Seasonal water table minimum depth: Greater than 6 feet
Land capability subclass (nonirrigated): 8

Minor Components

Fewkes and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Horrocks and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained

Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Lucky Star and similar soils
Composition: About 2 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

137—Hades-Fewkes complex, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,200 to 7,600 feet (1,890 to 2,318 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Hades and similar soils: 55 percent
Fewkes and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Hades soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent, north aspect
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 3 inches; loam
A2—3 to 18 inches; loam
Bt1—18 to 33 inches; clay loam
Bt2—33 to 44 inches; clay loam
Bt3—44 to 60 inches; clay loam

Fewkes soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent, south aspect
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 15 to 30 percent
Drainage class: Well drained

Ecological site: Mountain Loam (Mountain Big Sagebrush)

Horrocks and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Lucky Star and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Yeates Hollow and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

138—Hades-Fewkes complex, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,800 to 8,000 feet (1,768 to 2,438 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Hades and similar soils: 55 percent
Fewkes and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Hades soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent, west to east aspects
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 3 inches; loam
A2—3 to 18 inches; loam
Bt1—18 to 33 inches; clay loam
Bt2—33 to 44 inches; clay loam
Bt3—44 to 60 inches; clay loam

Fewkes soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent, east to west aspects
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada

bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Horrocks and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Lucky Star and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Yeates Hollow and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

139—Harter gravelly loam, 2 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,100 to 7,000 feet (1,860 to 2,135 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Harter and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Harter soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, quartzite, and shale
Slope: 2 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 8.1 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 12 inches; gravelly loam
AB—12 to 19 inches; gravelly loam
Bt1—19 to 24 inches; gravelly clay loam
Bt2—24 to 33 inches; gravelly clay
Bt3—33 to 60 inches; gravelly clay

Minor Components

Yeates Hollow and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Ant Flat and similar soils
Composition: About 4 percent
Landform: Fan remnants
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Snyderville and similar soils
Composition: About 3 percent
Landforms: Outwash terraces, stream terraces
Slope: 5 to 10 percent
Drainage class: Well drained
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)

Henefer and similar soils
Composition: About 3 percent
Landform: Fan remnants
Slope: 3 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

140—Heiners-Fewkes gravelly loams, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,800 to 7,700 feet (2,072 to 2,348 meters)
Mean annual precipitation: 14 to 22 inches (355 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 100 days

Map Unit Composition

Heiners and similar soils: 60 percent
Fewkes and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Heiners soils

Landform: Mountain slopes
Parent material: Slope alluvium derived from shale over residuum weathered from shale
Slope: 15 to 30 percent, south aspect
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.7 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loamy Shale (low Sagebrush)
Potential native vegetation: low sagebrush, bluebunch wheatgrass, Indian ricegrass, spiny phlox, western wheatgrass, yellow rabbitbrush
Land capability subclass (nonirrigated): 7s

Typical Profile:
A1—0 to 3 inches; gravelly loam
A2—3 to 8 inches; gravelly loam
Bw—8 to 12 inches; very gravelly loam
C—12 to 19 inches; very gravelly loam
Cr—19 to 29 inches; bedrock

Fewkes soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent, northwest to northeast aspects
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None

Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Minor Components

Hades and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, west to east aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Horrocks and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, southwest to southeast aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

141—Heiners-Fewkes-Hades complex, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,400 to 8,000 feet (1,645 to 2,438 meters)
Mean annual precipitation: 14 to 22 inches (355 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 100 days

Map Unit Composition

Heiners and similar soils: 35 percent
Fewkes and similar soils: 25 percent
Hades and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Heiners soils

Landform: Ridges on mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, and shale
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.7 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, Indian ricegrass, Nevada bluegrass, antelope bitterbrush, bottlebrush squirreltail, needleandthread
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 3 inches; gravelly loam
A2—3 to 8 inches; gravelly loam
Bw—8 to 12 inches; very gravelly loam
C—12 to 19 inches; very gravelly loam
Cr—19 to 29 inches; bedrock

Fewkes soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent, southwest to southeast aspects
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet

Runoff class: Very high
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

Hades soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent, northwest to northeast aspects
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 3 inches; loam
A2—3 to 18 inches; loam
Bt1—18 to 33 inches; clay loam
Bt2—33 to 44 inches; clay loam
Bt3—44 to 60 inches; clay loam

Minor Components

Rock outcrop
Composition: About 5 percent
Landforms: Ridges, escarpments

Lucky Star and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Horrocks and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Richsum and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, southeast to southwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

142—Henefer-Harter gravelly loams, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,800 to 7,900 feet (1,768 to 2,408 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Henefer and similar soils: 45 percent
Harter and similar soils: 40 percent
Minor components: 15 percent

Component Descriptions

Henefer soils

Landforms: Fan remnants, mountain slopes
Parent material: Slope alluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent, north aspect
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.0 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 7 inches; gravelly loam
A2—7 to 12 inches; gravelly loam
Bt1—12 to 21 inches; cobbly clay
Bt2—21 to 30 inches; cobbly clay
Bt3—30 to 37 inches; very gravelly clay loam
Bt4—37 to 43 inches; very gravelly clay loam
Bt5—43 to 50 inches; very cobbly sandy clay loam
BC—50 to 60 inches; very cobbly sandy clay loam

Harter soils

Landforms: Fan remnants, mountain slopes
Parent material: Slope alluvium derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent, south aspect
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 8.1 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 12 inches; gravelly loam
AB—12 to 19 inches; gravelly loam
Bt1—19 to 24 inches; gravelly clay loam
Bt2—24 to 33 inches; gravelly clay
Bt3—33 to 60 inches; gravelly clay

Minor Components

Yeates Hollow and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Hades and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Fewkes and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

143—Horrocks-Agassiz very cobbly loams, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 8,200 feet (1,707 to 2,500 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Horrocks and similar soils: 65 percent
Agassiz and similar soils: 20 percent
Minor components: 15 percent

Component Descriptions

Horrocks soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, and andesite
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Oak)
Potential native vegetation: Gambel's oak, bluebunch wheatgrass, slender wheatgrass, antelope bitterbrush, mountain big sagebrush, muttongrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 10 inches; very cobbly loam
Bt1—10 to 19 inches; very cobbly clay loam
Bt2—19 to 32 inches; very cobbly clay loam
Bt3—32 to 40 inches; very cobbly clay loam
BC—40 to 59 inches; very gravelly loam
R—59 to 60 inches; bedrock

Agassiz soils

Landform: Mountain slopes
Parent material: Colluvium derived from limestone
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.3 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, antelope bitterbrush, muttongrass, Indian ricegrass, arrowleaf balsamroot, bottlebrush squirreltail, mountain snowberry, western wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; very cobbly loam
A2—6 to 14 inches; very cobbly loam
R—14 to 24 inches; bedrock

Minor Components

Hades and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Harter and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Yeates Hollow and similar soils
Composition: About 5 percent
Landform: Mountain slopes

Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

144—Horrocks-Cutoff complex, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,400 to 7,000 feet (1,645 to 2,133 meters)
Mean annual precipitation: 14 to 22 inches (355 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 100 days

Map Unit Composition

Horrocks and similar soils: 60 percent
Cutoff and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Horrocks soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, conglomerate, and andesite
Slope: 15 to 30 percent, north aspect
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, slender wheatgrass, Letterman's needlegrass, Nevada bluegrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, common yarrow, elk sedge, sheep fescue
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 10 inches; very cobbly loam
Bt1—10 to 19 inches; very cobbly clay loam
Bt2—19 to 32 inches; very cobbly clay loam
Bt3—32 to 40 inches; very cobbly clay loam
BC—40 to 59 inches; very gravelly loam
R—59 to 60 inches; bedrock

Cutoff soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, quartzite, and conglomerate
Slope: 15 to 30 percent, southwest to southeast aspects
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 3.0 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: mountain big sagebrush, bluebunch wheatgrass, antelope bitterbrush, bluegrass, Indian ricegrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 inches to 1 inch; very gravelly loam
A2—1 inch to 9 inches; very gravelly loam
Bk1—9 to 16 inches; very gravelly loam
Bk2—16 to 29 inches; very gravelly loam
Bk3—29 to 38 inches; very gravelly loam
R—38 to 48 inches; bedrock

Minor Components

Hades and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent

Figure 5.—Horrocks-Cutoff complex, 30 to 60 percent slopes on the mountain slopes and Echocreek loam, 2 to 10 percent slopes in the valley bottom.

Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Heiners and similar soils
Composition: About 5 percent
Landform: Ridges on mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

Harter and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

145—Horrocks-Cutoff complex, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,300 to 7,200 feet (1,615 to 2,195 meters)
Mean annual precipitation: 14 to 22 inches (355 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 100 days

Map Unit Composition

Horrocks and similar soils: 60 percent
Cutoff and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Horrocks soils

Landform: Mountain slopes (Fig. 5)
Parent material: Colluvium derived from conglomerate, sandstone, and andesite
Slope: 30 to 60 percent, north aspect
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, slender wheatgrass, Letterman's needlegrass, Nevada bluegrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, common yarrow, elk sedge, sheep fescue
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 10 inches; very cobbly loam
Bt1—10 to 19 inches; very cobbly clay loam
Bt2—19 to 32 inches; very cobbly clay loam
Bt3—32 to 40 inches; very cobbly clay loam
BC—40 to 59 inches; very gravelly loam
R—59 to 60 inches; bedrock

Cutoff soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and conglomerate
Slope: 30 to 60 percent, southeast to southwest aspects

Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 3.0 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: mountain big sagebrush, bluebunch wheatgrass, antelope bitterbrush, bluegrass, Indian ricegrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 inches to 1 inch; very gravelly loam
A2—1 inch to 9 inches; very gravelly loam
Bk1—9 to 16 inches; very gravelly loam
Bk2—16 to 29 inches; very gravelly loam
Bk3—29 to 38 inches; very gravelly loam
R—38 to 48 inches; bedrock

Minor Components

Hades and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Heiners and similar soils
Composition: About 5 percent
Landform: Ridges on mountain slopes
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

Harter and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

146—Horrocks-Hades complex, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,800 to 8,200 feet (1,768 to 2,500 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Horrocks and similar soils: 65 percent
Hades and similar soils: 20 percent
Minor components: 15 percent

Component Descriptions

Horrocks soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, and andesite
Slope: 30 to 60 percent, north aspect
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 5.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, slender wheatgrass, Letterman's needlegrass, Nevada bluegrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, common yarrow, elk sedge, sheep fescue
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 10 inches; very cobbly loam
Bt1—10 to 19 inches; very cobbly clay loam
Bt2—19 to 32 inches; very cobbly clay loam
Bt3—32 to 40 inches; very cobbly clay loam
BC—40 to 59 inches; very gravelly loam
R—59 to 60 inches; bedrock

Hades soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent, northwest to northeast aspects
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 3 inches; loam
A2—3 to 18 inches; loam
Bt1—18 to 33 inches; clay loam
Bt2—33 to 44 inches; clay loam
Bt3—44 to 60 inches; clay loam

Minor Components

Cutoff and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, southeast to southwest aspects
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)

Heiners and similar soils
Composition: About 5 percent
Landform: Ridges on mountain slopes
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

Yeates Hollow and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

147—Hovarka-Millcreek loams, 0 to 4 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,800 to 9,400 feet (2,378 to 2,865 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Hovarka and similar soils: 45 percent
Millcreek and similar soils: 40 percent
Minor components: 15 percent

Component Descriptions

Hovarka soils

Landform: Flood plains
Parent material: Alluvium derived from sandstone and quartzite
Slope: 0 to 2 percent
Drainage class: Poorly drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 6.2 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: Frequent

Seasonal water table minimum depth: About 15 inches
Runoff class: Negligible
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Wet Fresh Meadow (Sedge)
Potential native vegetation: sedge, mountain rush, tufted hairgrass, shrubby cinquefoil, white marshmarigold, willow
Land capability subclass (nonirrigated): 7w

Typical Profile:
Oi—0 to 4 inches; slightly decomposed plant material
A1—4 to 12 inches; loam
A2—12 to 32 inches; loam
2C1—32 to 36 inches; very cobbly loamy sand
2C2—36 to 64 inches; very cobbly sand

Millcreek soils

Landform: Stream terraces
Parent material: Alluvium derived from sandstone and quartzite
Slope: 0 to 4 percent
Drainage class: Moderately well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.2 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: Rare
Seasonal water table minimum depth: About 49 inches
Runoff class: Low
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: slender wheatgrass, Columbia needlegrass, mountain big sagebrush, mountain brome, sheep fescue, mountain snowberry, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 4s

Typical Profile:
A1—0 to 14 inches; loam
A2—14 to 24 inches; loam
2C—24 to 60 inches; very cobbly sand

Minor Components

Duchesne and similar soils
Composition: About 7 percent
Landform: Mountain slopes
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Sandy Loam (Lodgepole Pine)

Haydenfork and similar soils
Composition: About 8 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

148—Jana-Richsum-Rock outcrop complex, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 7,400 feet (1,707 to 2,255 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)
Average annual air temperature: 40 to 48 degrees F. (4 to 9 degrees C.)
Frost-free period: 70 to 120 days

Map Unit Composition

Jana and similar soils: 50 percent
Richsum and similar soils: 30 percent
Rock outcrop: 10 percent
Minor components: 10 percent

Component Descriptions

Jana soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, and shale
Slope: 30 to 70 percent, south aspect
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.1 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Gravelly Loam (Utah Juniper)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, Indian ricegrass, Nevada

bluegrass, antelope bitterbrush, mountain snowberry, needleandthread, yellow rabbitbrush
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 inches to 1 inch; very gravelly loam
A2—1 inch to 6 inches; very gravelly loam
Bw—6 to 12 inches; extremely cobbly loam
Cr—12 to 22 inches; bedrock

Richsum soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, conglomerate, and shale
Slope: 30 to 60 percent, northeast to northwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 8.0 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, Indian ricegrass, basin wildrye, mountain big sagebrush, needleandthread, Oregongrape, antelope bitterbrush, aster, tapertip hawksbeard, western wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 2 inches; silt loam
A2—2 to 14 inches; silt loam
Bk1—14 to 23 inches; silt loam
Bk2—23 to 32 inches; silt loam
B3—32 to 52 inches; gravelly silt loam
Cr—52 to 60 inches; bedrock

Rock outcrop

Landforms: Ridges on mountain slopes, escarpments on mountain slopes
Seasonal water table minimum depth: Greater than 6 feet
Land capability subclass (nonirrigated): 8

Minor Components

Cutoff and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)

Heiners and similar soils
Composition: About 5 percent
Landform: Ridges on mountain slopes
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

149—Kovich-Toddspan loams, 0 to 3 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,000 to 6,600 feet (1,830 to 2,012 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Kovich and similar soils: 45 percent
Toddspan and similar soils: 40 percent
Minor components: 15 percent

Component Descriptions

Kovich soils

Landform: Flood plains
Parent material: Alluvium derived from sandstone, quartzite, and shale
Slope: 0 to 3 percent
Drainage class: Poorly drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 7.1 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: Occasional
Seasonal water table minimum depth: About 18 inches
Runoff class: Low

Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Wet Fresh Meadow (Sedge)
Potential native vegetation: sedge, mountain rush, tufted hairgrass, shrubby cinquefoil, white marshmarigold, willow
Land capability subclass (irrigated): 6w
Land capability subclass (nonirrigated): 7w

Typical Profile:
A1—0 to 9 inches; loam
A2—9 to 22 inches; clay loam
A3—22 to 29 inches; clay loam
2C—29 to 44 inches; fine sandy loam
3C—44 to 60 inches; very gravelly loamy fine sand

Toddspan soils

Landforms: Valley floors, flood plains
Parent material: Alluvium derived from sandstone, quartzite, and shale
Slope: 0 to 3 percent
Drainage class: Poorly drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 6.0 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: Occasional
Seasonal water table minimum depth: About 15 inches
Runoff class: Low
Calcium carbonate maximum: About 10 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Wet Fresh Meadow (Sedge)
Potential native vegetation: sedge, mountain rush, tufted hairgrass, shrubby cinquefoil, white marshmarigold, willow
Land capability subclass (irrigated): 6w
Land capability subclass (nonirrigated): 7w

Typical Profile:
A1—0 to 4 inches; loam
A2—4 to 14 inches; loam
A3—14 to 19 inches; loam
2Bg1—19 to 24 inches; very cobbly clay loam
2Bg2—24 to 32 inches; very cobbly clay loam
2C1—32 to 37 inches; extremely cobbly sandy clay loam
2C2—37 to 44 inches; extremely gravelly sandy clay loam
3C—44 to 60 inches; extremely gravelly loamy sand

Minor Components

Wanship and similar soils
Composition: About 10 percent
Landform: Stream terraces
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Ecological site: Semiwet Fresh Meadow (Redtop)

Poorly Drained, Calcareous Soils and similar soils
Composition: About 5 percent
Slope: 0 to 3 percent

150—Lucky Star gravelly loam, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,800 to 9,300 feet (1,768 to 2,835 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Lucky Star and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Lucky Star soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone and conglomerate
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.2 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Aspen)

Potential native vegetation: mountain brome, nodding brome, sticky geranium, Columbia needlegrass, Fendler's meadowrue, Nevada bluegrass, elk sedge, mountain big sagebrush, mountain snowberry, quaking aspen
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 6 inches; gravelly loam
A2—6 to 12 inches; gravelly loam
E—12 to 25 inches; very gravelly fine sandy loam
E/Bt—25 to 47 inches; very cobbly sandy loam
Bt/E—47 to 62 inches; very cobbly sandy clay loam
Bt—62 to 80 inches; very cobbly sandy clay loam

Minor Components

Crandall and similar soils
Composition: About 5 percent
Landforms: Mountain slopes, kame moraines
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

Dromedary and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Douglas-fir)

Parkcity and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

151—Lucky Star gravelly loam, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,200 to 9,800 feet (1,890 to 2,988 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Lucky Star and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Lucky Star soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone and conglomerate
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.2 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Aspen)
Potential native vegetation: mountain brome, nodding brome, sticky geranium, Columbia needlegrass, Fendler's meadowrue, Nevada bluegrass, elk sedge, mountain big sagebrush, mountain snowberry, quaking aspen
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; gravelly loam
A2—6 to 12 inches; gravelly loam
E—12 to 25 inches; very gravelly fine sandy loam
E/Bt—25 to 47 inches; very cobbly sandy loam
Bt/E—47 to 62 inches; very cobbly sandy clay loam
Bt—62 to 80 inches; very cobbly sandy clay loam

Minor Components

Crandall and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

Dromedary and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 70 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Douglas-fir)

Parkcity and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

152—Lucky Star-Dromedary gravelly loams, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,200 to 8,000 feet (1,890 to 2,438 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Lucky Star and similar soils: 55 percent
Dromedary and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Lucky Star soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, shale, and siltstone
Slope: 30 to 70 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.2 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Aspen)
Potential native vegetation: mountain brome, nodding brome, sticky geranium, Columbia needlegrass, Fendler's meadowrue, Nevada bluegrass, elk sedge, mountain big sagebrush, mountain snowberry, quaking aspen
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; gravelly loam
A2—6 to 12 inches; gravelly loam
E—12 to 25 inches; very gravelly fine sandy loam
E/Bt—25 to 47 inches; very cobbly sandy loam
Bt/E—47 to 62 inches; very cobbly sandy clay loam
Bt—62 to 80 inches; very cobbly sandy clay loam

Dromedary soils

Landform: Mountain slopes
Parent material: Colluvium and till derived from sandstone, conglomerate, and shale
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.6 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Douglas-fir)
Potential native vegetation: mountain snowberry, Oregongrape, boxleaf myrtle, elk sedge, quaking aspen, Nevada bluegrass, common juniper, heartleaf arnica, slender wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 6 inches; gravelly loam
E—6 to 22 inches; very cobbly sandy loam
Bt/E—22 to 44 inches; very cobbly sandy clay loam
Bt1—44 to 51 inches; very cobbly sandy clay loam
Bt2—51 to 60 inches; very cobbly sandy clay loam

Minor Components

Crandall and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

Parkcity and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

153—Lucky Star-Fewkes gravelly loams, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 8,200 feet (1,707 to 2,500 meters)
Mean annual precipitation: 16 to 35 inches (405 to 890 millimeters)
Average annual air temperature: 35 to 45 degrees F. (2 to 7 degrees C.)
Frost-free period: 20 to 90 days

Map Unit Composition

Lucky Star and similar soils: 55 percent
Fewkes and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Lucky Star soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, shale, and siltstone
Slope: 30 to 60 percent, north aspect
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.2 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Aspen)
Potential native vegetation: mountain brome, nodding brome, sticky geranium, Columbia needlegrass, Fendler's meadowrue, Nevada bluegrass, elk sedge, mountain big sagebrush, mountain snowberry, quaking aspen
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; gravelly loam
A2—6 to 12 inches; gravelly loam
E—12 to 25 inches; very gravelly fine sandy loam
E/Bt—25 to 47 inches; very cobbly sandy loam
Bt/E—47 to 62 inches; very cobbly sandy clay loam
Bt—62 to 80 inches; very cobbly sandy clay loam

Fewkes soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent, southeast to southwest aspects
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.0 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 12 inches; gravelly loam
Bt1—12 to 17 inches; clay loam
Bt2—17 to 22 inches; clay loam
Btk1—22 to 28 inches; clay loam
Btk2—28 to 40 inches; clay loam
Bk1—40 to 50 inches; clay loam
Bk2—50 to 60 inches; gravelly clay loam

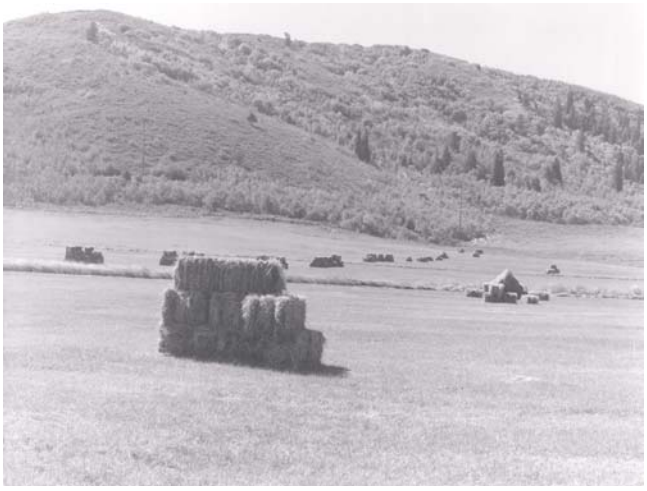


Figure 6.—Baled hay on Manila-Ant Flat loams, 2 to 8 percent slopes. Lucky Star gravelly loam, 30 to 60 percent slopes is under aspen; and Horrocks-Agassiz very cobbly loams, 30 to 70 percent slopes is under oak brush and sagebrush in the background.

Minor Components

Hades and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, west to east aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Heiners and similar soils
Composition: About 5 percent
Landform: Ridges on mountain slopes
Slope: 30 to 70 percent, southeast to southwest aspects
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

154—Manila-Ant Flat loams, 2 to 8 percent slopes

Map Unit Setting

MLRA: 47 (Fig. 6)
Elevation: 6,200 to 7,800 feet (1,890 to 2,378 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Manila and similar soils: 50 percent
Ant Flat and similar soils: 35 percent
Minor components: 15 percent

Component Descriptions

Manila soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate, sandstone, and shale
Slope: 8 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 7.5 LEP (high)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A1—0 to 4 inches; loam
A2—4 to 15 inches; loam
Bt1—15 to 22 inches; clay loam
Bt2—22 to 40 inches; clay
Bt3—40 to 46 inches; gravelly clay
Bt4—46 to 60 inches; clay

Ant Flat soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate, sandstone, and shale
Slope: 2 to 8 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.9 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None

Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 3e
Land capability subclass (nonirrigated): 3e

Typical Profile:
A—0 to 13 inches; loam
Bt1—13 to 19 inches; clay loam
Bt2—19 to 30 inches; clay
Bk1—30 to 45 inches; clay loam
Bk2—45 to 60 inches; clay loam

Minor Components

Henefer and similar soils
Composition: About 10 percent
Landform: Fan remnants
Slope: 3 to 15 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Horrocks and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, southeast to southwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

155—Manila-Ant Flat loams, 8 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,400 to 6,800 feet (1,645 to 2,073 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Manila and similar soils: 50 percent
Ant Flat and similar soils: 35 percent
Minor components: 15 percent

Component Descriptions

Manila soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate, sandstone, and shale
Slope: 8 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 7.5 LEP (high)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A1—0 to 4 inches; loam
A2—4 to 15 inches; loam
Bt1—15 to 22 inches; clay loam
Bt2—22 to 40 inches; clay
Bt3—40 to 46 inches; gravelly clay
Bt4—46 to 60 inches; clay

Ant Flat soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate, sandstone, and shale
Slope: 8 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.9 inches (high)

Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A—0 to 13 inches; loam
Bt1—13 to 19 inches; clay loam
Bt2—19 to 30 inches; clay
Bk1—30 to 45 inches; clay loam
Bk2—45 to 60 inches; clay loam

Minor Components

Henefer and similar soils
Composition: About 10 percent
Landform: Fan remnants
Slope: 8 to 15 percent, northwest to northeast aspects
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

Horrocks and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent, southeast to southwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

156—Manila-Harter complex, 2 to 8 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,400 to 7,800 feet (1,950 to 2,378 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Manila and similar soils: 50 percent
Harter and similar soils: 40 percent
Minor components: 10 percent

Component Descriptions

Manila soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate, sandstone, and shale
Slope: 2 to 8 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 7.5 LEP (high)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 3e
Land capability subclass (nonirrigated): 3e

Typical Profile:
A1—0 to 4 inches; loam
A2—4 to 15 inches; loam
Bt1—15 to 22 inches; clay loam
Bt2—22 to 40 inches; clay
Bt3—40 to 46 inches; gravelly clay
Bt4—46 to 60 inches; clay

Harter soils

Landform: Fan remnants
Parent material: Slope alluvium derived from sandstone, quartzite, and shale
Slope: 2 to 8 percent
Drainage class: Well drained

Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 8.1 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 3e
Land capability subclass (nonirrigated): 3e

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 12 inches; gravelly loam
AB—12 to 19 inches; gravelly loam
Bt1—19 to 24 inches; gravelly clay loam
Bt2—24 to 33 inches; gravelly clay
Bt3—33 to 60 inches; gravelly clay

Minor Components

Kovich and similar soils
Composition: About 3 percent
Landform: Flood plains
Slope: 0 to 3 percent
Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Figure 7.—Park City, Utah on Manila-Henefer complex, 8 to 15 percent slopes. Lucky Star gravelly loam, 30 to 60 percent slopes is under aspen, and Horrocks-Agassiz very cobbly loams, 30 to 70 percent slopes is on mountain tops.

Yeates Hollow and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Ant Flat and similar soils
Composition: About 2 percent
Landform: Fan remnants
Slope: 2 to 8 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Henefer and similar soils
Composition: About 2 percent
Landform: Fan remnants
Slope: 3 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

157—Manila-Henefer complex, 8 to 15 percent slopes

Map Unit Setting

MLRA: 47 (Fig. 7)
Elevation: 6,000 to 7,900 feet (1,830 to 2,408 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Manila and similar soils: 60 percent
Henefer and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Manila soils

Landform: Fan remnants
Parent material: Slope alluvium derived from conglomerate, sandstone, and shale
Slope: 8 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 7.5 LEP (high)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, basin wildrye, Columbia needlegrass, Nevada bluegrass, elk sedge, mountain big sagebrush, slender wheatgrass
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A1—0 to 4 inches; loam
A2—4 to 15 inches; loam
Bt1—15 to 22 inches; clay loam
Bt2—22 to 40 inches; clay
Bt3—40 to 46 inches; gravelly clay
Bt4—46 to 60 inches; clay

Henefer soils

Landform: Fan remnants
Parent material: Slope alluvium derived from quartzite, sandstone, and shale
Slope: 8 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.0 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (irrigated): 4e
Land capability subclass (nonirrigated): 4e

Typical Profile:
A1—0 to 7 inches; gravelly loam
A2—7 to 12 inches; gravelly loam
Bt1—12 to 21 inches; cobbly clay
Bt2—21 to 30 inches; cobbly clay
Bt3—30 to 37 inches; very gravelly clay loam
Bt4—37 to 43 inches; very gravelly clay loam
Bt5—43 to 50 inches; very cobbly sandy clay loam
BC—50 to 60 inches; very cobbly sandy clay loam

Minor Components

Horrocks and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

Yeates Hollow and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)

158—Melling-Ayoub-Rock outcrop complex, 10 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,400 to 7,200 feet (1,950 to 2,195 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Melling and similar soils: 50 percent
Ayoub and similar soils: 30 percent
Rock outcrop: 10 percent
Minor components: 10 percent

Component Descriptions

Melling soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite over residuum weathered from andesite
Slope: 10 to 30 percent
Depth to restrictive feature: 12 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 1.5 inches (very low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, antelope bitterbrush, muttongrass, Indian ricegrass, arrowleaf balsamroot, bottlebrush squirreltail, mountain snowberry, western wheatgrass
Land capability subclass (nonirrigated): 7s

Typical Profile:
A—0 to 6 inches; extremely stony loam
Bt—6 to 19 inches; very cobbly clay loam
R—19 to 29 inches; bedrock

Ayoub soils

Landform: Mountain slopes
Parent material: Colluvium derived from andesite and/or slope alluvium derived from andesite
Slope: 10 to 30 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 4.0 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)

Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass, Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 6 inches; cobbly loam
Bt1—6 to 12 inches; gravelly clay loam
Bt2—12 to 18 inches; gravelly clay loam
Bt3—18 to 23 inches; gravelly clay loam
C—23 to 35 inches; very cobbly loam
R—35 to 45 inches; bedrock

Rock outcrop

Landforms: Escarpments on mountain slopes, ridges on mountain slopes
Seasonal water table minimum depth: Greater than 6 feet
Land capability subclass (nonirrigated): 8

Minor Components

Dunford and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Mountain Gravelly Loam (Oak)

Echocreek and similar soils
Composition: About 5 percent
Landform: Stream terraces
Slope: 2 to 10 percent
Drainage class: Well drained
Ecological site: Upland Loam (Basin Wildrye)

159—Parkcity-Dromedary gravelly loams, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,900 to 9,800 feet (1,798 to 2,988 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Parkcity and similar soils: 70 percent
Dromedary and similar soils: 20 percent
Minor components: 10 percent

Component Descriptions

Parkcity soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, limestone, and quartzite
Slope: 15 to 30 percent, northwest to northeast aspects
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 6.2 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Aspen)
Potential native vegetation: mountain brome, nodding brome, sticky geranium, Columbia needlegrass, Fendler's meadowrue, Nevada bluegrass, elk sedge, mountain big sagebrush, mountain snowberry, quaking aspen (Fig. 8)
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 19 inches; gravelly loam
Bw—19 to 36 inches; very cobbly loam
C—36 to 60 inches; very cobbly loam

Dromedary soils

Landform: Mountain slopes
Parent material: Colluvium and till derived from sandstone, conglomerate, and shale
Slope: 15 to 30 percent, southwest to southeast aspects
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.6 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High

Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Douglas-fir)
Potential native vegetation: mountain snowberry, Oregongrape, boxleaf myrtle, elk sedge, quaking aspen, Nevada bluegrass, common juniper, heartleaf arnica, slender wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 6 inches; gravelly loam
E—6 to 22 inches; very cobbly sandy loam
Bt/E—22 to 44 inches; very cobbly sandy clay loam
Bt1—44 to 51 inches; very cobbly sandy clay loam
Bt2—51 to 60 inches; very cobbly sandy clay loam

Minor Components

Rock outcrop
Composition: About 5 percent
Landforms: Escarpments on mountain slopes, ridges on mountain slopes

Crandall and similar soils
Composition: About 5 percent
Landforms: Mountain slopes, kame moraines
Slope: 15 to 30 percent, southeast to southwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Figure 8.—Parkcity-Dromedary gravelly loams, 30 to 70 percent slopes is under aspen and conifer. Crandall-Lucky Star gravelly loams, 5 to 30 percent slopes and Crandall-Lucky Star-Starley Family complex, 30 to 70 percent slopes are under sagebrush and aspen on the upper slopes and ridges.

Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

160—Parkcity-Dromedary gravelly loams, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 9,600 feet (1,707 to 2,927 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Parkcity and similar soils: 70 percent
Dromedary and similar soils: 20 percent
Minor components: 10 percent

Component Descriptions

Parkcity soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, limestone, and quartzite
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 6.2 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Aspen)
Potential native vegetation: mountain brome, nodding brome, sticky geranium, Columbia needlegrass, Fendler's meadowrue, Nevada bluegrass, elk sedge, mountain big sagebrush, mountain snowberry, quaking aspen
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 5 inches; gravelly loam
A2—5 to 19 inches; gravelly loam
Bw—19 to 36 inches; very cobbly loam
C—36 to 60 inches; very cobbly loam

Dromedary soils

Landform: Mountain slopes
Parent material: Colluvium and till derived from conglomerate, sandstone, and shale
Slope: 30 to 70 percent, southwest to southeast aspects
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 5.6 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Douglas-fir)
Potential native vegetation: mountain snowberry, Oregongrape, boxleaf myrtle, elk sedge, quaking aspen, Nevada bluegrass, common juniper, heartleaf arnica, slender wheatgrass
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 6 inches; gravelly loam
E—6 to 22 inches; very cobbly sandy loam
Bt/E—22 to 44 inches; very cobbly sandy clay loam
Bt1—44 to 51 inches; very cobbly sandy clay loam
Bt2—51 to 60 inches; very cobbly sandy clay loam

Minor Components

Rock outcrop
Composition: About 5 percent
Landforms: Ridges on mountain slopes, escarpments on mountain slopes

Crandall and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, southeast to southwest aspects
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)

Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

161—Pits, gravel

Map Unit Setting

MLRA: 47

Map Unit Composition

Pits, gravel: 100 percent

Component Descriptions

Pits, gravel

Land capability subclass (nonirrigated): 8

162—Richsum-Heiners complex, 4 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,200 to 7,400 feet (1,890 to 2,255 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 70 to 100 days

Map Unit Composition

Richsum and similar soils: 70 percent
Heiners and similar soils: 20 percent
Minor components: 10 percent

Component Descriptions

Richsum soils

Landform: Mountain slopes
Parent material: Slope derived from sandstone, conglomerate, and shale
Slope: 4 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 8.0 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, Indian ricegrass, basin wildrye, mountain big sagebrush, needleandthread, Oregongrape, antelope bitterbrush, aster, tapertip hawksbeard, western wheatgrass
Land capability subclass (nonirrigated): 4e

Typical Profile:
A1—0 to 2 inches; silt loam
A2—2 to 14 inches; silt loam
Bk1—14 to 23 inches; silt loam
Bk2—23 to 32 inches; silt loam
Bk3—32 to 52 inches; gravelly silt loam
Cr—52 to 60 inches; bedrock

Heiners soils

Landform: Ridges on mountain slopes
Parent material: Slope alluvium over residuum, both derived from sandstone, conglomerate, and shale
Slope: 4 to 15 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.7 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, Indian ricegrass, Nevada bluegrass, antelope bitterbrush, bottlebrush squirreltail, needleandthread
Land capability subclass (nonirrigated): 7s

Typical Profile:
A1—0 to 3 inches; gravelly loam
A2—3 to 8 inches; gravelly loam
Bw—8 to 12 inches; very gravelly loam
C—12 to 19 inches; very gravelly loam
Cr—19 to 29 inches; bedrock

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Cutoff and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)

Jana and similar soils
Composition: About 2 percent
Landform: Mountain slopes
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Gravelly Loam (Utah Juniper)

163—Richsum-Heiners complex, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,900 to 7,400 feet (1,798 to 2,255 meters)
Mean annual precipitation: 14 to 16 inches (355 to 405 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 70 to 100 days

Map Unit Composition

Richsum and similar soils: 60 percent
Heiners and similar soils: 30 percent
Minor components: 10 percent

Component Descriptions

Richsum soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, conglomerate, and shale
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 8.0 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 40 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, Indian ricegrass, basin wildrye, mountain big sagebrush, needleandthread, Oregongrape, antelope bitterbrush, aster, tapertip hawksbeard, western wheatgrass
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 2 inches; silt loam
A2—2 to 14 inches; silt loam
Bk1—14 to 23 inches; silt loam
Bk2—23 to 32 inches; silt loam
Bk3—32 to 52 inches; gravelly silt loam
Cr—52 to 60 inches; bedrock

Heiners soils

Landform: Ridges on mountain slopes
Parent material: Slope alluvium derived from sandstone, conglomerate, and shale
Slope: 15 to 30 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.7 inches (very low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 2 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, Indian ricegrass, Nevada

bluegrass, antelope bitterbrush, bottlebrush squirreltail, needleandthread
Land capability subclass (nonirrigated): 7s

Typical Profile:
A1—0 to 3 inches; gravelly loam
A2—3 to 8 inches; gravelly loam
Bw—8 to 12 inches; very gravelly loam
C—12 to 19 inches; very gravelly loam
Cr—19 to 29 inches; bedrock

Minor Components

Ant Flat and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Cutoff and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 22 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Upland Stony Loam (Mountain Big Sagebrush)

Jana and similar soils
Composition: About 2 percent
Landform: Mountain slopes
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Gravelly Loam (Utah Juniper)

164—Rock outcrop

Map Unit Setting

MLRA: 47
Elevation: 5,200 to 11,500 feet (1,585 to 3,505 meters)
Mean annual precipitation: 16 to 35 inches (405 to 890 millimeters)
Average annual air temperature: 35 to 45 degrees F. (2 to 7 degrees C.)
Frost-free period: 20 to 90 days

Map Unit Composition

Rock outcrop: 90 percent
Minor components: 10 percent

Component Descriptions

Rock outcrop

Landform: Mountain slopes
Land capability subclass (nonirrigated): 8

Minor Components

Agassiz and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Mountain Shallow Loam (Mountain Big Sagebrush)

Starley Family and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Loam (Mountain Big Sagebrush)

Parkcity and similar soils
Composition: About 2 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Hades and similar soils
Composition: About 2 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Oak)

165—Rock outcrop-Starley Family complex, 30 to 70 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,000 to 11,200 feet (1,830 to 3,415 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Rock outcrop: 50 percent
Starley Family and similar soils: 30 percent
Minor components: 20 percent

Component Descriptions

Rock outcrop

Landform: Mountain slopes
Seasonal water table minimum depth: Greater than 6 feet
Land capability subclass (nonirrigated): 8

Starley Family soils

Landform: Mountain slopes
Parent material: Colluvium derived from shale, granite, conglomerate, limestone, quartzite, and sandstone; and colluvium derived from limestone, quartzite, and sandstone
Slope: 30 to 70 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 1.5 inches (very low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Mountain Big Sagebrush)
Potential native vegetation: slender wheatgrass, Columbia needlegrass, mountain big sagebrush, mountain brome, sheep fescue, mountain snowberry, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 6 inches; very cobbly loam
A2—6 to 15 inches; extremely cobbly loam
Bk—15 to 19 inches; extremely cobbly loam
R—19 to 29 inches; bedrock

Minor Components

Dromedary and similar soils
Composition: About 10 percent
Landform: Mountain slopes
Slope: 30 to 70 percent, southwest to southeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Douglas-fir)

Crandall and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

Lucky Star and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 30 to 60 percent, southwest to southeast aspects
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

166—Sessions-Haydenfork complex, 0 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 8,200 to 9,900 feet (2,500 to 3,018 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Sessions and similar soils: 60 percent
Haydenfork and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Sessions soils

Landform: Till plains
Parent material: Till derived from sandstone, quartzite, and shale
Slope: 2 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 7.5 LEP (high)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Silver Sagebrush)
Potential native vegetation: silver sagebrush, slender wheatgrass, Nevada bluegrass, mountain brome, mountain snowberry, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 6c

Typical Profile:
A1—0 to 8 inches; loam
A2—8 to 15 inches; clay loam
Bt1—15 to 48 inches; clay
Bt2—48 to 52 inches; gravelly clay loam
Btk—52 to 60 inches; gravelly clay loam

Haydenfork soils

Landform: Kettles
Parent material: Outwash derived from sandstone and quartzite
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 9.8 inches (high)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Ponding hazard: Occasional
Seasonal water table minimum depth: About 10 inches
Runoff class: Low
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Wet Fresh Meadow (Sedge)
Potential native vegetation: sedge, mountain rush, tufted hairgrass, shrubby cinquefoil, white marshmarigold, willow
Land capability subclass (nonirrigated): 7w

Typical Profile:
Oi—0 to 3 inches; slightly decomposed plant material
A1—3 to 9 inches; clay loam
A2—9 to 17 inches; clay loam
A3—17 to 21 inches; clay loam
Bg—21 to 25 inches; clay loam
Cg—25 to 36 inches; sandy clay loam
C1—36 to 55 inches; sandy clay loam
C2—55 to 63 inches; gravelly sandy clay loam

Minor Components

Skutum and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 2 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: High Mountain Loam (Aspen)

Crandall and similar soils
Composition: About 5 percent
Landforms: Mountain slopes, kame moraines
Slope: 5 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

Uinta and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Figure 9.—An old logging cabin on Sessions soil in Sessions-Skutum loams, 2 to 15 percent slopes.

167—Sessions-Skutum loams, 2 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,800 to 9,300 feet (2,378 to 2,835 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Sessions and similar soils: 55 percent
Skutum and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Sessions soils

Landform: Till plains (Fig. 9)
Parent material: Till derived from sandstone, quartzite, and shale
Slope: 2 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 7.5 LEP (high)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None

Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Silver Sagebrush)
Potential native vegetation: silver sagebrush, slender wheatgrass, Nevada bluegrass, mountain brome, mountain snowberry, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 6c

Typical Profile:
A1—0 to 8 inches; loam
A2—8 to 15 inches; clay loam
Bt1—15 to 48 inches; clay
Bt2—48 to 52 inches; gravelly clay loam
Btk—52 to 60 inches; gravelly clay loam

Skutum soils

Landform: Mountain slopes
Parent material: Slope alluvium derived from sandstone, conglomerate, siltstone, and claystone
Slope: 2 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Aspen)
Potential native vegetation: mountain brome, slender wheatgrass, thickleaf peavine, Columbia needlegrass, Kentucky bluegrass, blue wildrye, butterweed groundsel, coneflower, elk sedge, mountain snowberry, nodding bluegrass, sticky geranium, western sweetroot
Land capability subclass (nonirrigated): 6c

Typical Profile:
A1—0 to 5 inches; loam
A2—5 to 17 inches; loam
Bt1—17 to 32 inches; gravelly clay
Bt2—32 to 44 inches; gravelly clay
Bt3—44 to 48 inches; gravelly clay
2C—48 to 56 inches; gravelly sandy loam
Cr—56 to 60 inches; bedrock

Minor Components

Uinta and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Parkcity and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Aspen)

Crandall and similar soils
Composition: About 3 percent
Landforms: Mountain slopes, kame moraines
Slope: 5 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

Haydenfork and similar soils
Composition: About 4 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

168—Sessions-Uinta complex, 2 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 8,000 to 10,600 feet (2,438 to 3,230 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Sessions and similar soils: 60 percent
Uinta and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Sessions soils

Landform: Till plains
Parent material: Till derived from sandstone, quartzite, and shale
Slope: 2 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 9.7 inches (high)
Shrink-swell potential: About 7.5 LEP (high)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 30 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Silver Sagebrush)
Potential native vegetation: silver sagebrush, slender wheatgrass, Nevada bluegrass, mountain brome, mountain snowberry, sticky geranium, thickleaf peavine
Land capability subclass (nonirrigated): 6c

Typical Profile:
A1—0 to 8 inches; loam
A2—8 to 15 inches; clay loam
Bt1—15 to 48 inches; clay
Bt2—48 to 52 inches; gravelly clay loam
Btk—52 to 60 inches; gravelly clay loam

Uinta soils

Landform: Mountain slopes
Parent material: Slope alluvium and till derived from sandstone, quartzite, and shale
Slope: 8 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Mixed Conifer)
Potential native vegetation: elk sedge, slender wheatgrass, Oregongrape, Wheeler bluegrass, blue wildrye, boxleaf myrtle, common juniper, heartleaf arnica, kinnikinnick, mallow ninebark, mountain snowberry, spike trisetum
Land capability subclass (nonirrigated): 6e

Typical Profile:
E—0 to 13 inches; cobbly sandy loam
E/Bt—13 to 23 inches; gravelly sandy loam
Bt1—23 to 35 inches; gravelly sandy clay loam
Bt2—35 to 50 inches; gravelly clay loam
Bt3—50 to 60 inches; gravelly clay loam

Minor Components

Crandall and similar soils
Composition: About 5 percent
Landforms: Mountain slopes, kame moraines
Slope: 5 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

Haydenfork and similar soils
Composition: About 7 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Skutum and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: High Mountain Loam (Aspen)

169—Skutum loam, 2 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,500 to 9,500 feet (2,287 to 2,897 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Skutum and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Skutum soils

Landform: Mountain slopes
Parent material: Slope alluvium derived from sandstone, conglomerate, siltstone, and claystone
Slope: 2 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Aspen)
Potential native vegetation: mountain brome, slender wheatgrass, thickleaf peavine, Columbia needlegrass, Kentucky bluegrass, blue wildrye, butterweed groundsel, coneflower, elk sedge, mountain snowberry, nodding bluegrass, sticky geranium, western sweetroot
Land capability subclass (nonirrigated): 6c

Typical Profile:
A1—0 to 5 inches; loam
A2—5 to 17 inches; loam
Bt1—17 to 32 inches; gravelly clay
Bt2—32 to 44 inches; gravelly clay
Bt3—44 to 48 inches; gravelly clay
2C—48 to 56 inches; gravelly sandy loam
Cr—56 to 60 inches; bedrock

Minor Components

Sessions and similar soils
Composition: About 6 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Haydenfork and similar soils
Composition: About 6 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Uinta and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

170—Skutum loam, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,400 to 9,600 feet (1,950 to 2,927 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Skutum and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Skutum soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, conglomerate, siltstone, and claystone
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Aspen)
Potential native vegetation: mountain brome, slender wheatgrass, thickleaf peavine, Columbia

needlegrass, Kentucky bluegrass, blue wildrye, butterweed groundsel, coneflower, elk sedge, mountain snowberry, nodding bluegrass, sticky geranium, western sweetroot
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 5 inches; loam
A2—5 to 17 inches; loam
Bt1—17 to 32 inches; gravelly clay
Bt2—32 to 44 inches; gravelly clay
Bt3—44 to 48 inches; gravelly clay
2C—48 to 56 inches; gravelly sandy loam
Cr—56 to 60 inches; bedrock

Minor Components

Sessions and similar soils
Composition: About 6 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Haydenfork and similar soils
Composition: About 6 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Uinta and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

171—Skutum loam, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,600 to 9,800 feet (2,012 to 2,988 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Skutum and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Skutum soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, siltstone, and claystone
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Aspen)
Potential native vegetation: mountain brome, slender wheatgrass, thickleaf peavine, Columbia needlegrass, Kentucky bluegrass, blue wildrye, butterweed groundsel, coneflower, elk sedge, mountain snowberry, nodding bluegrass, sticky geranium, western sweetroot
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 5 inches; loam
A2—5 to 17 inches; loam
Bt1—17 to 32 inches; gravelly clay
Bt2—32 to 44 inches; gravelly clay
Bt3—44 to 48 inches; gravelly clay
2C—48 to 56 inches; gravelly sandy loam
Cr—56 to 60 inches; bedrock

Minor Components

Uinta and similar soils
Composition: About 6 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: High Mountain Stony Loam (Mixed Conifer)

Sessions and similar soils
Composition: About 4 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Haydenfork and similar soils
Composition: About 5 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

172—Skutum-Uinta association, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,600 to 10,100 feet (2,318 to 3,080 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Skutum and similar soils: 60 percent
Uinta and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Skutum soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from sandstone, conglomerate, siltstone, and claystone
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Aspen)
Potential native vegetation: mountain brome, slender wheatgrass, thickleaf peavine, Columbia needlegrass, Kentucky bluegrass, blue wildrye, butterweed groundsel, coneflower, elk sedge, mountain snowberry, nodding bluegrass, sticky geranium, western sweetroot
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 5 inches; loam
A2—5 to 17 inches; loam
Bt1—17 to 32 inches; gravelly clay
Bt2—32 to 44 inches; gravelly clay
Bt3—44 to 48 inches; gravelly clay
2C—48 to 56 inches; gravelly sandy loam
Cr—56 to 60 inches; bedrock

Uinta soils

Landform: Mountain slopes
Parent material: Slope alluvium and till derived from sandstone, quartzite, and shale
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Mixed Conifer)
Potential native vegetation: elk sedge, slender wheatgrass, Oregongrape, Wheeler bluegrass, blue wildrye, boxleaf myrtle, common juniper, heartleaf arnica, kinnikinnick, mallow ninebark, mountain snowberry, spike trisetum
Land capability subclass (nonirrigated): 6e

Typical Profile:
E—0 to 13 inches; cobbly sandy loam
E/Bt—13 to 23 inches; gravelly sandy loam
Bt1—23 to 35 inches; gravelly sandy clay loam
Bt2—35 to 50 inches; gravelly clay loam
Bt3—50 to 60 inches; gravelly clay loam

Minor Components

Sessions and similar soils
Composition: About 8 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Haydenfork and similar soils
Composition: About 7 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

173—Skutum-Uinta association, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 7,000 to 10,000 feet (2,135 to 3,048 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Skutum and similar soils: 60 percent
Uinta and similar soils: 25 percent
Minor components: 15 percent

Component Descriptions

Skutum soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, conglomerate, siltstone, and claystone
Slope: 30 to 50 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Loam (Aspen)
Potential native vegetation: mountain brome, slender wheatgrass, thickleaf peavine, Columbia needlegrass, Kentucky bluegrass, blue wildrye, butterweed groundsel, coneflower, elk sedge, mountain snowberry, nodding bluegrass, sticky geranium, western sweetroot
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 5 inches; loam
A2—5 to 17 inches; loam
Bt1—17 to 32 inches; gravelly clay
Bt2—32 to 44 inches; gravelly clay
Bt3—44 to 48 inches; gravelly clay
2C—48 to 56 inches; gravelly sandy loam
Cr—56 to 60 inches; bedrock

Uinta soils

Landform: Mountain slopes
Parent material: Colluvium derived from sandstone, quartzite, and shale
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Mixed Conifer)
Potential native vegetation: elk sedge, slender wheatgrass, Oregongrape, Wheeler bluegrass, blue wildrye, boxleaf myrtle, common juniper, heartleaf arnica, kinnikinnick, mallow ninebark, mountain snowberry, spike trisetum
Land capability subclass (nonirrigated): 7e

Typical Profile:
E—0 to 13 inches; cobbly sandy loam
E/Bt—13 to 23 inches; gravelly sandy loam
Bt1—23 to 35 inches; gravelly sandy clay loam
Bt2—35 to 50 inches; gravelly clay loam
Bt3—50 to 60 inches; gravelly clay loam

Minor Components

Sessions and similar soils
Composition: About 8 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Haydenfork and similar soils
Composition: About 7 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

174—Snyderville cobbly loam, 1 to 5 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,400 to 8,400 feet (1,645 to 2,560 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Snyderville and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Snyderville soils

Landforms: Stream terraces, outwash terraces
Parent material: Alluvium and outwash derived from sandstone, conglomerate, and quartzite
Slope: 1 to 5 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 4.3 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Low
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass, Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (irrigated): 4s
Land capability subclass (nonirrigated): 6s

Typical Profile:
A1—0 to 10 inches; cobbly loam
A2—10 to 16 inches; cobbly loam
Bt—16 to 28 inches; very cobbly loam
2C—28 to 35 inches; very cobbly loamy sand
3C—35 to 60 inches; extremely cobbly sand

Minor Components

Harter and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 2 to 8 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Toddspan and similar soils
Composition: About 5 percent
Landforms: Valley floors, flood plains
Slope: 0 to 3 percent
Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Wanship and similar soils
Composition: About 5 percent
Landform: Stream terraces
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Ecological site: Semiwet Fresh Meadow (Redtop)

175—Snyderville cobbly loam, 5 to 10 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,300 to 7,900 feet (1,615 to 2,408 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)

Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Snyderville and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Snyderville soils

Landforms: Outwash terraces, stream terraces
Parent material: Alluvium and outwash derived from sandstone, conglomerate, and quartzite
Slope: 5 to 10 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 4.3 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass, Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (irrigated): 4s
Land capability subclass (nonirrigated): 6s

Typical Profile:
A1—0 to 10 inches; cobbly loam
A2—10 to 16 inches; cobbly loam
Bt—16 to 28 inches; very cobbly loam
2C—28 to 35 inches; very cobbly loamy sand
3C—35 to 60 inches; extremely cobbly sand

Minor Components

Harter and similar soils
Composition: About 5 percent
Landform: Fan remnants
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Toddspan and similar soils
Composition: About 5 percent
Landforms: Valley floors, flood plains
Slope: 0 to 3 percent
Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Wanship and similar soils
Composition: About 5 percent
Landform: Stream terraces
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Ecological site: Semiwet Fresh Meadow (Redtop)

176—Snyderville gravelly loam, 1 to 5 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,400 to 7,200 feet (1,950 to 2,195 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Snyderville and similar soils: 85 percent
Minor components: 15 percent

Component Descriptions

Snyderville soils

Landforms: Outwash terraces, stream terraces
Parent material: Alluvium and outwash derived from sandstone, conglomerate, and quartzite
Slope: 1 to 5 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)
Available water capacity: About 4.3 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Low
Calcium carbonate maximum: About 3 percent
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)

Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, slender wheatgrass, Letterman's needlegrass, mountain big sagebrush, Columbia needlegrass, Nevada bluegrass, antelope bitterbrush, birchleaf mountain mahogany, muttongrass, sticky geranium, thickleaf peavine
Land capability subclass (irrigated): 4s
Land capability subclass (nonirrigated): 6s

Typical Profile:
A1—0 to 10 inches; gravelly loam
A2—10 to 16 inches; gravelly loam
Bt—16 to 28 inches; very gravelly sandy clay loam
2C—28 to 35 inches; very cobbly loamy sand
3C—35 to 60 inches; extremely cobbly sand

Minor Components

Harter and similar soils
Composition: About 8 percent
Landform: Fan remnants
Slope: 2 to 8 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Wanship and similar soils
Composition: About 5 percent
Landform: Stream terraces
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Ecological site: Semiwet Fresh Meadow (Redtop)

Toddspan and similar soils
Composition: About 2 percent
Landforms: Flood plains, valley floors
Slope: 0 to 3 percent
Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

177—Uinta-Duchesne complex, 8 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 8,400 to 10,200 feet (2,560 to 3,110 meters)
Mean annual precipitation: 22 to 35 inches (560 to 890 millimeters)
Average annual air temperature: 35 to 40 degrees F. (2 to 4 degrees C.)
Frost-free period: 20 to 60 days

Map Unit Composition

Uinta and similar soils: 55 percent
Duchesne and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Uinta soils

Landform: Mountain slopes
Parent material: Slope alluvium and till derived from sandstone, quartzite, and shale
Slope: 8 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 7.2 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Loam (Mixed Conifer)
Potential native vegetation: elk sedge, slender wheatgrass, Oregongrape, Wheeler bluegrass, blue wildrye, boxleaf myrtle, common juniper, heartleaf arnica, kinnikinnick, mallow ninebark, mountain snowberry, spike trisetum
Land capability subclass (nonirrigated): 6e

Typical Profile:
E—0 to 13 inches; cobbly sandy loam
E/Bt—13 to 23 inches; gravelly sandy loam
Bt1—23 to 35 inches; gravelly sandy clay loam
Bt2—35 to 50 inches; gravelly clay loam
Bt3—50 to 60 inches; gravelly clay loam

Duchesne soils

Landform: Mountain slopes
Parent material: Slope alluvium and till derived from sandstone, quartzite, and shale
Slope: 8 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.60 in/hr (moderate)

Available water capacity: About 5.4 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: High Mountain Stony Sandy Loam (Lodgepole Pine)
Potential native vegetation: elk sedge, nodding bluegrass, nodding brome, pinegrass, Oregongrape, boxleaf myrtle, common juniper, fleabane, grouse whortleberry, heartleaf arnica
Land capability subclass (nonirrigated): 6e

Typical Profile:
A—0 to 4 inches; very cobbly sandy loam
E—4 to 11 inches; gravelly fine sandy loam
E/Bt—11 to 18 inches; gravelly fine sandy loam
Bt/E—18 to 30 inches; very cobbly sandy clay loam
Bt1—30 to 42 inches; very cobbly sandy clay loam
Bt2—42 to 60 inches; very cobbly sandy clay loam

Minor Components

Haydenfork and similar soils
Composition: About 5 percent
Landform: Kettles
Slope: 0 to 3 percent
Drainage class: Very poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Crandall and similar soils
Composition: About 4 percent
Landforms: Mountain slopes, kame moraines
Slope: 5 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: High Mountain Gravelly Loam (Mountain Big Sagebrush)

Sessions and similar soils
Composition: About 3 percent
Landform: Till plains
Slope: 2 to 15 percent
Drainage class: Well drained
Ecological site: High Mountain Loam (Silver Sagebrush)

Skutum and similar soils
Composition: About 3 percent
Landform: Mountain slopes
Slope: 8 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: High Mountain Loam (Aspen)

178—Wanship loam, 0 to 3 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,300 to 7,200 feet (1,920 to 2,195 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Wanship and similar soils: 90 percent
Minor components: 10 percent

Component Descriptions

Wanship soils

Landform: Stream terraces
Parent material: Alluvium derived from sandstone and conglomerate
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Slowest permeability: About 2.00 in/hr (moderately rapid)
Available water capacity: About 4.9 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: Rare
Seasonal water table minimum depth: About 26 inches
Runoff class: Very low
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Semiwet Fresh Meadow (Redtop)
Potential native vegetation: sedge, timothy, tufted hairgrass, basin wildrye, field horsetail, meadow foxtail, mountain brome, mountain rush, muttongrass, redtop, shrubby cinquefoil, silver sagebrush, slender wheatgrass, sticky geranium
Land capability subclass (irrigated): 4w
Land capability subclass (nonirrigated): 4w

Figure 10.—Hayland is on Wanship-Kovich loams, 0 to 3 percent slopes. Horrocks-Cutoff complex, 30 to 60 percent slopes is in the background.

Typical Profile:
A1—0 to 8 inches; loam
A2—8 to 14 inches; loam
A3—14 to 24 inches; loam
2C1—24 to 26 inches; extremely cobbly loamy sand
2C2—26 to 60 inches; extremely cobbly loamy sand

Minor Components

Kovich and similar soils
Composition: About 5 percent
Landform: Flood plains
Slope: 0 to 3 percent
Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Snyderville and similar soils
Composition: About 5 percent
Landforms: Outwash terraces, stream terraces
Slope: 1 to 5 percent
Drainage class: Well drained
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)

179—Wanship-Kovich loams, 0 to 3 percent slopes

Map Unit Setting

MLRA: 47 (Fig. 10)
Elevation: 5,200 to 8,000 feet (1,585 to 2,438 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Wanship and similar soils: 55 percent
Kovich and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Wanship soils

Landform: Stream terraces
Parent material: Alluvium derived from sandstone and conglomerate
Slope: 0 to 3 percent
Drainage class: Somewhat poorly drained
Slowest permeability: About 2.00 in/hr (moderately rapid)
Available water capacity: About 4.9 inches (low)
Shrink-swell potential: About 1.5 LEP (low)
Flooding hazard: Rare
Seasonal water table minimum depth: About 26 inches
Runoff class: Very low
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Semiwet Fresh Meadow (Redtop)
Potential native vegetation: sedge, timothy, tufted hairgrass, basin wildrye, field horsetail, meadow foxtail, mountain brome, mountain rush, muttongrass, redtop, shrubby cinquefoil, silver sagebrush, slender wheatgrass, sticky geranium
Land capability subclass (irrigated): 4w
Land capability subclass (nonirrigated): 4w

Typical Profile:
A1—0 to 8 inches; loam
A2—8 to 14 inches; loam
A3—14 to 24 inches; loam
2C1—24 to 26 inches; extremely cobbly loamy sand
2C2—26 to 60 inches; extremely cobbly loamy sand

Kovich soils

Landform: Flood plains
Parent material: Alluvium derived from sandstone, quartzite, and shale alluvium
Slope: 0 to 3 percent
Drainage class: Poorly drained
Slowest permeability: About 0.20 in/hr (moderately slow)
Available water capacity: About 7.1 inches (moderate)
Shrink-swell potential: About 1.5 LEP (low)

Flooding hazard: Occasional
Seasonal water table minimum depth: About 18 inches
Runoff class: Low
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Wet Fresh Meadow (Sedge)
Potential native vegetation: sedge, mountain rush, tufted hairgrass, shrubby cinquefoil, white marshmarigold, willow
Land capability subclass (irrigated): 6w
Land capability subclass (nonirrigated): 7w

Typical Profile:
A1—0 to 9 inches; loam
A2—9 to 22 inches; clay loam
A3—22 to 29 inches; clay loam
2C—29 to 44 inches; fine sandy loam
3C—44 to 60 inches; very gravelly loamy fine sand

Minor Components

Toddspan and similar soils
Composition: About 6 percent
Landforms: Valley floors, flood plains
Slope: 0 to 3 percent
Drainage class: Poorly drained
Ecological site: Wet Fresh Meadow (Sedge)

Snyderville and similar soils
Composition: About 5 percent
Landforms: Outwash terraces, stream terraces
Slope: 1 to 5 percent
Drainage class: Well drained
Ecological site: Mountain Gravelly Loam (Mountain Big Sagebrush)

Dastrup and similar soils
Composition: About 4 percent
Landform: Fan remnants
Slope: 2 to 5 percent
Drainage class: Well drained
Ecological site: Upland Loam (Mountain Big Sagebrush)

180—Yeates Hollow-Henefer complex, 3 to 15 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,400 to 8,300 feet (1,950 to 2,530 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Yeates Hollow and similar soils: 55 percent
Henefer and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Yeates Hollow soils

Landform: Mountain slopes
Parent material: Slope alluvium derived from conglomerate, sandstone, and quartzite
Slope: 3 to 15 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 4.2 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, slender wheatgrass, Letterman's needlegrass, Nevada bluegrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, common yarrow, elk sedge, sheep fescue
Land capability subclass (nonirrigated): 6s

Typical Profile:
A—0 to 12 inches; very stony loam
Bt1—12 to 25 inches; very cobbly clay
Bt2—25 to 37 inches; very cobbly clay
Bt3—37 to 43 inches; extremely cobbly clay loam
R—43 to 53 inches; bedrock

Henefer soils

Landform: Mountain slopes
Parent material: Slope alluvium derived from quartzite, sandstone, and shale
Slope: 3 to 15 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)

Available water capacity: About 7.0 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Medium
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 4e

Typical Profile:
A1—0 to 7 inches; gravelly loam
A2—7 to 12 inches; gravelly loam
Bt1—12 to 21 inches; cobbly clay
Bt2—21 to 30 inches; cobbly clay
Bt3—30 to 37 inches; very gravelly clay loam
Bt4—37 to 43 inches; very gravelly clay loam
Bt5—43 to 50 inches; very cobbly sandy clay loam
BC—50 to 60 inches; very cobbly sandy clay loam

Minor Components

Ant Flat and similar soils
Composition: About 6 percent
Landform: Fan remnants
Slope: 2 to 8 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Heiners and similar soils
Composition: About 5 percent
Landform: Ridges on mountain slopes
Slope: 4 to 15 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

Fewkes and similar soils
Composition: About 4 percent
Landform: Fan remnants
Slope: 8 to 15 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

181—Yeates Hollow-Henefer complex, 15 to 30 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 6,200 to 8,400 feet (1,890 to 2,560 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Yeates Hollow and similar soils: 55 percent
Henefer and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Yeates Hollow soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from conglomerate, sandstone, and quartzite
Slope: 15 to 30 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 4.2 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, slender wheatgrass, Letterman's needlegrass, Nevada bluegrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, common yarrow, elk sedge, sheep fescue
Land capability subclass (nonirrigated): 6s

Typical Profile:
A—0 to 12 inches; very stony loam
Bt1—12 to 25 inches; very cobbly clay
Bt2—25 to 37 inches; very cobbly clay
Bt3—37 to 43 inches; extremely cobbly clay loam
R—43 to 53 inches; bedrock

Henefer soils

Landform: Mountain slopes
Parent material: Slope alluvium and colluvium derived from quartzite, sandstone, and shale
Slope: 15 to 30 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.0 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: High
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 6e

Typical Profile:
A1—0 to 7 inches; gravelly loam
A2—7 to 12 inches; gravelly loam
Bt1—12 to 21 inches; cobbly clay
Bt2—21 to 30 inches; cobbly clay
Bt3—30 to 37 inches; very gravelly clay loam
Bt4—37 to 43 inches; very gravelly clay loam
Bt5—43 to 50 inches; very cobbly sandy clay loam
BC—50 to 60 inches; very cobbly sandy clay loam

Minor Components

Ant Flat and similar soils
Composition: About 6 percent
Landform: Fan remnants
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Heiners and similar soils
Composition: About 5 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

Fewkes and similar soils
Composition: About 4 percent
Landform: Mountain slopes
Slope: 15 to 30 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

182—Yeates Hollow-Henefer complex, 30 to 60 percent slopes

Map Unit Setting

MLRA: 47
Elevation: 5,600 to 8,400 feet (1,707 to 2,560 meters)
Mean annual precipitation: 16 to 22 inches (405 to 560 millimeters)
Average annual air temperature: 40 to 45 degrees F. (4 to 7 degrees C.)
Frost-free period: 60 to 90 days

Map Unit Composition

Yeates Hollow and similar soils: 55 percent
Henefer and similar soils: 30 percent
Minor components: 15 percent

Component Descriptions

Yeates Hollow soils

Landform: Mountain slopes
Parent material: Colluvium derived from conglomerate, sandstone, and quartzite
Slope: 30 to 60 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 4.2 inches (low)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)

Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Stony Loam (Mountain Big Sagebrush)
Potential native vegetation: bluebunch wheatgrass, mountain big sagebrush, slender wheatgrass, Letterman's needlegrass, Nevada bluegrass, Saskatoon serviceberry, antelope bitterbrush, birchleaf mountain mahogany, common yarrow, elk sedge, sheep fescue
Land capability subclass (nonirrigated): 7e

Typical Profile:
A—0 to 12 inches; very stony loam
Bt1—12 to 25 inches; very cobbly clay
Bt2—25 to 37 inches; very cobbly clay
Bt3—37 to 43 inches; extremely cobbly clay loam
R—43 to 53 inches; bedrock

Henefer soils

Landform: Mountain slopes
Parent material: Colluvium derived from quartzite, sandstone, and shale
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: About 0.06 in/hr (slow)
Available water capacity: About 7.0 inches (moderate)
Shrink-swell potential: About 4.5 LEP (moderate)
Flooding hazard: None
Seasonal water table minimum depth: Greater than 6 feet
Runoff class: Very high
Calcium carbonate maximum: None
Gypsum maximum: None
Salinity maximum: About 0 mmhos/cm (nonsaline)
Sodicity maximum: About 0 SAR (nonsodic)
Ecological site: Mountain Loam (Oak)
Potential native vegetation: Gambel's oak, mountain snowberry, Kentucky bluegrass, Oregongrape, Saskatoon serviceberry, bluebunch wheatgrass, elk sedge, mountain big sagebrush, slender wheatgrass, thickleaf peavine
Land capability subclass (nonirrigated): 7e

Typical Profile:
A1—0 to 7 inches; gravelly loam
A2—7 to 12 inches; gravelly loam
Bt1—12 to 21 inches; cobbly clay
Bt2—21 to 30 inches; cobbly clay
Bt3—30 to 37 inches; very gravelly clay loam
Bt4—37 to 43 inches; very gravelly clay loam
Bt5—43 to 50 inches; very cobbly sandy clay loam
BC—50 to 60 inches; very cobbly sandy clay loam

Minor Components

Fewkes and similar soils
Composition: About 6 percent
Landform: Mountain slopes
Slope: 30 to 60 percent
Drainage class: Well drained
Ecological site: Mountain Loam (Mountain Big Sagebrush)

Heiners and similar soils
Composition: About 5 percent
Landform: Ridges on mountain slopes
Slope: 30 to 70 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Upland Shallow Loam (Mountain Big Sagebrush)

Rock outcrop
Composition: About 4 percent
Landforms: Escarpments on mountain slopes, ridges on mountain slopes

183—Water

Map Unit Setting

MLRA: 47

Map Unit Composition

Water: 100 percent

184—Dams

Map Unit Setting

MLRA: 47

Map Unit Composition

Dams: 100 percent

Component Descriptions

Dams

Description: Dams are a barrier built across a watercourse for impounding 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, slightly limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately well 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.

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.

About 42,000 acres in the survey area is used for irrigated crops and pasture. Of this, about 24,000 acres is used for hay and pasture; about 2,000 acres is used

for oats, wheat, or barley; and about 16,000 acres is used for irrigated pasture. About 3,500 additional acres is used for non-irrigated pasture and hay (Utah State Historical Society, 1988). The majority of the farmland is located in the valley areas near Henefer, Coalville, Hoytsville, Wanship, Oakley, Marion, Kamas, Francis, and Snyderville.

The potential for increasing the acreage of cropland is limited by the lack of suitable soils and the shortage of irrigation water. Production on existing farmland could be increased by implementation of the latest cropland technology.

Rotating alfalfa every six or seven years helps to keep quack grass under control. When reseeding alfalfa after the rotation, using a better variety of alfalfa or alfalfa grass mix will improve yield and be more effective in controlling quack grass. Irrigated pasture may also be improved by inter-seeding such plants as garrison meadow foxtail, reed canary grass, meadow bromes, or orchard grass, mixed with one of the desirable legumes. The use of proper stocking rates and restricted grazing during wet periods helps to maintain pastures in good condition.

Using and distributing irrigation water efficiently, maintaining soil fertility, and rotating livestock to allow better growing conditions for the forage crops are the main management objectives on the irrigated soils in the survey area.

Frequency and duration of the application of irrigation water should be considered. The irrigation method to be used depends upon the type of crop grown, soil characteristics, slope, and the water supply. Irrigation water should be applied in amounts large enough to wet the root zone but small enough to minimize the leaching of plant nutrients. The application of animal manure and commercial fertilizer is necessary to maintain soil fertility. Legumes generally respond readily to phosphorus, and grasses respond readily to nitrogen. All additions of fertilizer should be based on the result of soil tests, cropping history, crop needs, and the desired level of crop yields. Fertilizer applications should be in agreement with the latest recommendations of the Cooperative Extension Service and the Agricultural Experiment Station.

In general soils used for crop production in the survey area have a dark-colored loam surface layer that is moderate in content of organic matter. These soils commonly have good tilth. Regular additions of crop residue, manure, and other organic material help to maintain and improve the tilth and water intake rate.

Farmland soils occurring on the fan remnant positions in the survey area are the well drained Ant Flat, Manila, Dastrup, Fewkes, Henefer, and Harter soils. These soils are used mainly for the production of irrigated hay, pasture, and small grains. Farmland soils occurring on the floodplains and stream terrace positions are the poorly drained Kovich and Toddspan soils, the somewhat poorly drained Wanship soils, and the well drained Echocreek and Snyderville soils. These soils are used mainly for the production of irrigated hay and pasture.

The growing season in the survey area is short, and frost frequently occurs late in the spring and early in the fall. The climate is too severe for early vegetables, small fruit, and orchards. The latest information and suggestions for growing special crops can be obtained from the local offices of the Cooperative Extension Service or the Natural Resources Conservation Service.

Yields per Acre

The average yields per acre that can be expected of the principal irrigated 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 variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

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, soils are generally grouped at three levels—capability class, subclass, and unit.

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.

The capability classification of map units in this survey area is given in the section “Detailed Soil Map Units” and in the yields table.

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. The slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 23,000 acres of the survey area, or about 3 percent, would meet the requirements for prime farmland if an adequate and dependable supply of irrigation water were available. Most of this land is located near the towns of Coalville, Henefer, Oakley, Marion, and Francis. The major crops grown in the Summit County Area are alfalfa hay, pasture, and barley.

A recent trend in land use in some parts of the survey area 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 when irrigated are listed in table 6. 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 qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

Rangeland or Forestland Understory

Rangeland is an important resource in the survey area; a large portion of the survey area is used as rangeland. Perennial grasses, shrubs, and forbs are the dominant vegetation, but some areas support a cover of aspen, maple, oak, and coniferous trees.

Upland rangeland areas are used for the grazing of cattle and sheep primarily in the winter; the mountain areas are used for grazing mainly in the spring and fall; and the high mountain areas are used for grazing mainly in the summer. Stock water generally is adequate and is supplemented by streams, springs, reservoirs, or wells.

The productivity of rangeland can be increased by using such management practices as planned grazing systems, deferred grazing, brush management, fencing, water development, and reseeding. The practices used or recommended for use should include consideration of the soils, the ecological site, and the specific type of operation.

In areas that have similar climate and topography, differences in the kind and amount of rangeland or forest understory vegetation are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

Table 7 shows, for each soil that supports vegetation suitable for grazing, the ecological site; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the average percentage of each species. An explanation of the column headings in table 7 follows.

An *ecological site* 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. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites 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. Under *rangeland composition*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Range management requires a knowledge of the kinds of soil and of the potential natural 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 potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural 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.

The objective in range 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.

Climatic Regimes and Their Effects on Range

Precipitation and climate are important environmental factors influencing the kind, amount, and distribution of vegetation. Plants growing on the range in different parts of the survey area are affected by differences in the kind of soil and by differences in climate.

Three climatic regimes are recognized in the survey area. These regimes are determined on the basis of differences in the amount of moisture received, the average annual temperature, and the length of the growing season. The climatic regimes in the survey area are Upland, Mountain, and High Mountain. In addition, some sites are recognized as azonal, where the influence of flooding, a high water table, or some other factor is strong enough to override climate as a controlling factor.

Upland climatic regime: In this regime, the average precipitation ranges from 14 to 16 inches and the average annual air temperature is 40 to 45 degrees F. The average frost-free period is 70 to 100 days. Elevations range from 5,200 to 8,000 feet. The ecological or woodland sites in this climatic regime are Upland Loam (Basin Wild Rye), Upland Loam (Mountain Big Sagebrush), Upland Loamy Shale (Low Sagebrush), Upland Shallow Loam (Wyoming Big Sagebrush), Upland Shallow Loam (Utah Juniper), and Upland Stony Loam (Mountain Big Sagebrush).

Mountain climatic regime: In this regime, the average annual precipitation ranges from 16 to 22 inches and the average annual air temperature is 40 to 45 degrees F. The average frost-free period is 60 to 90 days. Elevations range from 5,200 to 8,400 feet. The ecological or woodland sites in this climatic regime are Mountain Gravelly Loam (Mountain Big Sagebrush), Mountain Gravelly Loam (Oak), Mountain Loam (Mountain Big Sagebrush), Mountain Loam (Oak), Mountain Shallow Loam (Mountain Big Sagebrush), Mountain Stony Loam (Mountain Big Sagebrush), and Mountain Stony Loam (Oak).

High Mountain climatic regime: In this regime, the average annual precipitation ranges from 22 to 35 inches and the average annual air temperature is 35 to 40 degrees F. The average frost-free period is 20 to 60 days. Elevations range from 5,600 to 11,200 feet. The ecological or woodland sites in this climatic regime are Alpine Meadow (Alpine Timothy), High Mountain Gravelly Loam (Mountain Big Sagebrush), High Mountain Loam (Aspen), High Mountain Loam (Mountain Big Sagebrush), High Mountain Loam (Silver Sagebrush), High Mountain Stony Loam (Aspen), High Mountain Stony Loam (Douglas Fir), High Mountain Stony Loam (Lodgepole Pine), and High Mountain Stony Loam (Mixed Conifer).

Azonal areas: Two azonal range sites are in the survey area. The average annual precipitation ranges from 16 to 35 inches, and the average annual air temperature is 35 to 45 degrees F. The average frost-free period is 20 to 90 days. Elevations range from 5,200 to 10,800 feet. Plant communities in these ecological sites receive additional moisture from a water table or as runoff from adjacent soils. The azonal ecological sites are Semi-wet Fresh Meadow (Sedge) and Wet Fresh Meadow (Redtop).

Forest Productivity and Management

The tables in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood

crops and rate the soils according to the limitations that affect various aspects of forest management.

Forest Productivity

In table 8, 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* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Recreation

The survey area provides a wide variety of recreational activities. It includes areas that are popular for hunting of big game such as mule deer and elk, and for hunting of game birds such as grouse, pheasants, and waterfowl. Echo and Rockport Reservoirs are popular areas for camping, boating, and fishing. Ski areas and resorts in the area include Solitude and Brighton in Big Cottonwood Canyon; Alta and Snowbird in Little Cottonwood Canyon; Park City and Deer Valley near Park City; and Park West near Snyderville. Historic areas include the Mormon Trail and the Pony Express Trail across the northern part of the survey area, and the gold and silver mines near Park City.

The soils of the survey area are rated in tables 9A and 9B 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. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and 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 0.00 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 9A and 9B 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

Most soils in the survey area support vegetation that is used by wildlife to some extent. Most species of wildlife are not confined to areas of a particular soil or group of soils. The presence of wildlife in a given area is dependent upon the availability of food, water, and cover, and their relationships to each other. The suitability of the soil for providing these elements and how the soil is used determines the relative abundance of wildlife species in the area.

The mountainous lands of the survey area provide summer habitat for mule deer, moose, and elk. Winter habitat for these species is provided by southern exposed foothills and wind swept ridges. Other important species in the mountainous area include coyote, snowshoe hare, blue grouse, ruffed grouse, Steller's jay, western toad, green snake, and an occasional black bear. The uplands of the survey area provide seasonal habitat for some of these species. Additional species occupying this area include badger, bobcat, mule deer, ground squirrel, pheasants, western meadowlark, Swainson's hawk, and garter snake. Wetlands and adjacent areas provide a diverse habitat. A variety of species utilize wetland areas, including raccoon, skunk, cottontail, blackbirds, hawks, ducks, geese, tiger salamander, and garter snake.

Natural streams and lakes in the survey area provide fishing and recreation for local residents and tourists alike. These occur throughout the survey area. Additional fishing is provided by several reservoirs. Fish species important to the area include rainbow trout, cutthroat trout, and other game fish. These water bodies and associated vegetation provide important habitat for beaver, muskrat, and mink.

The endangered bald eagle and peregrine falcon are known to travel within the survey area. These species are migrants. The bald eagle is more prevalent during winter months along streams and lakes. There is potential habitat for the endangered black-footed ferret in the northern part of the survey area. They are found in prairie dog towns in open short grass areas. There are no known endangered or threatened fish species in the area.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 10, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluegrass, sunflower, wheatgrass, and lupine.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are mountainmahogany, bitterbrush, snowberry, and big sagebrush.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are redtop, tufted hairgrass, oatgrass, saltgrass, rushes, and sedges.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, reservoirs, streams, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include red tail hawk, pheasant, meadowlark,

field sparrow, meadow mole, jackrabbit, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include elk, ruffed grouse, martin, woodpeckers, squirrels, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include mule deer, sage grouse, meadowlark, and mourning dove.

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (USDA, 1999) and "Keys to Soil Taxonomy" (USDA, 1998), and in the "Soil Survey Manual" (USDA, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt, 1996).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt, 1996).

122—Duchesne-Haydenfork complex, 0 to 40 percent slopes
127—Echocreek-Kovich loams, 0 to 10 percent slopes
147—Hovarka-Millcreek loams, 0 to 4 percent slopes
149—Kovich-Toddspan loams, 0 to 3 percent slopes
166—Sessions-Haydenfork complex, 0 to 15 percent slopes
179—Wanship-Kovich loams, 0 to 3 percent slopes

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The following map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

119—Duchesne very cobbly sandy loam, 2 to 15 percent slopes

120—Duchesne very cobbly sandy loam, 15 to 30 percent slopes
121—Duchesne very cobbly sandy loam, 30 to 60 percent slopes
126—Echocreek loam, 2 to 10 percent slopes
156—Manila-Harter complex, 2 to 8 percent slopes
167—Sessions-Skutum loams, 2 to 15 percent slopes
168—Sessions-Uinta complex, 2 to 30 percent slopes
169—Skutum loam, 2 to 15 percent slopes
170—Skutum loam, 15 to 30 percent slopes
171—Skutum loam, 30 to 60 percent slopes
172—Skutum-Uinta association, 15 to 30 percent slopes
173—Skutum-Uinta association, 30 to 60 percent slopes
174—Snyderville cobbly loam, 1 to 5 percent slopes
175—Snyderville cobbly loam, 5 to 10 percent slopes
176—Snyderville gravelly loam, 1 to 5 percent slopes
177—Uinta-Duchesne complex, 8 to 30 percent slopes
178—Wanship loam, 0 to 3 percent slopes

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 estimated data and test data in the "Soil Properties" section.

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 11A and 11B 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. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and 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 0.00 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

Tables 12A and 12B show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, 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. *Slightly limited* indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and 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 0.00 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.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the

movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

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 13A and 13B 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 13A, 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 number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates 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 14 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; embankments, dikes, and levees; and aquifer-fed excavated ponds. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

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. 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.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment

ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

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 index 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, plasticity, and compaction characteristics.

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 index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 15 gives the engineering classifications and the range of index 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, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998).

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.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

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 ovendry 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 16 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.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In table 16, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In table 16, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 16, 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 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.

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 (ovendry) 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 16, 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 16 as the K factor (Kw and Kf) 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 Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf 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. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

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 17 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 milliequivalents per 100 grams of soil 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.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

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.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is 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. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

Water Features

Table 18 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 18 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 18 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 19 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, cemented layers, dense layers, and frozen layers. The table indicates the hardness and 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, 1998 and 1999). 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 20 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 xeric moisture regime, 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 the 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. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic 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, mineral content, soil temperature regime, soil depth, and reaction. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine, smectitic, frigid Typic 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.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series 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, 1998). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Agassiz Series

The Agassiz series consists of shallow, somewhat excessively drained, moderately permeable soils on mountain slopes and ridges. These soils formed in colluvium derived from limestone. The slopes are 30 to 70 percent. The elevation ranges from 5,200 to 8,200 feet. The average annual precipitation is 16 to 22

inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are loamy-skeletal, mixed, superactive, frigid Lithic Haploxerolls.

A typical pedon of Agassiz very cobbly loam in an area of Agassiz-Rock outcrop complex, 30 to 70 percent slopes; about 1/2 mile north of Park City, Utah, about 1,000 feet west and 200 feet north of the southeast corner of sec. 9, T. 2 S., R. 4 E.

A1—0 to 6 inches; very dark brown (10YR 2/2) very cobbly loam, very dark grayish brown (10YR 3/2) dry; weak fine granular structure; soft, friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; few very fine vesicular pores; 25 percent cobbles and 25 percent gravel, neutral (pH 7.2); clear smooth boundary.

A2—6 to 14 inches; very dark grayish brown (10YR 3/2) very cobbly loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure parting to weak fine and medium granular; soft, friable, slightly sticky and slightly plastic; few very fine, fine and medium roots; few very fine tubular pores; 30 percent gravel and 20 percent cobbles; neutral (pH 7.2); abrupt irregular boundary.

R—14 inches; fractured limestone.

Bedrock is at a depth of 10 to 20 inches. The mollic epipedon is 10 to 20 inches thick.

A horizons: The value is 2 or 3 moist, 3 or 4 dry; and the chroma is 2 or 3 moist or dry. The clay content is 18 to 27 percent. The content of rock fragments is 35 to 60 percent. The reaction is slightly acid or neutral.

Ant Flat Series

The Ant Flat series consists of very deep, well drained, slowly permeable soils on fan remnants and mountain slopes. These soils formed in alluvium derived from conglomerate, sandstone, and shale. The slopes are 2 to 30 percent. The elevation ranges from 5,400 to 8,200 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine, smectitic, frigid Calcic Argixerolls.

A typical pedon of Ant Flat loam, 8 to 15 percent slopes in an area of Manila-Ant Flat loams, 2 to 8 percent slopes; about 1/4 mile southwest of Kimball Junction, about 1,000 feet south and 300 feet east of the northwest corner of sec. 19, T. 1 S., R. 4 E.

A—0 to 13 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; moderate and weak medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium roots; many very fine vesicular pores; 5 percent gravel; neutral (pH 6.6); clear smooth boundary.

Bt1—13 to 19 inches; very dark grayish brown (10YR 3/2) clay loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; many very fine and fine and common medium roots; many very fine tubular pores; few faint clay films on faces of peds; 5 percent gravel; neutral (pH 6.8); gradual smooth boundary.

Bt2—19 to 30 inches; brown (7.5YR 5/4) clay, light brown (7.5YR 6/4) dry; strong medium subangular blocky structure; extremely hard, very firm, very sticky and very plastic; many very fine, common fine and few medium roots; common very fine tubular pores; common faint clay films on faces of peds; 10 percent gravel; neutral (pH 7.2); abrupt smooth boundary.

Bk1—30 to 45 inches; reddish brown (5YR 5/4) clay loam, light reddish brown (5YR 6/3) dry; moderate medium subangular blocky structure; very hard, very firm, very sticky and very plastic; common very fine and few fine roots; common very fine tubular pores; 5 percent gravel; strongly effervescent; carbonates are segregated and in filaments; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bk2—45 to 60 inches; reddish brown (5YR 5/4) clay loam, light reddish brown (5YR 6/3) dry; weak medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; 10 percent gravel; strongly effervescent; carbonates are segregated; moderately alkaline (pH 8.4).

Secondary carbonates begin at a depth of 18 to 36 inches. The mollic epipedon is 10 to 19 inches thick. The particle-size control section averages 35 to 45 percent clay and 0 to 15 percent rock fragments.

A horizon: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 or 4 dry; and the chroma is 2 or 3 moist or dry.

Bt horizons: The hue is 7.5YR or 5YR; the value is 3 to 5 moist, 4 to 6 dry; and the chroma is 2 to 4 moist or dry. The texture is clay loam or clay.

Bk horizons: The hue is 7.5YR or 5YR; the value is 4 to 6 moist, 5 to 7 dry; and the chroma is 3 or 4 moist

or dry. The texture is clay loam or clay. The calcium carbonate equivalent is 15 to 30 percent. The reaction ranges from slightly alkaline to strongly alkaline.

Ayoub Series

The Ayoub series consists of moderately deep, well drained, moderately slowly permeable soils on mountain slopes. These soils formed in residuum, slope alluvium, and colluvium derived dominantly from andesite. The slopes are 2 to 60 percent. The elevation ranges from 5,800 to 8,000 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy, mixed, superactive, frigid Typic Argixerolls.

A typical pedon of Ayoub cobbly loam in an area of Ayoub-Dunford Melling complex, 15 to 30 percent slopes; about 4 1/4 miles southeast of Silver Creek Junction, about 700 feet east and 300 feet north of the southwest corner of sec. 36, T. 1 S., R. 4 E.

A—0 to 6 inches; very dark grayish brown (10YR 3/2) cobbly loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; 15 percent cobbles and 15 percent gravel; slightly acid (pH 6.4); abrupt wavy boundary.

Bt1—6 to 12 inches; very dark grayish brown (10YR 3/2) gravelly clay loam, dark grayish brown (10YR 4/2) dry; weak and moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; common very fine pores; few prominent clay films on faces of peds; 20 percent gravel; slightly acid (pH 6.4); clear smooth boundary.

Bt2—12 to 18 inches; dark brown (10YR 3/3) gravelly clay loam, brown (10YR 4/3) dry; moderate medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine pores; few prominent clay films on faces of peds; 25 percent gravel; neutral (pH 6.6); clear smooth boundary.

Bt3—18 to 23 inches; brown (10YR 4/3) gravelly clay loam, brown (10YR 5/3) dry; weak and moderate medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine pores; few faint clay films on faces of peds; 25 percent gravel; neutral (pH 6.6); clear wavy boundary.

C—23 to 35 inches; dark grayish brown (10YR 4/2) very cobbly loam, grayish brown (10YR 5/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; 35 percent gravel and 20 percent cobbles; neutral (pH 6.8); clear smooth boundary.

R—35 inches; andesite.

Bedrock is at a depth of 20 to 40 inches. The mollic epipedon is 10 to 20 inches thick. The particle-size control section averages 27 to 35 percent clay and 15 to 35 percent rock fragments.

A horizon: The value is 2 or 3 moist, 4 or 5 dry; and the chroma is 2 or 3 dry. The content of rock fragments is 15 to 35 percent. The reaction is slightly acid or neutral.

Bt horizons: The value is 3 to 5 moist and 4 to 6 dry; and the chroma is 2 to 4 moist or dry. The reaction is slightly acid or neutral.

C horizon: The hue is 10YR or 2.5Y; the value is 3 to 5 moist and 5 to 7 dry; and the chroma is 2 to 4 moist or dry. The texture is very cobbly loam, very gravelly loam, or very gravelly sandy clay loam. The reaction is slightly acid or neutral.

Cluff Series

The Cluff series consists of deep, well drained, slowly permeable soils on mountain slopes. These soils formed in slope alluvium and colluvium derived from conglomerate, quartzite, limestone, and sandstone. The slopes are 8 to 60 percent. The elevation ranges from 6,800 to 10,600 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are clayey-skeletal, smectitic Mollic Haplocryalfs

A typical pedon of Cluff loam, 8 to 30 percent slopes; about 1/4 mile west of Porcupine Reservoir, about 2,250 feet west and 1,400 feet south of the northeast corner of sec. 21, T. 3 N., R. 7 E.

A1—0 to 4 inches; dark brown (7.5YR 3/2) loam, dark grayish brown (10YR 4/2) dry; strong very fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine, and common medium roots; few very fine vesicular pores; 10 percent gravel; slightly acid (pH 6.5); clear smooth boundary.

A2—4 to 9 inches; dark brown (7.5YR 3/2) gravelly loam, brown (10YR 5/3) dry; weak medium subangular blocky structure parting to moderate medium granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine, and common medium roots; few very fine tubular pores; 15 percent gravel and 5 percent cobbles; slightly acid (pH 6.5); clear smooth boundary.

E—9 to 16 inches; brown (10YR 4/3) very gravelly loam, light brown (7.5YR 6/4) dry; weak 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; 25 percent gravel and 10 percent cobbles; slightly acid (pH 6.5); clear smooth boundary.

Bt/E—16 to 20 inches; the Bt part (70 percent of the horizon) is strong brown (7.5YR 4/6) very cobbly clay loam, brown (7.5YR 5/4) dry; weak fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few faint clay films on faces of peds; the E part (30 percent of the horizon) is brown (10YR 4/3) very cobbly fine sandy loam, light brown (7.5YR 6/4) dry: weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic. Both the Bt and E parts have common very fine and fine roots; many very fine tubular pores; 20 percent gravel, 15 percent cobbles and 10 percent stones; slightly acid (pH 6.5); clear wavy boundary.

Bt1—20 to 33 inches; yellowish red (5YR 4/6) very cobbly clay, yellowish red (5YR 5/6) dry; moderate fine and medium subangular blocky structure; extremely hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots; many fine tubular pores; many faint clay films on faces of peds; 25 percent gravel, 20 percent cobbles and 5 percent stones; slightly acid (pH 6.2); gradual wavy boundary.

Bt2—33 to 54 inches; yellowish red (5YR 4/6) very cobbly clay, reddish yellow (5YR 6/6) dry; weak medium and coarse subangular blocky structure; extremely hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots; few fine tubular pores; common faint clay films on faces of peds; 20 percent gravel, 20 percent cobbles and 10 percent stones; slightly acid (pH 6.2); abrupt smooth boundary

R—54 inches; conglomerate.

Bedrock is at a depth of 40 to 60 inches. The particle-size control section averages 35 to 50 percent clay.

A horizons: The hue is 7.5YR or 10YR; the value is 2 or 3 moist, 4 or 5 dry; and the chroma is 2 or 3 moist or dry. The texture is loam or gravelly loam. The content of rock fragments is 10 to 25 percent.

E horizons: The hue is 7.5YR or 10YR; the value is 3 or 4 moist and 5 or 6 dry; and the chroma is 3 or 4 moist and 2 to 4 dry. The content of rock fragments is 35 to 50 percent.

Bt horizons: The hue is 5YR or 7.5YR; the value is 3 or 4 moist, 5 or 6 dry; and the chroma is 4 to 6 moist or dry. The texture is very cobbly clay, very cobbly clay loam, or extremely cobbly sandy clay. The content of rock fragments commonly increases with depth and ranges from 35 to 70 percent.

Crandall Series

The Crandall series consists of deep, well drained, moderately slowly permeable soils on mountain slopes, kame moraines, and till plains. These soils formed in colluvium, slope alluvium, and glacial till derived from conglomerate and sandstone. The slopes are 2 to 60 percent. The elevation ranges from 7,300 to 11,000 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are loamy-skeletal, mixed, superactive Xeric Argicryolls.

A typical pedon of Crandall gravelly loam in an area of Crandall-Lucky Star-Starley Family complex, 30 to 70 percent slopes; about 2 miles east of Boyer Lake, about 1,200 feet south and 1,200 feet west of the northeast corner of sec. 36, T. 2 N., R. 8 E.

A1—0-5 inches; very dark brown (7.5YR 2.5/2) gravelly loam, brown (7.5YR 4/3) dry; weak fine granular structure; soft very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine interstitial pores; 1 percent stones, 10 percent cobbles, and 20 percent gravel; neutral (pH 6.8); clear smooth boundary.

A2—5-14 inches; dark brown (7.5YR 3/3) gravelly loam, brown (7.5YR 5/3) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, few fine, and medium roots; many very fine interstitial pores; 1 percent stones, 10 percent cobbles, and 20 percent gravel; neutral (pH 6.8); clear wavy boundary.

Bt—14-45 inches; brown (7.5YR 4/4) very cobbly clay loam, light brown (7.5YR 6/4) dry; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; many very fine and few fine roots; many very fine interstitial pores; few faint clay films on faces of peds; 5 percent stones, 15 percent cobbles, and 20 percent gravel; neutral (pH 7.0); clear wavy boundary.

Bk—45-55 inches; brown (7.5YR 4/4) very cobbly loam, light brown (7.5 6/4) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine interstitial pores; 5 percent stones; 20 percent cobbles, and 30

percent gravel; slightly alkaline (pH 7.8) ; slightly effervescent; abrupt irregular boundary.
R—55 inches; conglomerate bedrock

The mollic epipedon is 10 to 16 inches thick. Bedrock is at a depth of 40 to 60 inches. The particle-size control section averages 25 to 35 percent clay and 35 to 60 percent rock fragments.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 4 or 5 dry; and the chroma is 2 or 3 moist or dry. The reaction is neutral or slightly acid.

Bt horizon: The hue is 5YR, 7.5YR, or 10YR; the value is 3 or 4 moist, 4 to 6 dry; and the chroma is 3 to 6 moist or dry. The texture is very gravelly loam, very cobbly loam, and very cobbly clay loam.

Bk horizon: The hue is 5YR, 7.5YR, or 10YR; the value is 4 or 5 moist, 5 or 6 dry; and the chroma is 4 to 6 moist or dry. The texture is very cobbly loam or very gravelly loam.

Cutoff Series

The Cutoff series consists of moderately deep, well drained, moderately permeable soils on mountain slopes. These soils formed in colluvium and slope alluvium derived from sandstone, conglomerate, and quartzite. The slopes are 15 to 60 percent. The elevation ranges from 5,300 to 7,200 feet. The average annual precipitation is 14 to 16 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are loamy-skeletal, mixed, superactive, frigid Typic Calcixerepts.

A typical pedon of Cutoff very gravelly loam in an area of Horrocks-Cutoff complex, 15 to 30 percent slopes; about 4 miles northeast of Henefer, about 200 feet west and 2,200 feet north of the southeast corner of sec. 22, T. 4 N., R. 4 E.

A1—0 inches to 1 inch; dark brown (7.5YR 3/4) very gravelly loam, brown (7.5YR 4/4) dry; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and medium roots; 35 percent gravel and 10 percent cobbles; strongly effervescent; carbonates are disseminated; moderately alkaline (pH 8.0); abrupt smooth boundary.
A2—1 inch to 9 inches; reddish brown (5YR 4/4) very gravelly loam, yellowish red (5YR 4/6) dry; weak fine subangular blocky structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and medium roots; few fine pores; 30 percent gravel and 5 percent cobbles; strongly effervescent; carbonates are disseminated; moderately alkaline (pH 8.2); clear smooth boundary.
Bk1—9 to 16 inches; red (2.5YR 4/6) very gravelly loam, yellowish red (5YR 5/8) dry; weak medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; few very fine and medium roots; common very fine pores; 30 percent gravel and 5 percent cobbles; strongly effervescent; carbonates are disseminated, with thin lime coatings on undersides of rock fragments; strongly alkaline (pH 8.5); abrupt wavy boundary.
Bk2—16 to 29 inches; yellowish red (5YR 5/8) very gravelly loam, reddish yellow (5YR 6/6) dry; massive; slightly hard, friable, slightly sticky and nonplastic; few very fine and fine roots; 55 percent gravel; strongly effervescent; carbonates are disseminated, with thin lime coatings on undersides of rock fragments; strongly alkaline (pH 8.8); abrupt wavy boundary.
Bk3—29 to 38 inches; red (2.5YR 4/6) very gravelly loam, reddish yellow (5YR 6/6) dry; massive; hard, friable, slightly sticky and nonplastic; few very fine and fine roots; 50 percent gravel; strongly effervescent; carbonates are disseminated, with thin lime coatings on undersides of rock fragments; strongly alkaline (pH 8.8); abrupt wavy boundary.
R—38 inches; conglomerate.

Bedrock is at a depth of 20 to 40 inches. The particle-size control section averages 18 to 27 percent clay.

A horizons: The hue is 7.5YR or 5YR; the value is 3 or 4 moist, 4 or 5 dry; and the chroma is 3 to 6 moist or dry. The content of rock fragments is 35 to 45 percent. The reaction is slightly alkaline or moderately alkaline.

Bk horizons: The hue is 2.5YR to 7.5YR; the value is 3 to 5 moist, 4 to 6 dry; and the chroma is 4 to 8 moist or dry. The texture is very gravelly loam or very cobbly loam. The content of rock fragments is 35 to 55 percent. The calcium carbonate equivalent is 15 to 30 percent.

Dastrup Series

The Dastrup series consists of very deep, well drained, moderately to moderately slowly permeable soils on fan remnants. These soils formed in slope alluvium derived from sandstone, siltstone, and conglomerate. The slopes are 2 to 30 percent. The elevation ranges from 5,400 to 6,600 feet. The average annual precipitation is 14 to 16 inches and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy, mixed, superactive, frigid Typic Calcixerolls.

A typical pedon of Dastrup loam, 15 to 30 percent slopes, about 1½ miles west of Coalville, about 2,400 feet west and 1,700 feet north of the southeast corner of sec. 7, T. 2 N., R. 5 E.

A—0 to 12 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3) dry; moderate fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine vesicular pores; slightly effervescent; carbonates are disseminated; slightly alkaline (pH 7.6); abrupt smooth boundary.

Bw—12 to 16 inches; dark grayish brown (10YR 4/2) clay loam, pale brown (10YR 6/3) dry; strong fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine, fine and medium roots; common fine tubular pores; strongly effervescent; carbonates are disseminated; slightly alkaline (pH 7.6); abrupt smooth boundary.

Bk1—16 to 36 inches; yellowish brown (10YR 5/4) loam, very pale brown (10YR 7/4) dry; moderate medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine and medium roots; few very fine tubular pores; strongly effervescent; carbonates are disseminated and veined; moderately alkaline (pH 7.9); clear smooth boundary.

Bk2—36 to 48 inches; yellowish brown (10YR 5/4) loam, very pale brown (10YR 7/4) dry; moderate medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; strongly effervescent; carbonates are disseminated and veined; moderately alkaline (pH 8.4); abrupt wavy boundary.

Bk3—48 to 60 inches; very pale brown (10YR 7/4) loam, very pale brown (10YR 8/2) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; strongly effervescent; carbonates are disseminated and veined; moderately alkaline (pH 8.4).

The mollic epipedon is 10 to 20 inches thick. Secondary carbonates begin at a depth of 10 to 20 inches. The particle-size control section averages 18 to 35 percent clay and less than 20 percent rock fragments.

A horizon: The hue is 10YR or 7.5YR; the value is 3 or 4 moist, 4 or 5 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is less than 10 percent.

Bw and Bk horizons: The hue is 10YR or 7.5YR; the value is 4 to 7 moist, 6 to 8 dry; and the chroma is 2 to 4 moist or dry. The texture is loam, silt loam, clay loam, or gravelly clay loam. The content of rock fragments is less than 20 percent. The reaction is slightly alkaline or moderately alkaline.

Dromedary Series

The Dromedary series consists of very deep, well drained, moderately permeable soils on mountain slopes. These soils formed in colluvium and glacial till derived from a mixture of sedimentary rocks. The slopes are 15 to 70 percent. The elevation ranges from 5,600 to 10,200 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are loamy-skeletal, mixed superactive Mollic Haplocryalfs.

A typical pedon of Dromedary gravelly loam, in an area of Dromedary-Rock outcrop complex, 30 to 70 percent slopes; about ½ mile west of Reynolds Flat, about 850 feet east and 2,300 feet south of the northwest corner of sec. 18, T. 2 S., R. 3 E.

The surface has a 3-inch thick layer of undecomposed leaves, twigs, and needles.

A—0 to 6 inches; very dark grayish brown (10YR 3/2) gravelly loam, brown (10YR 5/3) dry; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; 20 percent gravel and 5 percent cobbles; slightly acid (pH 6.5); abrupt wavy boundary.

E—6 to 22 inches; brown (10YR 4/3) very cobbly sandy loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; many fine interstitial pores; 20 percent cobbles and 20 percent gravel; slightly acid (pH 6.5); gradual wavy boundary.

Bt/E—22 to 44 inches; the Bt part (60 percent of the horizon) is brown (10YR 4/3) very cobbly sandy clay loam, yellowish brown (10YR 5/4) dry; moderate medium and coarse subangular blocky structure; slightly hard, firm, moderately sticky and moderately plastic; few faint clay films on faces of peds; the E part (40 percent of the horizon) is brown (10YR 4/3) very cobbly sandy loam, pale brown (10YR 6/3) dry; weak medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic. Both the Bt and E parts have few very fine, fine and medium roots; many

fine tubular pores; 20 percent gravel and 15 percent cobbles; slightly acid (pH 6.5); clear wavy boundary.

Bt1—44 to 51 inches; brown (10YR 4/3) very cobbly sandy clay loam, yellowish brown (10YR 5/4) dry; moderate fine and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine, fine and medium roots; many very fine tubular pores; common faint clay films on faces of peds; 35 percent gravel and 20 percent cobbles; slightly acid (pH 6.5); abrupt wavy boundary.

Bt2—51 to 60 inches; dark brown (10YR 3/3) very cobbly sandy clay loam, brown (10YR 5/3) dry; massive; hard, firm, moderately sticky and moderately plastic; few very fine, fine and medium roots; few faint clay films on faces of peds; 30 percent gravel and 25 percent cobbles; slightly acid (pH 6.5).

The ochric epipedon is 4 to 7 inches thick. The particle-size control section averages 27 to 35 percent clay and 35 to 60 percent rock fragments. The reaction is neutral or slightly acid.

A horizon: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 to 5 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 15 to 35 percent.

E horizons: The hue is 10YR or 7.5YR; the value is 3 to 5 moist, 5 to 7 dry; and the chroma is 2 or 3 moist or dry. The texture is very gravelly or very cobbly sandy loam. The content of rock fragments is 35 to 60 percent.

Bt horizons: The hue is 10YR or 7.5YR; the value is 3 to 5 moist, 5 to 7 dry; and the chroma is 2 to 4 moist or dry. The texture is very gravelly or very cobbly sandy clay loam.

Duchesne Series

The Duchesne series consists of very deep, well drained, moderately permeable soils on mountain slopes and kame moraines. These soils formed in glacial till, slope alluvium, and colluvium derived from sandstone, quartzite, and shale. The slopes are 2 to 60 percent. The elevation ranges from 8,100 to 10,800 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are loamy-skeletal, mixed superactive Typic Glossocryalfs.

A typical pedon of Duchesne very cobbly sandy loam, 2 to 15 percent slopes; about 2/3 mile southwest of Fish Lake, about 650 feet west and 1,900 feet south of the northeast corner of sec. 2, T. 2 N., R. 11 E.

The surface has a 3-inch thick layer of undecomposed leaves, twigs, and needles.

A—0 to 4 inches; dark brown (7.5YR 3/2) very cobbly sandy loam, brown (7.5YR 5/3) dry; weak coarse subangular blocky structure parting to moderate, very fine and fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, medium and coarse roots; common fine pores; 15 percent gravel, 15 percent cobbles, and 10 percent stones; strongly acid (pH 5.2); abrupt wavy boundary.

E—4 to 11 inches; brown (7.5YR 4/3) gravelly fine sandy loam, very pale brown (10YR 7/3) dry; moderate fine and distinct platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine and very fine and few medium and coarse roots; many very fine and fine pores; 20 percent gravel and 10 percent cobbles; strongly acid (pH 5.2); abrupt smooth boundary.

E/Bt—11 to 18 inches; the E part (70 percent of the horizon) is brown (7.5Y 5/3) gravelly fine sandy loam, pink (7.5YR 7/3) dry; weak medium subangular blocky structure; soft, very friable, sightly sticky and slightly plastic; the Bt part (30 percent of the horizon) is brown (7.5YR 4/3) gravelly sandy clay loam, light brown (7.5YR 6/4) dry; moderate medium subangular blocky structure; very hard, firm moderately sticky and slightly plastic; few faint clay films on faces of peds. Both the E and Bt horizons have common fine and very fine and few medium roots; common very fine and fine pores; 20 percent gravel, 5 percent cobbles, and 5 percent stones; strongly acid (pH 5.2); clear irregular boundary.

Bt/E—18 to 30 inches; the Bt part (70 percent of the horizon) is strong brown (7.5YR 4/6) very cobbly sandy clay loam, light brown (7.5YR 6/4) dry; moderate medium subangular blocky structure; very hard, firm, moderately sticky and sightly plastic; few faint clay films on faces of peds; the E part (30 percent of the horizon) is brown (7.5YR 5/3) very cobbly fine sandy loam, pink (7.5YR 7/3) dry; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic. Both the Bt and E horizons have few very fine and fine roots; common very fine pores; 15 percent gravel and 20 percent cobbles; strongly acid (pH 5.4); clear wavy boundary.

Bt1—30 to 42 inches; strong brown (7.5YR 4/6) very cobbly sandy clay loam, strong brown (7.5YR 5/6) dry; parts of most ped surfaces are coated with brown (7.5YR 5/3) sand and silt; weak coarse subangular blocky structure; extremely hard, very

firm, moderately sticky and moderately plastic; few very fine and fine roots; many very fine pores; few faint clay films on faces of peds; 20 percent gravel and 30 percent cobbles; strongly acid (pH 5.4); abrupt wavy boundary.

Bt2—42 to 60 inches; yellowish red (5YR 4/6) very cobbly sandy clay loam, strong brown (7.5YR 5/6) dry; weak coarse subangular blocky structure; extremely hard, very firm, moderately sticky and moderately plastic; few fine and very fine roots; common very fine pores; few faint clay films on faces of peds; 20 percent gravel, 25 percent cobbles, and 10 percent stones; strongly acid (pH 5.4).

The particle-size control section averages 25 to 35 percent clay and 35 to 60 percent rock fragments.

A horizon: The hue is 7.5YR or 10YR; the value is 3 or 4 moist, 5 or 6 dry; and the chroma is 2 or 3 moist or dry.

E horizons: The hue is 10YR to 5YR; the value is 5 or 6 moist, 7 or 8 dry; and the chroma is 2 or 3 moist or dry. The reaction is moderately acid or strongly acid.

Bt horizons: The hue is 10YR to 5YR; the value is 3 to 5 moist 4 to 6 dry; and the chroma is 4 to 6 moist or dry.

Dunford Series

The Dunford series consists of moderately deep, well drained, moderately slowly permeable soils on mountain slopes. These soils formed in slope alluvium and colluvium derived from andesite. The slopes are 15 to 60 percent. The elevation ranges from 5,800 to 8,000 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy, mixed, superactive, frigid Pachic Argixerolls.

A typical pedon of Dunford cobbly loam in an area of Dunford-Ayoub-Melling complex, 30 to 60 percent slopes; about 5 miles northwest of Kamas along Indian Hollow, about 1,700 feet east and 2,500 feet south of the northwest corner of sec. 10, T. 2 S., R. 5 E.

A—0 to 10 inches; very dark brown (10YR 2/2) cobbly loam, very dark grayish brown (10YR 3/2) dry; weak medium subangular blocky structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; 15 percent gravel and 15 percent cobbles; neutral (pH 6.8); clear smooth boundary.

Bt1—10 to 21 inches; very dark brown (10YR 2/2) gravelly clay loam, dark grayish brown (10YR 4/2) dry; weak fine and medium subangular blocky structure; hard, firm, slightly sticky and moderately plastic; few very fine and fine roots; common very fine and few fine interstitial pores; few faint clay films on faces of peds; 25 percent gravel; neutral (pH 6.6); clear wavy boundary.

Bt2—21 to 36 inches; brown (7.5YR 4/2) gravelly clay loam, brown (10YR 5/3) dry; weak fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; common very fine and few fine and medium interstitial pores; few faint clay films on faces of peds; 25 percent gravel and 5 percent cobbles; neutral (pH 6.6); gradual wavy boundary.

R—36 inches; fractured andesite.

Bedrock is at a depth of 20 to 40 inches. The mollic epipedon is 20 to 34 inches thick. The particle-size control section averages 27 to 35 percent clay and 15 to 35 percent rock fragments.

A horizon: The value is 2 or 3 moist, 3 to 5 dry. The content of rock fragments is 15 to 35 percent.

Bt horizons: The hue is 7.5YR or 10YR; the value is 2 to 5 moist, 3 to 6 dry; and the chroma is 2 or 3 moist or dry. The texture is gravelly clay loam or cobbly clay loam. The reaction is slightly acid or neutral.

Echocreek Series

The Echocreek series consists of very deep, well drained, moderately slowly permeable soils on stream terraces. These soils formed in alluvium derived from sandstone, quartzite, and shale. The slopes are 2 to 10 percent. The elevation ranges from 5,200 to 8,000 feet. The average annual precipitation is 14 to 18 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy, mixed, superactive, frigid Cumulic Haploxerolls.

A typical pedon of Echocreek loam, in an area of Echocreek-Kovich loams, 0 to 10 percent slopes, about 1 mile southeast of Henefer, about 1,800 feet east and 300 feet north of the southwest corner of sec. 10, T. 3 N., R. 4 E.

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 4/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

A1—7 to 18 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many

very fine and few medium roots; many very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

A2—18 to 26 inches; dark brown (10YR 3/3) loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine tubular pores; slightly effervescent; carbonates are disseminated; slightly alkaline (pH 7.4); clear wavy boundary.

Bk1—26 to 38 inches; dark yellowish brown (10YR 3/4) loam, yellowish brown (10YR 5/4) dry; weak and moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine tubular pores; strongly effervescent; carbonates are disseminated; moderately alkaline (pH 8.0); clear smooth boundary.

Bk2—38 to 45 inches; brown (10YR 4/3) loam, brown (7.5YR 5/4) dry; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; few very fine tubular pores; strongly effervescent; carbonates are disseminated; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bk3—45 to 60 inches; brown (7.5YR 4/4) loam, brown (7.5YR 5/4) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; strongly effervescent; carbonates are disseminated; moderately alkaline (pH 8.2).

The mollic epipedon is 20 to 30 inches thick. The particle-size control section averages 18 to 27 percent clay and less than 10 percent rock fragments.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 4 or 5 dry; and the chroma is 2 or 3 moist or dry. The reaction is neutral or slightly alkaline.

Bk horizons: The hue is 10YR or 7.5YR; the value is 3 or 4 moist, 5 or 6 dry; and the chroma is 2 to 4 moist or dry. The reaction is slightly alkaline or moderately alkaline.

Fewkes Series

The Fewkes series consists of very deep, well drained, moderately slowly permeable soils on mountain slopes and fan remnants. These soils formed in slope alluvium and colluvium derived from sandstone, quartzite, and shale. The slopes are 2 to 60 percent. The elevation ranges from 5,400 to 8,300 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy, mixed, superactive, frigid Calcic Argixerolls.

A typical pedon of Fewkes gravelly loam in a area of Hades-Fewkes complex, 30 to 60 percent slopes; about 2 miles south of Wanship, about 200 feet east and 350 feet north of the southwest corner of sec. 29, T. 1 N., R. 5 E.

A—0 to 12 inches; very dark brown (10YR 2/2) gravelly loam, very dark grayish brown (10YR 3/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; common very fine pores; 15 percent gravel and 5 percent cobbles; neutral (pH 7.0); clear smooth boundary.

Bt1—12 to 17 inches; dark grayish brown (10YR 4/2) clay loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and few fine roots; few very fine pores; few faint clay films on faces of peds; 10 percent gravel; neutral (pH 7.2); clear smooth boundary.

Bt2—17 to 22 inches; brown (10YR 4/3) clay loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine pores; few faint clay films on faces of peds; 5 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.4); clear smooth boundary.

Btk1—22 to 28 inches; brown (10YR 5/3) clay loam, pale brown (10YR 6/3) dry; weak and moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine pores; few faint clay films on faces of peds; 10 percent gravel; very slightly effervescent; few carbonates as seams on faces of peds; moderately alkaline (pH 8.0); abrupt wavy boundary.

Btk2—28 to 40 inches; pale brown (10YR 6/3) clay loam, very pale brown (10YR 7/3) dry; weak medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine pores; few faint clay films on faces of peds; 10 percent gravel; strongly effervescent; carbonates are disseminated and thinly veined; moderately alkaline (pH 8.2); clear smooth boundary.

Bk1—40 to 50 inches; pale brown (10YR 6/3) clay loam, very pale brown (10YR 7/3) dry; weak fine subangular blocky structure; hard, firm, moderately

sticky and moderately plastic; few very fine roots; few very fine pores; 10 percent gravel; strongly effervescent; carbonates are disseminated and veined on faces of peds; moderately alkaline (pH 8.4); clear wavy boundary.

Bk2—50 to 60 inches; pale brown (10YR 6/3) gravelly clay loam, very pale brown (10YR 8/2) dry; massive; hard, firm, moderately sticky and moderately plastic; 15 percent gravel; strongly effervescent; carbonates are segregated and veined on faces of peds; strongly alkaline (pH 8.5).

The mollic epipedon is 10 to 20 inches thick. The particle-size control section averages 27 to 35 percent clay and less than 15 percent rock fragments.

A horizon: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 to 5 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 5 to 25 percent. The reaction is neutral or slightly alkaline.

Bt horizons: The hue is 10YR or 7.5YR; the value is 3 to 5 moist, 5 or 6 dry; and the chroma is 2 to 4 moist or dry. The reaction is neutral to slightly alkaline.

Bk horizons: The hue is 10YR or 7.5YR; the value is 5 to 7 moist, 6 to 8 dry; and the chroma is 2 to 4 moist or dry. The texture is gravelly clay loam, clay loam, loam, or gravelly loam. The content of rock fragments is 0 to 35 percent. The reaction is moderately alkaline or strongly alkaline.

Hades Series

The Hades series consists of very deep, well drained, moderately slowly permeable soils on mountain slopes. These soils formed in slope alluvium and colluvium derived from sandstone, quartzite, and shale. The slopes are 15 to 60 percent. The elevation ranges from 5,400 to 8,300 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy, mixed, superactive, frigid Pachic Argixerolls.

A typical pedon of Hades loam in an area of Fewkes-Hades complex, 30 to 60 percent slopes; about 1 mile east of Rockport Reservoir, about 800 feet east and 200 feet south of the northwest corner of sec. 3, T. 1 S., R. 5 E.

A1—0 to 3 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to weak coarse granular; soft, very friable, slightly sticky and slightly plastic; many very fine roots; neutral (pH 6.8); abrupt smooth boundary.

A2—3 to 18 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; few medium tubular pores; neutral (pH 7.0); gradual smooth boundary.

Bt1—18 to 33 inches; very dark grayish brown (10YR 3/2) clay loam, grayish brown (10YR 5/2) dry; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; many fine and common medium roots; common very fine tubular pores; few faint clay films on faces of peds; 5 percent gravel; neutral (pH 7.0); clear smooth boundary.

Bt2—33 to 44 inches; very dark grayish brown (10YR 3/2) clay loam, brown (10YR 5/3) dry; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine roots; many very fine tubular pores; common faint clay films on faces of peds; 5 percent gravel; neutral (pH 7.2); clear smooth boundary.

Bt3—44 to 60 inches; dark grayish brown (10YR 4/2) clay loam, pale brown (10YR 6/3) dry; strong fine subangular blocky structure; hard, firm, very sticky and very plastic; few very fine roots; many fine and medium tubular pores; common faint clay films on faces of peds; 5 percent gravel; slightly alkaline (pH 7.4).

The mollic epipedon is 20 to 50 inches thick. The particle-size control section averages 27 to 35 percent clay and less than 15 percent rock fragments.

A horizons: The value is 2 or 3 moist, 3 to 5 dry; and the chroma is 2 or 3 moist or dry. The reaction is slightly acid or neutral.

Bt horizons: The hue is 10YR or 7.5YR; the value is 3 to 5 moist, 4 to 7 dry; and the chroma is 2 to 4 moist or dry. The reaction is neutral or slightly alkaline.

Harter Series

The Harter series consists of very deep, well drained, slowly permeable soils on fan remnants and mountain slopes. These soils formed in slope alluvium and colluvium derived from sandstone, quartzite, and shale. The slopes are 2 to 30 percent. The elevation ranges from 5,800 to 7,900 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine, smectitic, frigid Typic Argixerolls.

A typical pedon of Harter gravelly loam in an area of Henifer-Harter complex, 15 to 30 percent slopes; about 6 miles east of Hoytsville and 1 mile north of

Spring Canyon, about 500 feet east and 800 feet north of the southwest corner of sec. 32, T. 2 N., R. 6 E.

A1—0 to 5 inches; very dark grayish brown (10YR 3/2) gravelly loam, dark brown (10YR 3/3) dry; weak thin platy and weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; common very fine and fine pores; 15 percent gravel; neutral (pH 6.6); clear smooth boundary.

A2—5 to 12 inches; very dark grayish brown (10YR 3/2) gravelly loam, dark grayish brown (10YR 4/2) dry; weak, fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine and fine pores; 15 percent gravel; neutral (pH 6.6); clear wavy boundary.

AB—12 to 19 inches; very dark grayish brown (10YR 3/2) gravelly loam, brown (10YR 5/3) dry; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and slightly plastic; common very fine and fine roots; common very fine pores; 15 percent gravel; neutral (pH 6.8); abrupt wavy boundary.

Bt1—19 to 24 inches; brown (7.5YR 4/2) gravelly clay loam, brown (7.5YR 5/4) dry; moderate fine and medium subangular blocky structure; extremely hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine pores; few faint clay films on faces of peds; 20 percent gravel; neutral (pH 6.8); abrupt smooth boundary.

Bt2—24 to 33 inches; reddish brown (5YR 4/3) gravelly clay, reddish brown (5YR 5/3) dry; strong medium subangular blocky structure parting to moderate medium subangular blocky; extremely hard, very firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine and fine pores; many prominent clay films on faces of peds; 20 percent gravel; neutral (pH 6.8); abrupt wavy boundary.

Bt3—33 to 60 inches; reddish brown (5YR 4/4) gravelly clay, light reddish brown (5YR 6/4) dry; strong medium subangular blocky structure; extremely hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine and fine pores; many prominent clay films on faces of peds; 20 percent gravel; neutral (pH 6.8).

The mollic epipedon is 11 to 19 inches thick. The particle-size control section averages 35 to 50 percent clay and 15 to 35 percent rock fragments.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 to 5 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 15 to 25 percent.

Bt horizons: The hue is 7.5YR to 2.5YR; the value is 3 to 5 moist, 4 to 7 dry; and the chroma is 2 to 4 moist or dry. The texture is gravelly clay loam or gravelly clay. The reaction is slightly acid or neutral.

Haydenfork Series

The Haydenfork series consists of very deep, very poorly drained, moderately slowly permeable soils in kettles of glaciated mountains. These soils formed in glacial outwash derived from sandstone and quartzite. The slopes are 0 to 3 percent. The elevation ranges from 8,100 to 10,800 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are fine-loamy, mixed superactive Typic Cryaquolls.

A typical pedon of Haydenfork clay loam in an area of Sessions-Haydenfork complex, 0 to 15 percent slopes; about 1 1/2 miles west of Moslander Reservoir, about 800 feet west and 2,800 feet south of the northeast corner of sec. 20, T. 3 N., R. 11 E.

0i—0 to 3 inches; slightly decomposed leaf litter on the surface.

A1—3 to 9 inches; black (10YR 2/1) clay loam, very dark grayish brown (10YR 3/2) dry; weak coarse subangular blocky structure parting to moderate fine and medium granular; very hard, firm, moderately sticky and moderately plastic; many very fine and fine roots; few very fine pores; moderately acid (pH 6.0); clear smooth boundary.

A2—9 to 17 inches; black (10YR 2/1) clay loam, dark grayish brown (10YR 4/2) dry; moderate coarse prismatic structure parting to strong fine and medium subangular blocky; extremely hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; few very fine pores; moderately acid (pH 6.0); clear smooth boundary.

A3—17 to 21 inches; very dark grayish brown (10YR 3/2) clay loam, grayish brown (10YR 5/2) dry; many medium prominent strong brown (7.5YR 5/6) mottles; moderate coarse subangular blocky structure; extremely hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine pores; moderately acid (pH 6.0); abrupt smooth boundary.

Bg—21 to 25 inches; gray (5Y 5/1) clay loam, light gray (5Y 7/2) dry; common medium prominent strong brown (7.5YR 5/8) mottles; moderate coarse subangular blocky structure; extremely hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; common very fine and fine pores; slightly acid (pH 6.1); abrupt smooth boundary.

Cg—25 to 36 inches; brown (10YR 5/3) sandy clay loam, pale brown (10YR 6/3) dry; coarse prominent gray (5Y 5/1) mottles; massive; very hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine and fine pores; 10 percent gravel; moderately acid (pH 6.0); abrupt smooth boundary.

C1—36 to 55 inches; dark grayish brown (2.5Y 4/2) sandy clay loam, pale brown (10YR 6/3) dry; massive; very hard, friable, slightly sticky and slightly plastic; 10 percent gravel; moderately acid (pH 6.0); abrupt smooth boundary.

C2—55 to 63 inches; dark grayish brown (2.5Y 4/2) gravelly sandy clay loam; pale brown (10YR 6/3) dry; massive; very hard, friable, slightly sticky and slightly plastic; 15 percent gravel; moderately acid (pH 6.0).

The mollic epipedon is 10 to 20 inches thick. The particle-size control section averages 18 to 35 percent clay. The depth to a high water table is 0 to 20 inches. This soil is subject to occasional brief ponding in the spring.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 to 5 dry; and the chroma is 1 or 2 moist or dry. The reaction is moderately acid to slightly acid.

Bg and Cg horizons: The hue is 5Y, 2.5Y or 10YR; the value is 4 or 5 moist, 6 or 7 dry; and the chroma is 1 to 3 moist, 2 or 3 dry. The texture is clay loam, sandy clay loam, or loam. The content of rock fragments is 0 to 15 percent. The reaction is moderately acid to slightly acid.

C horizons: The hue is 10YR or 2.5Y; the value is 4 or 5 moist, 5 or 6 dry; and the chroma is 2 or 3 moist or dry. The texture is sandy clay loam, loam, or gravelly sandy clay loam. The content of rock fragments is 5 to 35 percent. The reaction is moderately acid or slightly acid.

Heiners Series

The Heiners series consists of shallow, well drained, moderately permeable soils on mountain slopes. These soils formed in colluvium, slope alluvium, and residuum derived from sandstone, conglomerate, and shale. The slopes are 4 to 70 percent. The elevation ranges from 5,400 to 8,000 feet. The average annual precipitation is 14 to 16 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are loamy-skeletal, mixed, superactive, frigid, shallow Typic Haploxerepts.

A typical pedon of Heiners gravelly loam in an area of Richsum-Heiners complex, 4 to 15 percent slopes; about 10 miles east and 9 miles north of Echo, about 1,350 feet north and 250 feet west of the southeast corner of sec. 26, T. 5 N., R. 6 E.

A1—0 to 3 inches; dark reddish brown (5YR 3/4) gravelly loam, brown (7.5YR 4/4) dry; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; few fine vesicular pores; 20 percent gravel; strongly effervescent; carbonates are disseminated; moderately alkaline (pH 8.4); abrupt wavy boundary.

A2—3 to 8 inches; reddish brown (5YR 4/4) gravelly loam, brown (7.5YR 5/4) dry; weak and moderate 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; 20 percent gravel; strongly effervescent; carbonates are disseminated; moderately alkaline (pH 8.4); clear smooth boundary.

Bw—8 to 12 inches; yellowish red (5YR 5/6) very gravelly loam, reddish yellowish (5YR 6/6) dry; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; 35 percent sandstone gravel; strongly effervescent; carbonates are disseminated; strongly alkaline (pH 8.7); clear smooth boundary.

C—12 to 19 inches; yellowish red (5YR 5/6) very gravelly loam, reddish yellow (5YR 6/6) dry; massive; hard, friable, slightly sticky and slightly plastic; common very fine roots; few very fine tubular pores; 55 percent sandstone gravel; strongly effervescent; carbonates are disseminated; strongly alkaline (pH 8.7); clear smooth boundary.

Cr—19 inches; weathered sandstone.

Weathered bedrock is at a depth of 10 to 20 inches. The particle-size control section averages 15 to 22 percent clay and 35 to 60 percent rock fragments.

A horizons: The hue is 7.5YR or 5YR; the value is 3 or 4 moist, 4 or 5 dry; and the chroma is 3 or 4 moist or dry. The content of rock fragments is 15 to 35 percent.

Bw and C horizons: The hue is 7.5YR or 5YR; the value is 4 or 5 moist, 5 to 6 dry; and the chroma is 4 or 6 moist or dry. The texture is very gravelly loam or very cobbly loam.

Henefer Series

The Henefer series consists of very deep, well drained, slowly permeable soils on mountain slopes and fan remnants. These soils formed in slope alluvium and colluvium derived from quartzite, shale, and sandstone. The slopes are 3 to 60 percent. The elevation ranges from 5,600 to 8,400 feet. The average annual precipitation is 16 to 22 inches, and the mean air annual temperature is 40 to 45 degrees F.

These soils are fine, smectitic, frigid Pachic Argixerolls.

A typical pedon of Henefer gravelly loam in an area of Henefer-Harter gravelly loams, 15 to 30 percent slopes; about 7 1/2 miles northwest of Park City, about 1,900 feet east and 1,200 feet north of the southwest corner of sec. 11, T. 1 S., R. 3 E.

A1—0 to 7 inches; very dark brown (10YR 2/2) gravelly loam, dark grayish brown (10YR 4/2) dry; moderate fine and medium subangular blocky structure parting to strong, fine and medium subangular blocky; hard, friable, slightly sticky and slightly plastic; common fine roots; many fine and medium pores; 15 percent gravel and 5 percent cobbles and stones; neutral (pH 6.8); clear smooth boundary.

A2—7 to 12 inches; very dark grayish brown (10YR 3/2) gravelly loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure; very hard, friable, moderately sticky and slightly plastic; few fine roots; few fine and medium pores; 10 percent gravel and 5 percent cobbles, neutral (pH 6.8); clear smooth boundary.

Bt1—12 to 21 inches; dark reddish brown (5YR 3/3) cobbly clay, reddish brown (5YR 5/4) dry; moderate fine prismatic structure parting to strong fine and medium subangular blocky; extremely hard, firm, moderately sticky and very plastic; few very fine roots; few very fine pores; many distinct and few prominent clay films on faces of peds; 10 percent gravel and 10 percent cobbles; neutral (pH 6.9); clear smooth boundary.

Bt2—21 to 30 inches; reddish brown (5YR 4/4) cobbly clay, reddish brown (5YR 5/4) dry; moderate fine and medium subangular blocky structure; extremely hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine and fine pores; many distinct clay films on faces of peds; 15 percent gravel and 15 percent cobbles; neutral (pH 7.0); clear smooth boundary.

Bt3—30 to 37 inches; reddish brown (5YR 4/4) very gravelly clay loam, light reddish brown (5YR 6/4) dry; moderate fine subangular blocky structure; extremely hard, friable, moderately sticky and moderately plastic; few very fine roots; few fine and medium pores; few distinct clay films on faces of peds; 35 percent gravel and 15 percent cobbles; neutral (pH 7.2); abrupt smooth boundary.

Bt4—37 to 43 inches; brown (7.5YR 4/4) very gravelly clay loam, light brown (7.5YR 6/4) dry; weak medium subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; few very fine roots; few fine tubular pores; few faint clay films on faces of peds; 30 percent gravel and 10 percent cobbles; neutral (pH 7.3); abrupt smooth boundary.

Bt5—43 to 50 inches; reddish brown (5YR 4/4) very cobbly sandy clay loam, light reddish brown (5YR 6/4) dry; weak medium subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; few faint clay films on faces of peds; 30 percent cobbles and 25 percent gravel; neutral (pH 7.3); abrupt smooth boundary.

BC—50 to 60 inches; reddish brown (5YR 4/4) very cobbly sandy clay loam, reddish brown (5YR 5/4) dry; massive; very hard, friable, slightly sticky, and slightly plastic; 25 percent gravel and 30 percent cobbles; neutral (pH 7.3).

The mollic epipedon is 20 to 30 inches thick. The particle-size control section averages 35 to 45 percent clay and 15 to 35 percent rock fragments.

A horizons: The value is 2 or 3 moist, 3 to 5 dry; and the chroma is 2 or 3 moist or dry.

Bt horizons: The hue is 7.5YR or 5YR; the value is 2 to 4 moist, 4 to 6 dry; and the chroma is 2 to 4 moist or dry. The texture is gravelly clay loam or cobbly clay over very gravelly clay loam or very cobbly sandy clay loam. The reaction is neutral or slightly alkaline.

BC horizon: The hue is 7.5YR or 5YR; the value is 3 to 6 moist, 4 to 7 dry; and the chroma is 2 to 4 moist or dry. The texture is very cobbly sandy clay loam, very cobbly clay loam, or very gravelly clay loam.

Horrocks Series

The Horrocks series consists of deep, well drained, moderately slowly permeable soils on mountain slopes. These soils formed in slope alluvium and colluvium derived from conglomerate, andesite, sandstone, and quartzite. The slopes are 15 to 60 percent. The elevation ranges from 5,300 to 8,200 feet. The average

annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are loamy-skeletal, mixed, superactive, frigid Typic Argixerolls.

A typical pedon of Horrocks very cobbly loam in an area of Horrocks-Hades complex, 30 to 60 percent slopes; about 3 miles southwest of Wanship, about 900 feet south and 500 feet east of the northwest corner of sec. 36, T. 1 N., R. 4 E.

A—0 to 10 inches; very dark brown (10YR 2/2) very cobbly loam, very dark grayish brown (10YR 3/2) dry; weak fine granular structure; soft, friable, slightly sticky and slightly plastic; many very fine roots; 25 percent gravel and 20 percent cobbles; neutral (pH 7.0); clear smooth boundary.

Bt1—10 to 19 inches; very dark grayish brown (10YR 3/2) very cobbly clay loam, dark grayish brown (10YR 4/2) dry; weak medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and few fine roots; few very fine pores; common faint clay films on faces of peds; 15 percent gravel and 25 percent cobbles; neutral (pH 7.0); clear smooth boundary.

Bt2—19 to 32 inches; brown (10YR 4/3) very cobbly clay loam, brown (10YR 5/3) dry; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and few fine roots; common very fine and few fine pores; common faint clay films on faces of peds; 25 percent gravel and 15 percent cobbles; neutral (pH 7.0); clear smooth boundary.

Bt3—32 to 40 inches; brown (10YR 4/3) very cobbly clay loam, brown (10YR 5/3) dry; weak fine subangular blocky structure; hard, firm, slightly sticky and moderately plastic; common very fine roots; few very fine pores; common faint clay films on faces of peds; 20 percent gravel and 20 percent cobbles; neutral (pH 7.0); clear smooth boundary.

BC—40 to 59 inches; brown (10YR 4/3) very gravelly loam, brown (10YR 5/3) dry; weak fine subangular blocky structure parting to weak fine granular; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine pores; 40 percent gravel; neutral (pH 7.2); clear smooth boundary.

R—59 inches; andesite.

Bedrock is at a depth of 40 to 60 inches. The mollic epipedon is 10 to 20 inches thick. The particle-size control section averages 27 to 35 percent clay and 35 to 60 percent rock fragments.

A horizon: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 or 4 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 25 to 45 percent. The reaction is slightly acid or neutral.

Bt horizons: The hue is 10YR to 5YR; the value is 3 or 4 moist, 3 to 5 dry; and the chroma is 2 to 6 moist or dry. The texture is very cobbly clay loam, very gravelly clay loam, or very cobbly sandy clay loam. The reaction is slightly acid or neutral.

BC horizon: The hue is 10YR to 5YR; the value is 3 or 4 moist, 4 to 6 dry; and the chroma is 3 to 6 moist or dry. The texture is very gravelly loam or very gravelly sandy clay loam. The content of rock fragments is 40 to 60 percent. The reaction is slightly acid or neutral.

Hovarka Series

The Hovarka series consists of very deep, poorly drained, moderately over very rapidly permeable soils on flood plains. These soils formed in alluvium derived from sandstone and quartzite. The slopes are 0 to 2 percent. The elevation ranges from 7,800 to 9,400 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are fine-loamy over sandy or sandy skeletal, mixed, superactive, Cumulic Cryaquolls.

A typical pedon of Horvaka loam, 0 to 2 percent slopes in an area of Hovarka-Millcreek loams, 0 to 4 percent slopes; about 1 mile north of Burts-Miller Ranch; about 1,800 feet north and 300 feet east of the southwest corner of sec. 17, T. 3 N., R. 10 E.

Oi—0 to 4 inches; slightly decomposed leaves, twigs, and roots.

A1—4 to 12 inches very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; common medium distinct strong brown (7.5YR 5/6) mottles; weak fine granular structure; friable, slightly hard, slightly sticky and slightly plastic, many very fine, common fine and few coarse roots; many very fine tubular pores; 5 percent gravel and 5 percent cobbles; slightly acid (pH 6.2); clear smooth boundary.

A2—12 to 32 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; many fine distinct brown (7.5YR 5/4) mottles; weak fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many very fine and few fine roots; many very fine tubular pores; 5 percent gravel and 5 percent cobbles; slightly acid (pH 6.2) clear wavy boundary.

2C1—32 to 36 inches; gray (10YR 5/1) very cobbly loamy sand, gray (10YR 6/1) dry; single grain; loose; non-sticky and non-plastic; few very fine

roots; many very fine interstical pores; 30 percent gravel and 20 percent cobbles; slightly acid (pH 6.4); clear wavy boundary.

2C2—36 to 64 inches; gray (10YR 5/1) very cobbly sand, gray (10YR 6/1) dry; single grain, loose, non-sticky and non-plastic; few very fine foots; many very fine intersticial pores; 30 percent gravel and 20 percent cobbles; neutral. (pH 6.6)

The mollic epipedon is 16 to 40 inches thick. The particle-size control section averages 18 to 27 percent clay and 0 to 15 percent rock fragments in the upper part of the horizon, and 0 to 10 percent clay and 35 to 60 percent rock fragments in the lower part. The depth to a high water table is 10 to 20 inches. This soil is subject to frequent brief flooding from March through May.

A horizons: The value is 2 or 3 moist, 3 or 4 dry; and the chroma is 1 or 2 moist or dry. The content of rock fragments is 0 to 15 percent. The reaction ranges from moderately acid to neutral.

2C horizons: The value is 4 or 5 moist, 6 or 7 dry; and the chroma is 1 or 2 moist or dry. The texture is stratified very gravelly to very cobbly loamy sand. The reaction ranges from moderately acid to neutral.

Jana Series

The Jana series consists of shallow, well drained, moderately permeable soils on mountain slopes. These soils formed in colluvium derived from sandstone, conglomerate, and shale. The slopes are 30 to 70 percent. The elevation ranges from 5,600 to 7,400 feet. The average annual precipitation is 14 to 16 inches and the mean annual air temperature is 45 to 48 degrees F.

These soils are loamy-skeletal, mixed, superactive, mesic shallow Typic Haploxerepts.

A typical pedon of Jana very gravelly loam, in an area of Jana-Richsum-Rock outcrop, 30 to 70 percent slopes; about 1 mile northeast of Hoytsville: about 1,200 feet south and 400 feet west of the northeast corner of sec. 27, T. 2 N., R. 5 E.

The surface is covered by 40 percent gravel and 10 percent cobbles.

A1—0 inches to 1 inch; dark brown (7.5YR 3/3) very gravelly loam, brown (7.5YR 5/3) dry; weak fine granular structure; soft, friable, slightly sticky and slightly plastic; 30 percent gravel and 10 percent cobbles; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

A2—1 inch to 6 inches; brown (7.5YR 4/3) very gravelly loam, light brown (7.5YR 6/3) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; 30 percent gravel and 10 percent cobbles; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bw—6 to 12 inches; reddish brown (5YR 5/4) extremely cobbly loam, light reddish brown (5YR 6/4) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; 40 percent gravel and 20 percent cobbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt irregular boundary.

Cr—12 inches; fractured moderately soft sandstone bedrock.

The particle-size control section is 15 to 22 percent clay and 35 to 60 percent rock fragments. Weathered bedrock is at a depth of 10 to 20 inches.

A horizons: The hue is 5YR, 7.5YR, or 10YR; the value is 3 or 4 moist, 4 through 6 dry; and the chroma is 2 or 3 moist, 3 or 4 dry.

B horizon: The hue is 5YR, 7.5YR, or 10YR; the value is 4 or 5 moist, 5 or 6 dry; and the chroma is 4 through 6 moist or dry. The texture is extremely cobbly loam, very gravelly loam, or very gravelly fine sandy loam. The thickness is 6 inches or more.

Kovich Series

The Kovich series consists of very deep, poorly drained, moderately slowly permeable soils on flood plains and valley floors. These soils formed in alluvium derived from sandstone, quartzite, and shale. The slopes are 0 to 3 percent. The elevation ranges from 5,200 to 8,000 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy, mixed, superactive, frigid Cumulic Endoaquolls.

A typical pedon of Kovich loam, in an area of Wanship-Kovick loams, 0 to 3 percent slopes; about 1 1/2 miles southeast of Kimball Junction, about 800 feet east and 500 feet north of the southwest corner of sec. 20, T. 1 S., R. 4 E.

A1—0 to 9 inches; black (10YR 2/1) loam, very dark gray (10YR 3/1) dry; weak fine granular structure; slightly hard, friable, slightly sticky and moderately plastic; many very fine and common fine roots; slightly acid (pH 6.2); clear smooth boundary.

A2—9 to 22 inches; black (10YR 2/1) clay loam, very dark grayish brown (10YR 3/2) dry; common medium strong brown (7.5YR 5/6) mottles; weak medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; many very fine and fine roots; few very fine tubular

pores; slightly acid (pH 6.4); clear smooth boundary.

A3—22 to 29 inches; very dark brown (10YR 2/2) clay loam, dark brown (7.5YR 3/2) dry; common fine dark reddish brown distinct (5YR 3/4) mottles; moderate medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; neutral (pH 6.6); clear smooth boundary.

2C—29 to 44 inches; dark brown (7.5YR 4/4) fine sandy loam, brown (7.5YR 5/4) dry; common medium distinct strong brown (7.5YR 5/6) mottles; weak and moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; 10 percent gravel; neutral (pH 7.0); clear smooth boundary.

3C—44 to 60 inches; brown (10YR 4/3) very gravelly loamy fine sand, brown (10YR 5/3) dry; single grained; loose, non-sticky and non-plastic; 45 percent gravel and 10 percent cobbles; slightly acid (pH 6.1).

The mollic epipedon is more than 24 inches thick. The particle-size control section averages 20 to 35 percent clay and less than 35 percent rock fragments. The depth to a high water table is 10 to 20 inches from March through May.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 or 4 dry; and the chroma is 1 or 2 moist or dry. The texture is loam or clay loam. The reaction is slightly acid or neutral.

C horizons: The hue is 10YR or 7.5YR; the value is 2 to 4 moist, 4 to 6 dry; and the chroma is 2 to 4 moist or dry. The texture is stratified and includes fine sandy loam to very gravelly sandy clay loam in the upper part of the horizon, and very gravelly loamy fine sand, very gravelly sand, and very gravelly loamy sand in the lower part. The reaction is slightly acid or neutral.

Lucky Star Series

The Lucky Star series consists of very deep, well drained, moderately permeable soils on mountain slopes. These soils formed in slope alluvium and colluvium derived from sandstone and conglomerate. The slopes are 5 to 70 percent. The elevation ranges from 5,600 to 10,800 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are loamy-skeletal, mixed superactive Typic Palecryolls.

A typical pedon of Lucky Star gravelly loam, 30 to 60 percent slopes, about 3 1/2 miles southwest of Park City, off spur road along Guardsman Pass Road, about 2,100 feet north and 400 feet east of the southwest corner of sec. 28, T. 2 S., R. 4 E.

The surface has a 2-inch thick layer of undecomposed leaves, twigs, needles, and other plant residue.

A1—0 to 6 inches; very dark brown (10YR 2/2) gravelly loam, brown (10YR 4/3) dry; moderate fine and medium granular structure; soft, very friable, slightly sticky and slightly plastic; many fine and medium and few coarse roots; many fine and medium pores; 20 percent gravel; neutral (pH 6.7); clear wavy boundary.

A2—6 to 12 inches; very dark grayish brown (10YR 3/2) gravelly loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine and few medium and coarse roots; common fine and medium and few coarse pores; 25 percent gravel; neutral (pH 6.6); abrupt wavy boundary.

E—12 to 25 inches; brown (7.5YR 4/4) very gravelly fine sandy loam, very pale brown (10YR 7/3) dry; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine, medium and coarse roots; many fine and medium pores; 35 percent gravel; neutral (pH 6.6); clear irregular boundary.

E/Bt—25 to 47 inches; the E part (70 percent of the horizon) is strong brown (7.5YR 4/6) very cobbly sandy loam, very pale brown (10YR 7/3) dry; weak medium subangular block structure; slightly hard, very friable, slightly sticky and slightly plastic; the Bt part (30 percent of the horizon) is strong brown (7.5YR 4/6) very cobbly sandy clay loam, light yellowish brown (10YR 6/4) dry; moderate medium subangular blocky structure, hard, friable, moderately sticky and slightly plastic; few faint clay films on faces of peds; both the E and Bt parts have common fine and few coarse roots; many medium pores; 30 percent gravel and 15 percent cobbles; slightly acid (pH 6.5); clear irregular boundary.

Bt/E—47 to 62 inches; the Bt part (60 percent of the horizon) is strong brown (7/5YR 4/6) very cobbly sandy clay loam, reddish yellow (7.5 YR 6/6 dry; strong fine and medium subangular blocky structure; extremely hard, firm, moderately sticky and moderately plastic; common prominent clay films on faces of peds; the E part (40 percent of the horizon) is strong brown (7.5YR 4/6) very cobbly sandy loam, very pale brown (10YR 7/4) dry; weak medium subangular blocky structure slightly hard very friable, slightly sticky and slightly plastic; both the Bt and E parts have few

fine roots; few fine pores; 20 percent gravel and 20 percent cobbles; slightly acid (pH6.5); gradual irregular boundary.

Bt—62 to 80 inches; strong brown (7.5YR 4/6) very cobbly sandy clay loam, reddish yellow (7.5 YR 6/6) dry; strong fine and medium subangular blocky structure; extremely hard, firm, moderately sticky and moderately plastic; few fine roots; few fine pores; common prominent clay films on faces of peds; 20 percent gravel and 20 percent cobbles; slightly acid (pH 6.4).

The mollic epipedon is 10 to 20 inches thick. The particle-size control section averages 20 to 35 percent clay and 35 to 60 percent rock fragments.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 to 5 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 15 to 35 percent. The reaction is slightly acid or neutral.

E horizons: The hue is 10YR or 7.5YR; the value is 4 to 6 moist, 5 to 7 dry; and the chroma is 3 to 6 moist or dry. The texture is very gravelly fine sandy loam, very cobbly fine sandy loam, or very cobbly sandy loam. The content of rock fragments is 35 to 60 percent. The reaction is slightly acid or neutral.

Bt horizons: The hue is 10YR to 5YR; the value is 3 to 5 moist, 5 to 7 dry; and the chroma is 3 to 6 moist or dry. The texture is very cobbly sandy clay loam or very gravelly sandy clay loam. The content of rock fragments is 35 to 60 percent. The reaction is slightly acid or neutral.

Manila Series

The Manila series consists of very deep, well drained, slowly permeable soils on fan remnants. These soils formed in slope alluvium derived from conglomerate, sandstone and shale. The slopes are 2 to 15 percent. The elevation ranges from 5,400 to 7,900 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine, smectitic, frigid Typic Argixerolls.

A typical pedon of Manila loam in an area of Manila-Henefer complex, 5 to 15 percent slopes; about 4 1/4 miles northwest of Park City, about 200 feet west and 300 feet south of the northeast corner of sec. 36, T. 1 S., R. 3 E.

A1—0 to 4 inches; very dark grayish brown (10YR 3/2) loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine roots; few very fine pores; 5 percent gravel; neutral (pH 6.6); clear smooth boundary.

A2—4 to 15 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; moderate medium subangular blocky structure parting to weak fine subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine pores; 5 percent gravel; neutral (pH 6.6); clear smooth boundary.

Bt1—15 to 22 inches; brown (7.5YR 4/4) clay loam, light brown (7.5YR 6/4) dry; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; many very fine and common fine roots; many very fine pores; few faint clay films on faces of peds; 5 percent gravel; neutral (pH 6.8); clear smooth boundary.

Bt2—22 to 40 inches; reddish brown (5YR 4/4) clay, light brown (7.5YR 6/4) dry; strong coarse subangular blocky structure parting to moderate medium subangular blocky; extremely hard, very firm, very sticky and very plastic; many very fine roots; many very fine and fine pores; common faint clay films on faces of peds; 5 percent gravel; neutral (pH 6.8); abrupt wavy boundary.

Bt3—40 to 46 inches; reddish brown (5YR 4/4) gravelly clay, light brown (7.5YR 6/4) dry; strong coarse subangular blocky structure parting to moderate medium subangular blocky; extremely hard, very firm, very sticky and very plastic; many very fine roots; many very fine and fine pores; many faint clay films on faces of peds; 15 percent gravel; neutral (pH 7.0); clear smooth boundary.

Bt4—46 to 60 inches; reddish brown (5YR 4/4) clay, light reddish brown (5YR 6/3) dry; moderate medium subangular blocky structure; extremely hard, very firm, moderately sticky and moderately plastic; few very fine roots; many very fine and fine pores; many faint clay films on faces of peds; 10 percent gravel; neutral (pH 7.0); clear smooth boundary.

The mollic epipedon is 10 to 20 inches thick. The particle-size control section averages 35 to 45 percent clay and less than 15 percent rock fragments.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 4 or 5 dry; and the chroma is 2 or 3 moist or dry. The reaction is slightly acid or neutral.

Bt horizons: The hue is 5YR to 10YR; the value is 3 to 5 moist, 4 to 6 dry; and the chroma is 2 to 4 moist or dry. The texture is clay loam, clay, or gravelly clay loam. The content of rock fragments is less than 15 percent above 40 inches, and ranges from 5 to 35 percent below 40 inches.

Melling Series

The Melling series consists of shallow, well drained, moderately slowly permeable soils on mountain slopes. These soils formed in residuum and colluvium derived from andesite. The slopes are 10 to 60 percent. The elevation ranges from 5,800 to 8,000 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are loamy-skeletal, mixed, superactive frigid Lithic Argixerolls.

A typical pedon of Melling extremely stony loam in an area of Melling-Ayoub-Rock outcrop complex, 10 to 30 percent slopes; about 4 1/2 miles west of Kamas along Indian Hollow, about 300 feet east and 1,600 feet south of the northwest corner of sec. 14, T. 2 S., R. 5 E.

A—0 to 6 inches; very dark grayish brown (10YR 3/2) extremely stony loam, brown (10YR 4/3) dry; weak fine and medium granular structure; soft, friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; few very fine vesicular pores; 10 percent gravel, 30 percent cobbles, and 25 percent stones; neutral (pH 7.0); clear smooth boundary.

Bt—6 to 19 inches; dark brown (10YR 3/3) very cobbly clay loam, brown (10YR 4/3) dry; weak fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine, few fine and medium roots; common very fine and few fine tubular pores; few faint clay films on faces of peds; 10 percent gravel and 40 percent cobbles; neutral (pH 7.0); abrupt smooth boundary.

R—19 inches; andesite bedrock.

Bedrock is at a depth of 12 to 20 inches. The mollic epipedon is 12 to 19 inches thick. The particle-size control section averages 27 to 35 percent clay and 35 to 60 percent rock fragments.

A horizon: The value is 2 or 3 moist, and the chroma is 2 or 3 moist or dry.

Bt horizon: The value is 2 or 3 moist, 3 to 5 dry; and the chroma is 2 or 3 moist, 3 or 4 dry. The texture is very cobbly clay loam or very gravelly clay loam.

Millcreek Series

The Millcreek series consists of very deep, moderately well drained, moderately over rapidly permeable soils on stream terraces. These soils formed in alluvium derived from sandstone and quartzite. The slopes are 0 to 4 percent. The elevation ranges from 7,800 to 9,400 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are fine loamy over sandy or sandy skeletal, mixed, superactive Cumulic Haplocryolls.

A typical pedon of Millcreek loam, in an area of Hovarka-Millcreek loams, 0 to 4 percent slopes; about 5 1/2 miles north and 1 mile west of Bear River Ranger Station; located about 2,500 feet north and 1,800 feet west of the southeast corner of sec. 30, T 3N., R. 10 E.

A1—0 to 14 inches; very dark brown (7.5YR 2/2) loam, brown (7.5YR 4/2) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent gravel; slightly acid (pH 6.4); clear smooth boundary.

A2—14 to 24 inches; dark brown (7.5YR 3/2) loam, brown (7.5YR 5/2) dry; weak fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many very fine roots; many very fine tubular pores; 5 percent gravel and 5 percent cobbles; neutral (pH 6.6); clear wavy boundary.

2C—24 to 60 inches; brown (7.5YR 4/2) very cobbly sand, pinkish gray (7.5YR 6/2) dry; single grain; loose; non-sticky and non-plastic; common very fine roots; many very fine intersticial pores; 30 percent gravel and 20 percent cobbles; neutral (pH 6.8); clear wavy boundary.

The mollic epipedon is 16 to 40 inches thick. The particle-size control section averages 18 to 27 percent clay in the upper part of the horizon, and less than 15 percent in the lower part. The depth to a high water table is 40 to 60 inches. This soil is subject to rare brief flooding from March through May.

A horizons: The value is 2 or 3 moist and 4 or 5 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 0 to 15 percent.

2C horizon: The value is 4 or 5 moist, 6 or 7 dry; and the chroma is 2 to 4 moist or dry. The texture is very gravelly loamy sand or very cobbly sand.

Parkcity Series

The Parkcity series consists of very deep, well drained, moderately permeable soils on mountain slopes. These soils formed in colluvium and slope alluvium derived from sandstone, limestone, and quartzite. The slopes are 15 to 60 percent. The elevation ranges from 5,600 to 9,800 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are loamy-skeletal, mixed superactive Pachic Haplocryolls.

A typical pedon of Parkcity gravelly loam, 30 to 60 percent slopes in an area of Parkcity-Dromedary gravelly loams, 30 to 70 percent slopes; about 1 mile west of Park City, about 2,580 feet south and 800 feet east of the northwest corner of sec. 17, T. 2 S., R. 4 E.

A1—0 to 5 inches; very dark brown (10YR 2/2) gravelly loam, very dark grayish brown (10YR 3/2) dry; moderate medium granular structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; few very fine pores; 20 percent gravel; slightly acid (pH 6.1); clear smooth boundary.

A2—5 to 19 inches; very dark brown (10YR 2/2) gravelly loam, very dark grayish brown (10YR 3/2) dry; moderate medium subangular blocky structure parting to weak fine subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine pores; 20 percent gravel and 10 percent cobbles; slightly acid (pH 6.2); clear smooth boundary.

Bw—19 to 36 inches; dark brown (10YR 3/3) very cobbly loam, brown (10YR 4/3) dry; weak and moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine pores; 15 percent gravel, 30 percent cobbles, and 10 percent stones; slightly acid (pH 6.4); clear wavy boundary.

C—36 to 60 inches; brown (10YR 4/3) very cobbly loam, yellowish brown (10YR 5/4) dry; massive; slightly hard, friable, slightly sticky and nonplastic; common very fine and few fine roots; few very fine pores; 20 percent gravel, 25 percent cobbles, and 10 percent stones; slightly acid (pH 6.5).

The mollic epipedon is 16 inches or more thick. The particle-size control section averages 12 to 18 percent clay and 35 to 60 percent rock fragments.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 3 or 4 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 15 to 35 percent. The reaction is slightly acid or neutral.

B horizon: The hue is 10YR or 7.5YR; the value is 3 or 4 moist, 4 or 5 dry; and the chroma is 3 or 4 moist or dry. The content of rock fragments is 35 to 60 percent. The texture is very cobbly loam. The reaction is slightly acid or neutral.

C horizon: The hue is 10YR or 7.5YR; the value is 3 to 5 moist, 4 to 7 dry; and the chroma is 3 or 4 moist or dry. The reaction is slightly acid or neutral. The content of rock fragments is 35 to 60 percent. The texture is very cobbly loam or very cobbly sandy loam.

Richsum Series

The Richsum series consists of deep, well drained, moderately permeable soils on mountain slopes. These soils formed in slope alluvium and colluvium derived from shale, sandstone, and conglomerate. The slopes range from 4 to 60 percent. The elevation ranges from 5,600 to 7,400 feet. The average annual precipitation is 14 to 16 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy, mixed, superactive, frigid Typic Calcixerepts.

A typical pedon of Richsum silt loam in an area of Richsum-Heiners complex, 4 to 15 percent slopes; about 16 miles northeast of Echo, about 2,200 feet west and 2,000 feet north of the southeast corner of sec. 27, T. 5 N., R. 7 E.

A1—0 to 2 inches; dark brown (7.5YR 3/3) silt loam, brown (7.5YR 5/4) dry; weak medium platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots; many very fine vesicular pores; 10 percent gravel; neutral (pH 7.2); abrupt smooth boundary.

A2—2 to 14 inches; dark brown (7.5YR 3/4) silt loam, brown (7.5YR 5/4) dry; weak coarse subangular blocky structure parting to moderate coarse granular; hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common fine and few medium and coarse pores; 10 percent gravel; strongly effervescent; carbonates are disseminated; slightly alkaline (pH 7.7); clear smooth boundary.

Bk1—14 to 23 inches; reddish brown (5YR 4/4) silt loam, light reddish brown (5YR 6/4) dry; weak coarse subangular blocky structure parting to strong medium subangular blocky; very hard, firm, moderately sticky and moderately plastic; few very fine, fine and medium roots; few very fine and fine pores; 5 percent gravel and 5 percent cobbles; strongly effervescent; carbonates are disseminated and flaky; moderately alkaline (pH 7.9); clear wavy boundary.

Bk2—23 to 32 inches; reddish brown (5YR 4/4) silt loam, light reddish brown (5YR 6/4) dry; weak coarse subangular blocky structure parting to strong medium subangular blocky; hard, friable, slightly sticky and slightly plastic, few very fine, fine and medium roots; few very fine and fine pores; 5 percent gravel and 5 percent cobbles;

strongly effervescent; carbonates are disseminated and veined; moderately alkaline (pH 8.0); abrupt wavy boundary.

Bk3—32 to 52 inches; reddish brown (5YR 4/4) gravelly silt loam, light reddish brown (5YR 6/4) dry; massive; slightly hard, friable, moderately sticky and slightly plastic; few very fine roots; 15 percent gravel; strongly effervescent; carbonates are disseminated; moderately alkaline (pH 8.2); clear wavy boundary.

Cr—52 inches; weathered shale and sandstone.

Weathered bedrock is at a depth of 40 to 60 inches. The particle-size control section averages 18 to 27 percent clay and less than 15 percent rock fragments. The reaction ranges from neutral to strongly alkaline.

A horizons: The hue is 5YR to 10YR; the value is 3 or 4 moist, 4 or 5 dry; and the chroma is 3 or 4 moist or dry. The content of rock fragments is 0 to 15 percent.

Bk horizons: The hue is 2.5YR to 7.5YR; the value is 4 to 6 moist, 5 to 7 dry; and the chroma is 4 to 6 moist or dry. The texture is silt loam, loam, or gravelly silt loam.

Sessions Series

The Sessions series consists of very deep, well drained, slowly permeable soils on ground moraines and till plains. These soils formed in glacial till derived from shale, quartzite, and sandstone. The slopes are 2 to 15 percent. The elevation ranges from 7,800 to 10,600 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are fine, smectitic Xeric Argicryolls.

A typical pedon of Sessions loam in an area of Sessions-Skutum loams, 2 to 15 percent slopes; about 1 1/2 miles southwest of Grassy Lakes, about 1,400 feet east and 1,900 feet south of the northwest corner of sec. 2, T. 2 N., R. 9 E.

A1—0 to 8 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; moderate very fine and fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; few very fine vesicular pores; 5 percent gravel; neutral (pH 7.2); clear smooth boundary.

A2—8 to 15 inches; very dark grayish brown (10YR 3/2) clay loam, brown (10YR 4/3) dry; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine and fine roots; few very fine tubular pores; 5 percent gravel; neutral (pH 7.2); clear smooth boundary.

Bt1—15 to 48 inches; brown (7.5YR 4/4) clay, brown (7.5YR 5/4) dry; moderate medium subangular blocky structure; very hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots; common very fine tubular pores; common distinct thick clay films on faces of peds; 10 percent gravel; slightly alkaline (pH 7.6); clear wavy boundary.

Bt2—48 to 52 inches; brown (7.5YR 4/4) gravelly clay loam, brown (7.5YR 5/4) dry; weak fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine tubular pores; common faint clay films on faces of peds; 20 percent gravel; slightly alkaline (pH 7.6); clear smooth boundary.

Btk—52 to 60 inches; brown (7.5YR 5/4) gravelly clay loam, light brown (7.5YR 6/4) dry; massive; hard, firm, slightly sticky and slightly plastic; few faint clay films on faces of peds; 25 percent gravel; strongly effervescent; carbonates are in filaments; slightly alkaline (pH 7.8).

The mollic epipedon is 12 to 15 inches thick. The particle-size control section averages 35 to 45 percent clay and 5 to 20 percent rock fragments.

A horizons: The value is 2 or 3 moist, 3 or 4 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 0 to 15 percent. The reaction is slightly acid or neutral.

Bt horizons: The hue is 7.5YR or 5YR; the value is 3 to 5 moist, 4 to 6 dry; and the chroma is 3 or 4 moist or dry. The texture is clay loam, gravelly clay loam, or clay. The reaction is neutral or slightly alkaline.

Btk horizon: The hue is 7.5YR or 5YR; the value is 4 or 5 moist, 5 or 6 dry; and the chroma is 3 or 4 moist or dry. The texture is clay loam, gravelly clay loam, or clay. The reaction is slightly alkaline or moderately alkaline. The calcium carbonate equivalent is 10 to 30 percent.

Skutum Series

The Skutum series consists of deep, well drained, slowly permeable soils on mountain slopes. These soils formed in slope alluvium and colluvium derived from sandstone, conglomerate, and claystone. The slopes are 2 to 60 percent. The elevation ranges from 6,400 to 10,100 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are fine, smectitic Pachic Argicryolls.

A typical pedon of Skutum loam, 2 to 15 percent slopes; about 3 1/2 miles southeast of Aagard Ranch, about 2,100 feet south and 1,200 feet east of the northwest corner of sec. 10, T. 2 N., R. 8 E.

A1—0 to 5 inches; dark brown (7.5YR 3/2) loam, brown (7.5YR 4/2) dry; strong fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and medium roots; few very fine vesicular pores; 5 percent gravel; neutral (pH 6.6); clear smooth boundary.

A2—5 to 17 inches; dark brown (7.5YR 3/2) loam, brown (7.5YR 4/2) dry; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine, common medium and coarse roots; few very fine interstitial pores; 10 percent gravel; neutral (pH 6.8); clear smooth boundary.

Bt1—17 to 32 inches; reddish brown (5YR 4/4) gravelly clay, reddish brown (5YR 5/4) dry; strong medium prismatic structure parting to strong medium angular blocky; extremely hard, extremely firm, very sticky and very plastic; few very fine, fine and medium roots; common very fine and few fine tubular pores; many distinct clay films on faces of peds; 15 percent gravel; organic coatings on some peds; neutral (pH 7.0); abrupt smooth boundary.

Bt2—32 to 44 inches; reddish brown (5YR 4/4) gravelly clay, reddish brown (5YR 5/4) dry; strong medium prismatic structure parting to strong medium subangular blocky; extremely hard, extremely firm, very sticky and very plastic; few very fine and fine roots; many very fine tubular pores; many distinct clay films on faces of peds; 10 percent gravel and 5 percent cobbles; neutral (pH 7.2); clear smooth boundary.

Bt3—44 to 48 inches; brown (7.5YR 4/4) gravelly clay, brown (7.5YR 5/4) dry; moderate medium prismatic structure parting to moderate medium subangular blocky; extremely hard, extremely firm, very sticky and very plastic; few very fine and fine roots; many very fine tubular pores; common distinct clay films on faces of peds; 15 percent gravel and 5 percent cobbles; neutral (pH 7.3); clear smooth boundary.

2C—48 to 56 inches; reddish brown (2.5YR 4/4) gravelly sandy loam, reddish brown (5YR 5/3) dry; massive; very hard, firm, moderately sticky and slightly plastic; few very fine roots; common very fine tubular pores; 25 percent gravel and 5 percent cobbles; neutral (pH 7.3).

Cr—56 inches; weathering sandstone.

The mollic epipedon is 17 to 27 inches thick. The particle-size control section averages 35 to 45 percent clay and 15 to 35 percent rock fragments.

A horizons: The hue is 10YR to 5YR; the value is 2 or 3 moist, 3 to 5 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is less than 15 percent.

Bt horizons: The hue is 5YR or 7.5YR; the value is 3 to 5 moist, 4 to 6 dry; and the chroma is 3 to 5 moist or dry. The texture is gravelly clay loam or gravelly clay.

2C horizon: The hue is 7.5YR to 2.5YR; the value is 3 to 5 moist, 4 to 6 dry; and the chroma is 3 to 5 moist or dry. The texture is gravelly sandy loam or gravelly sandy clay loam. The content of rock fragments is 15 to 35 percent.

Cr horizon: Weathering sedimentary bedrock at a depth of 40 to 60 inches.

Snyderville Series

The Snyderville series consists of very deep, well drained, moderately permeable soils on stream terraces and outwash terraces. These soils formed in alluvium and glacial outwash derived from sandstone, conglomerate, and quartzite rocks. The slopes are 1 to 10 percent. The elevation ranges from 5,300 to 8,400 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are loamy-skeletal, mixed, superactive, frigid Pachic Argixerolls.

A typical pedon of Snyderville gravelly loam, 1 to 5 percent slopes; about 2 1/2 miles southeast of Woodland, about 100 feet east and 2,000 feet north of the southwest corner of sec. 17, T. 3 S., R. 7 E.

A1—0 to 10 inches; very dark brown (10YR 2/2) gravelly loam, dark grayish brown (10YR 4/2) dry; weak fine granular texture; slightly hard, friable, slightly sticky and slightly plastic; many very fine, few fine, and medium roots; many very fine tubular pores; 15 percent gravel and 5 percent cobbles; neutral (pH 6.8); clear smooth boundary.

A2—10 to 16 inches; very dark grayish brown (10YR 3/2) gravelly loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many fine tubular pores; 15 percent gravel and 5 percent cobbles; neutral (pH 6.8); clear smooth boundary.

Bt—16 to 28 inches; dark brown (7.5YR 3/3) very gravelly sandy clay loam, brown (7.5YR 5/3) dry;

moderately fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine tubular pores; many faint clay films on faces of peds; 30 percent gravel and 10 percent cobbles; neutral (pH 7.0); clear smooth boundary.

2C—28 to 35 inches; brown (7.5YR 4/3) very cobbly loamy sand, light brown (7.5YR 6/3) dry; weak, fine subangular blocky structure; soft, very friable, non-sticky and non-plastic; common very fine and few fine roots; many very fine irregular pores; 35 percent gravel, 15 percent cobbles, and 5 percent stones; neutral (pH 7.2); clear wavy boundary.

3C—35 to 60 inches; brown (7.5YR 4/3) extremely cobbly sand, brown (7.5YR 6/3) dry; single grain; loose; few very fine roots; many very fine intersticial pores; 45 percent gravel, 20 percent cobbles, and 5 percent stones; neutral (pH 7.2).

The mollic epipedon is 20 to 36 inches thick. The particle-size control section averages 22 to 27 percent clay and 35 to 60 percent rock fragments.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 4 or 5 dry; and the chroma is 2 or 3 moist or dry. The content of rock fragments is 15 to 35 percent. The texture is gravelly loam or cobbly loam.

Bt horizon: The hue is 10YR or 7.5YR; the value is 3 or 4 moist, 5 or 6 dry; and the chroma is 3 or 4 moist or dry. The texture is very gravelly sandy clay loam or very cobbly loam.

C horizons: The hue is 10YR or 7.5YR; the value is 4 or 5 moist, 6 or 7 dry; and the chroma is 3 or 4 moist or dry. The texture is very cobbly loamy sand, very gravelly loamy sand, extremely cobbly sand, or extremely gravelly sand. The content of rock fragments is 35 to 75 percent.

Starley Family

The Starley family consists of shallow and well drained, moderately permeable soils on mountain slopes. These soils formed in colluvium and residuum derived from mixed sedimentary rocks, mainly limestone, sandstone, and conglomerate. The slopes are 5 to 70 percent. The elevation ranges from 6,000 to 11,200 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are loamy-skeletal, mixed, superactive Lithic Haplocryolls.

A reference profile of Starley family very cobbly loam in an area of Rock outcrop-Starley family complex, 30 to 70 percent slopes; about 1/4 mile northwest of Alta Ski Resort, 200 feet west of the southeast corner of section 31, T. 2 S., R. 3 E.

A1—0 to 6 inches; very dark grayish brown (10YR 3/2) very cobbly loam, brown (10YR 4/3) dry; moderately fine and very fine granular structure; soft, very friable, non-sticky and non-plastic; many very fine and few medium roots; 25 percent angular cobbles and 30 percent angular gravel; moderately alkaline (pH 7.9); clear smooth boundary.

A2—6 to 15 inches; dark brown (10YR 3/3) extremely cobbly loam, brown (10YR 5/3) dry; weak medium subangular blocky structure; slightly hard, very friable, non-sticky and non-plastic; many very fine and fine and few medium roots; 30 percent angular cobbles and 30 percent angular gravel; moderately alkaline (pH 7.9); clear irregular boundary.

Bk—15 to 19 inches; dark brown (10YR 3/3) extremely cobbly loam, yellowish brown (10YR 5/4) dry; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and non-plastic; many very fine and fine roots; 35 percent angular cobbles and 35 percent angular gravel; slightly effervescent, lime is disseminated; moderately alkaline (pH 8.0); abrupt irregular boundary.

R—19 inches: Fractured limestone.

The mollic epipedon is 10 to 20 inches thick. The particle-size control section averages 18 to 27 percent clay and 35 to 70 percent rock fragments. Bedrock is at a depth of 10 to 20 inches.

A horizons: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 4 or 5 dry; and the chroma is 2 or 3. The reaction ranges from neutral to moderately alkaline.

Bk horizon: The hue is 10YR or 7.5YR; the value is 3 or 4 moist, 5 or 6 dry; and the chroma is 3 or 4. The texture is extremely cobbly loam or gravelly loam. The reaction ranges from neutral to moderately alkaline.

Toddspan Series

The Toddspan series consists of very deep, poorly drained, moderately slowly permeable soils on flood plains and valley floors. These soils formed in alluvium derived from sandstone, quartzite, and shale. The slopes are 0 to 3 percent. The elevation ranges from 6,000 to 6,600 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are loamy-skeletal, mixed, superactive, frigid Fluvaquentic Endoaquolls.

A typical pedon of Toddspan loam, 0 to 3 percent slopes; about 1/2 mile west of Kamas, about 1,300 feet west and 300 feet south of the northeast corner of sec. 20, T. 2 S., R. 6 E.

A1—0 to 4 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure, slightly hard, very friable, non-sticky and non-plastic; many very fine and common fine roots; many very fine and common fine tubular pores; neutral (pH 7.2); clear wavy boundary.

A2—4 to 14 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; common fine faint dark yellowish brown (10YR 4/4) mottles; moderate, medium subangular blocky structure; slightly sticky and slightly plastic; many very fine and common fine roots; many fine and common fine tubular pores; neutral (pH 7.2); gradual wavy boundary.

A3—14 to 19 inches; very dark gray (10YR 3/1) loam, gray (10YR 5/1) dry; many fine distinct yellowish red (5YR 5/6) mottles; moderate, medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine and common fine tubular pores; 10 percent gravel; neutral (pH 7.2); clear wavy boundary.

2Bg1—19 to 24 inches; brown (7.5YR 4/2) very cobbly clay loam, pinkish gray (7.5YR 6/2) dry; many fine prominent yellowish red (5YR 4/6) mottles; moderate fine subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine and few fine roots; many very fine and common fine tubular pores; 30 percent gravel and 20 percent cobbles; slightly alkaline (pH 7.4); clear wavy boundary.

2Bg2—24 to 32 inches; gray (2.5Y 5/1) very cobbly clay loam, light gray (2.5Y 7/1) dry; many medium prominent greenish gray (5GY 4/1) mottles; moderate fine subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular pores; 30 percent gravel and 20 percent cobbles; slightly alkaline (pH 7.4); clear wavy boundary.

2C1—32 to 37 inches; dark grayish brown (10YR 4/2) extremely cobbly sandy clay loam, light brownish gray (10YR 6/2) dry; common coarse prominent gray (N 5/0) mottles; massive; hard, friable, slightly sticky and non-plastic; common very fine roots; common very fine tubular pores; 40 percent gravel and 30 percent cobbles; slightly alkaline (pH 7.4); gradual wavy boundary.

2C2—37 to 44 inches; dark grayish brown (10YR 4/2) extremely gravelly sandy clay loam, light brownish gray (10YR 6/2) dry; massive; hard, friable, slightly sticky and non-plastic; 50 percent fine gravel and 20 percent cobbles; slightly alkaline (pH 7.4); clear wavy boundary.

3C—44 to 60 inches; dark grayish brown (10YR 4/2) extremely gravelly loamy sand, light brownish gray (10YR 6/2) dry; massive; soft, very friable, non-sticky and non-plastic; 50 percent gravel and 20 percent cobbles; slightly alkaline (pH 7.4).

The particle-size control section averages 18 to 35 percent clay and 35 to 60 percent rock fragments. The depth to a high water table is 10 to 20 inches. This soil is subject to rare and occasional flooding for brief periods of time from March through May.

A horizons: The value is 2 or 3 moist, 4 or 5 dry; and the chroma is 1 or 2 moist or dry. The content of rock fragments is 0 to 15 percent.

2Bg horizons: The value is 3 to 5 moist, 5 to 7 dry; and the chroma is 1 to 3 moist or dry. The texture is very cobbly clay loam or very cobbly loam. The content of rock fragments is 35 to 60 percent.

C horizons: The value is 3 to 5 moist, 5 to 7 dry; and the chroma is 1 to 3 moist or dry. The texture is extremely cobbly sandy clay loam, extremely gravelly sandy clay loam, or very gravelly loam over extremely gravelly loamy sand or very cobbly sand. The content of rock fragments is 35 to 75 percent.

Uinta Series

The Uinta series consists of very deep, well drained, moderately slowly permeable soils on till plains and mountain slopes. These soils formed in slope alluvium, colluvium, and glacial till derived from quartzite, sandstone, and shale. The slopes are 8 to 60 percent. The elevation ranges from 7,000 to 10,600 feet. The average annual precipitation is 22 to 35 inches, and the mean annual air temperature is 35 to 40 degrees F.

These soils are fine-loamy, mixed superactive Eutric Glossocryalfs.

A typical pedon of Uinta cobbly sandy loam in an area of Uinta-Duchesne complex, 8 to 30 percent slopes; about 1 1/2 miles southwest of Mill Creek Guard Station, about 1,000 feet east and 800 feet north of the southwest corner of sec. 18, T. 2 N., R. 11 E.

The surface has a 2-inch thick layer of undecomposed leaves, twigs, and needles.

E—0 to 13 inches; brown (7.5YR 4/2) cobbly sandy loam, very pale brown (10YR 7/3) dry; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine, fine and medium roots; many very fine

and fine tubular pores; 10 percent gravel, 15 percent cobbles, and 5 percent stones; slightly acid (pH 6.2); clear wavy boundary.

E/Bt—13 to 23 inches; the E part (75 percent of the horizon) is brown (7.5YR 5/2) gravelly sandy loam, pink (5YR 7/3) dry; weak medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; the Bt part (25 percent of the horizon) is reddish brown (5YR 4/4) gravelly sandy clay loam, reddish brown (5YR 5/4) dry; moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few faint clay films on faces of peds. Both the E and Bt horizons have few very fine, fine and medium roots; many very fine and fine tubular pores; 15 percent gravel; slightly acid (pH 6.2); abrupt wavy boundary.

Bt1—23 to 35 inches; yellowish red (5YR 4/6) gravelly sandy clay loam, yellowish red (5YR 5/6) dry; strong medium and coarse prismatic structure parting to strong medium and coarse subangular blocky; extremely hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; common very fine and fine tubular pores; few faint clay films on faces of peds; 10 percent gravel and 5 percent cobbles; slightly acid (pH 6.2); abrupt smooth boundary.

Bt2—35 to 50 inches; yellowish red (5YR 4/6) gravelly clay loam, light reddish brown (5YR 6/4) dry; moderate coarse subangular blocky structure; extremely hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots; common very fine tubular pores; few faint clay films on faces of peds; 10 percent gravel and 5 percent cobbles; slightly acid (pH 6.2); abrupt smooth boundary.

Bt3—50 to 60 inches; yellowish red (5YR 4/6) gravelly clay loam, yellowish red (5YR 5/6) dry; moderate coarse subangular blocky structure; extremely hard, very firm, moderately sticky and moderately plastic; few very fine roots; common very fine and fine tubular pores; common faint clay films on faces of peds; 15 percent gravel; slightly acid (pH 6.2).

The particle-size control section averages 27 to 35 percent clay and 15 to 35 percent rock fragments.

E horizons: The value is 4 to 7 moist, 5 to 8 dry; and the chroma is 2 to 4 moist or dry. The content of rock fragments is 20 to 30 percent. Tongues of the E material extend into the B material to form the E/B horizon.

Bt horizons: The value is 4 or 5 moist, 5 or 6 dry; and the chroma is 3 to 6 moist or dry. The texture is gravelly sandy clay loam or gravelly clay loam.

Wanship Series

The Wanship series consists of very deep, somewhat poorly drained, moderately over rapidly permeable soils on stream terraces. These soils formed in alluvium derived from sandstone and conglomerate. The slopes are 0 to 3 percent. The elevation ranges from 5,200 to 8,000 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are fine-loamy over sandy or sandy-skeletal, mixed superactive, frigid Aquic Cumulic Haploxerolls.

A typical pedon of Wanship loam in an area of Wanship-Kovich complex, 0 to 3 percent slopes; about $^{3}/_{4}$ mile west of Hoytsville, about 1,000 feet north and 500 feet east of the southwest corner of sec. 28, T. 2 N., R. 5 E.

A1—0 to 8 inches; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine tubular pores; 5 percent gravel; slightly alkaline (pH 7.6); clear smooth boundary.

A2—8 to 14 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 5 percent gravel; slightly alkaline (pH 7.4); gradual wavy boundary.

A3—14 to 24 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine tubular pores; 10 percent gravel; neutral (pH 7.2); clear wavy boundary.

2C1—24 to 26 inches; brown (10YR 4/3) extremely cobbly loamy sand, pale brown (10YR 6/3) dry; common fine distinct, yellowish red (5YR 5/6) and few fine faint gray (10YR 5/1) mottles; massive; soft, friable, non sticky and non plastic; common very fine roots; many very fine intersticial pores; 40 percent gravel and 20 percent cobbles; neutral (pH 7.2); clear wavy boundary.

2C2—26 to 60 inches; brown (10YR 4/3) extremely cobbly loamy sand, pale brown (10YR 6/3) dry; single grain; loose; few very fine roots; many very fine to coarse intersticial pores; 50 percent gravel and 25 percent cobbles; slightly alkaline (pH 7.4).

The mollic epipedon is 20 to 40 inches thick. The upper part of the particle-size control section averages

18 to 27 percent clay and less than 15 percent rock fragments; the lower part averages less than 5 percent clay and 35 to 80 percent rock fragments. The depth to a high water table is 20 to 30 inches from March through May.

A horizons: The value is 2 or 3 moist, 4 or 5 dry. The reaction ranges from neutral to moderately alkaline.

2C horizons: The value is 3 or 4 moist, 5 or 6 dry; and the chroma is 2 or 3 moist or dry. The texture is extremely cobbly loamy sand or very gravelly sand. The reaction ranges from neutral to moderately alkaline.

Yeates Hollow Series

The Yeates Hollow series consists of deep, well drained, slowly permeable soils on mountain slopes. These soils formed in colluvium and slope alluvium derived from conglomerate, sandstone, and quartzite. The slopes are 3 to 60 percent. The elevation ranges from 5,600 to 8,400 feet. The average annual precipitation is 16 to 22 inches, and the mean annual air temperature is 40 to 45 degrees F.

These soils are clayey-skeletal, smectitic, frigid Typic Argixerolls.

A typical pedon of Yeates Hollow very stony loam in an area of Yeates Hollow-Henefer complex, 15 to 30 percent slopes; about 3 3/4 miles southwest of Wanship, about 1,400 feet west and 700 feet north of the southeast corner of sec. 22, T. 1 N., R. 4 E.

A—0 to 12 inches; very dark grayish brown (10YR 3/2) very stony loam, brown (10YR 4/3) dry; moderate medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine and fine vesicular pores; 15 percent gravel, 20 percent cobbles, and 20 percent stones; neutral (pH 6.8); clear wavy boundary.

Bt1—12 to 25 inches; brown (7.5YR 4/4) very cobbly clay, brown (7.5YR 5/4) dry; moderate medium and coarse subangular blocky structure; extremely hard, extremely firm, very sticky and very plastic; few very fine, fine and medium roots; common very fine tubular pores; common faint clay films on faces of peds; 20 percent gravel and 20 percent cobbles; slightly acid (pH 6.2); abrupt irregular boundary.

Bt2—25 to 37 inches; brown (10YR 5/3) very cobbly clay, pale brown (10YR 6/3) dry; strong medium and coarse angular blocky structure; extremely hard, extremely firm, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; common faint and distinct clay films on faces of peds; 20 percent gravel and 20 percent cobbles; moderately acid (pH 5.8); clear irregular boundary.

Bt3—37 to 43 inches; yellowish red (5YR 4/6) extremely cobbly clay loam, reddish yellow (7.5YR 6/6) dry; strong fine subangular blocky structure; extremely hard, extremely firm, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; common faint and distinct clay films on faces of peds; 10 percent gravel and 60 percent cobbles; moderately acid (pH 5.6); abrupt irregular boundary.

R—43 inches; fractured sandstone.

Bedrock is at a depth of 40 to 60 inches. The mollic epipedon is 10 to 20 inches thick. The particle-size control section averages 35 to 55 percent clay and 35 to 85 percent rock fragments.

A horizon: The hue is 10YR or 7.5YR; the value is 2 or 3 moist, 4 or 5 dry; and the chroma is 2 or 3 moist or dry. The reaction ranges from moderately acid to neutral.

Bt horizons: The hue is 5YR to 10YR;, the value is 2 to 6 moist, 4 to 6 dry; and the chroma is 3 to 6 moist or dry. The texture is very cobbly clay, extremely cobbly clay loam, very gravelly clay loam, or very gravelly clay. The reaction ranges from moderately acid to neutral.

Formation of the Soils

This section describes how the five factors of soil formation have affected the soils in the survey area. These factors are: (1) the parent material and its physical, chemical and mineral composition; (2) the climate under which the parent material accumulated and under which it has existed since accumulation; (3) relief or topography of the land; (4) the plant and animal life living in or on the soil; and (5) the length of time these forces have acted on the parent material. Each of these five factors will be discussed in the paragraphs that follow.

Parent Material

Parent material is the unconsolidated weathered rock material from which soils form. The grain size, porosity, and mineral and chemical composition of this material greatly influence soil formation.

In the eastern part of the survey area in the Uinta Mountains, the parent material consists of reddish to grayish quartzite and quartz sandstone with small areas of shale and siltstone. Examples of soils formed in this material are Duchesne, Uinta, and Skutum. The Sessions soil is on glacial till that occurs within this formation.

Parent material in the central to northern part of the survey area is reddish to grayish sandstone, conglomerate, siltstone, and claystone. Examples of soils formed in this material are Richsum, Crandall, Horrocks, Fewkes, and Heiners.

Parent material in the south central part of the survey area in the West Hills, is light gray to gray igneous rock that is dominantly andesite. Examples of soils formed in this material are Ayoub, Dunford, and Melling.

Parent material in the southwestern part of the survey area is dominantly grayish limestone with layers of siltstone, sandstone, and quartzite, and an area of granite around the Lone Peak area. Examples of soils formed in this material are Agassiz, Dromedary, Parkcity, and Starley.

Climate

Climate features that significantly affect soil formation are rainfall and temperature. The amount of precipitation and variations in temperature influence the content of organic matter in the soil, the kind and abundance of native vegetation, the physical movement of substances in suspension or solution, and the rate of chemical processes.

Generally, as rainfall increases, the content of organic matter increases, soil reaction decreases, depth to carbonates increases, and the translocation of clay and minerals increase. Warmer temperatures tend to cause the rates of chemical and biological activity to increase. Alternate periods of freezing and thawing speed the mechanical weathering process by breaking down particles into smaller sizes.

The climate in the survey area ranges from dry sub-humid to humid.

The dry sub-humid climate is in the dryer areas between Coalville and Evanston, Wyoming. The average annual precipitation is 14 to 16 inches; the mean annual air temperature is 40 to 45 degrees F.; the frost-free period is 70 to 100 days; and the temperature regime is frigid. These soils typically are weakly developed with alkaline reaction and are calcareous. Soils in this area include Cutoff, Dastrup, Heiners, and Richsum. The warmer juniper-covered Jana soil has a mean annual air temperature of 45 to 48 degrees F.; the frost-free period is 100 to 120 days; and the temperature regime is mesic.

The moist sub-humid climate is in the lower mountain areas. The average annual precipitation is 16 to 22 inches; the mean annual air temperature is 40 to 45 degrees F.; the frost-free period is 60 to 90 days; and the temperature regime is frigid. These soils typically are well developed with neutral reaction, but some areas are alkaline and calcareous in the lower layers. Soils in this area include Ant Flat, Ayoub, Fewkes, Manila, and Yeates Hollow.

The humid climate is in the higher mountain areas. The average annual precipitation in 22 to 35 inches; the mean annual air temperature is 35 to 40 degrees F.; the frost-free period is 20 to 60 days; and the temperature regime is cryic. These soils typically are well developed with neutral to moderately acid reaction. Soils in this area include Cluff, Crandall, Duchesne, Lucky Star, Parkcity, Sessions, and Skutum.

Relief

Relief, or landform, affects soil formation principally through its influence on runoff, drainage and microclimate. The steepness and the aspects of slopes are important elements of soil formation.

The landscape of the survey area consists of a few relatively broad valleys surrounded by mountains and narrow valleys. Aspect on steeper slopes is an important element in soil development. Southern aspects have more rapid snowmelt, runoff, and evaporation. This results in less water entering the soil to sustain plants. On northern aspects, temperatures are cooler, snow accumulates in greater quantities and melts at a slower rate, and more water percolates deeply into the soil to sustain plants.

The dominant landforms or topographic features in the survey area are flood plains, stream terraces, fan remnants, mountain slopes, kettles, and till plains. Hovarka, Kovich, and Toddspan soils are on flood plains. Echocreek, Millcreek, Snyderville, and Wanship soils are on stream terraces. Ant Flat, Dastrup, and Manila soils are on fan remnants. Ayoub, Cluff, Horrocks, and Yeates Hollow soils are on mountain slopes. Haydenfork soil is in glacial kettles. Sessions and Uinta soils are on till plains.

Plants and Animals

The vegetation under which a soil forms influences soil properties, such as color, structure, reaction and content and distribution of organic matter. Vegetation extracts water from the soil, recycles nutrients, and adds organic matter to the soil. Gases derived from root respiration combine with water to form acids that influence the weathering of minerals. Because of a lower content of organic matter, soils that formed under coniferous vegetation generally are lighter in color than those that formed under grasses and deciduous plants.

Bacteria, fungi, and many other microorganisms decompose organic matter and release nutrients to growing plants. Earthworms, insects, and small burrowing animals mix the soil, incorporate organic matter into the soil, and create small channels that influence soil aeration and the percolation of water.

The moist and warmer soils of the meadows and irrigated farmland areas tend to have the most biologic activity. This activity improves soil tilth and the breakdown and availability of soil nutrients. An example of a meadow soil is Wanship. Examples of irrigated farmland soils are Dastrup and Ant Flat.

Time

Time is necessary for the formation of soils. The development of distinct horizons in the soil profile requires a certain amount of time. The soils in the survey area range from young soils that exhibit little or no horizon development to older soils that have well-developed profiles.

The youngest soils in the survey area are on flood plains, stream terraces, and valley floors. Echocreek, Wanship, Kovich, and Toddspan are examples. These soils have dark surfaces, but otherwise have weakly developed horizons. Young, weakly developed, calcareous soils on mountain slopes in the survey area are Jana, Heiners, Cutoff, and Richsum soils. Active erosion on these soils limits soil development.

The oldest and most well developed soils in the survey area are on stable fan remnants and mountain slopes. Manila, Sessions, Skutum, and Yeates Hollow are examples. These soils have thick, dark surface layers, well developed subsoils, and are leached of calcium carbonates.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

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.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

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 horizon characterized by an accumulation of illuvial clay.

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, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

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.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. The steep and very steep broken land at the border of an upland summit that is dissected by ravines.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

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.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. 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.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Cirque. A semicircular, concave, bowllike area that has steep faces primarily resulting from glacial ice and snow abrasion.

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 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.

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.

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, rounded or partially rounded 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.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

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.

Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

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.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

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.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

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.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

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.

Draw. A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural 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.

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.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

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.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

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.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan remnant. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

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.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry 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*.

Fine textured soil. Sandy clay, silty clay, or clay.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

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.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

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 drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Glacial outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur as kames, eskers, deltas, and outwash plains.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are interbedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

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.

Ground water. Water filling all the unblocked pores of the material below the water table.

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.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

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.

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.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

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.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

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.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

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. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

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.

Kame. An irregular, short ridge or hill of stratified glacial drift.

Kettle . A steep-sided, bowl-shaped depression commonly without surface drainage (closed depression) in drift deposits, often containing a lake or swamp, and formed by the melting of a large, detached block of stagnant ice that had been wholly or partly buried in the drift. Kettles range in depth from 1 to tens of meters, and with diameters up to 13 km.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. 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.

Landform. Any physical, recognizable form or feature on the earth's surface, having a characteristic shape, and produced by natural causes. Landforms provide an empirical description of similar portions of the earth's surface.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

LEP (Linear Extensibility Percent). The linear expression of the volume difference of natural soil fabric at 1/3 bar or 1/10 bar water content and oven dryness. The volume change is reported as percent change for the whole soil. (See Linear Extensibility.)

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-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

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.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mesa. A broad, nearly flat topped and commonly isolated upland mass characterized by summit widths that are more than the heights of bounding erosional scarps.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

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.

MLRA (Major Land Resource Area). An aggregation of geographically associated land resource units that identifies nearly homogeneous areas of land use, elevation, topography, climate, water resources, potential natural vegetation, and soils.

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 and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine. An accumulation of earth, stones, and other debris deposited by a glacier. Some types are terminal, lateral, medial, and ground.

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.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

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.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

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.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

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. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

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.

Percolation. The movement of water through 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:

Extremely slow	0.0 to 0.01 inch
Very slow	0.01 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.)

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 native plant community. (See Climax plant community.)

Potential native vegetation. 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.

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.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

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

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

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.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

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.

Salinity. A measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

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.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

SAR (Sodium Adsorption Ratio). (See Sodicity.)

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.

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

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. (See Linear Extensibility.)

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.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

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.

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.

In this survey, classes for simple slopes are as follows:

Nearly level	0 to 2 percent
Gently sloping	2 to 5 percent
Moderately sloping	5 to 15 percent
Moderately steep	15 to 30 percent
Steep	30 to 60 percent
Very steep	61 percent and higher

Sloughed till. Water-saturated till that has flowed slowly downhill from its original place of deposit by glacial ice. It may rest on other till, on glacial outwash, or on a glaciolacustrine deposit.

Sodicity. The degree to which a soil is affected by exchangeable sodium. It is expressed as a sodium absorption ratio (SAR), which is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

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.

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.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

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).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

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."

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Fragments of rock and other soil material

accumulated by gravity at the foot of cliffs or steep slopes.

Terminal moraine. A belt of thick glacial drift that generally marks the termination of important glacial advances.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

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."

Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.

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.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Valley floor. A general term for the nearly level to gently sloping, lowest surface of a valley. Landforms include axial stream channels, the flood plain, and, in some areas, low terrace surfaces.

Water table. The upper surface of ground water or that level in the ground where the water is at atmospheric pressure.

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.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Tables

Table 1.--Temperature and precipitation

(Recorded in the period 1961-1990 at Coalville, Echo Dam, Silver Lake Brighton, and Wanship Dam, Utah)

Month	Temperature (Degrees F.)						Precipitation (Inches)				
	avg. daily max.	avg. daily min.	avg.	2 yrs.in 10 will have max. temp. >than	2 yrs.in 10 will have min. temp. <than	avg. # of grow. deg. days*	avg.	2 yrs.in 10 will have less than	2 yrs.in 10 will have more than	avg. # of days w/.1 or more	avg. total snow-fall
	°F	°F	°F	°F	°F	Units	In.	In.	In.		In.
Coalville:											
January	36.8	10.7	23.8	57	-23	2	1.07	0.48	1.65	3	12.3
February	41.9	14.1	28.0	62	-17	7	1.10	0.54	1.58	3	13.1
March	49.8	21.6	35.7	70	-5	37	1.54	0.89	2.12	5	11.1
April	59.8	28.1	43.9	80	13	149	2.00	0.93	2.92	5	4.9
May	69.4	34.4	51.9	86	20	366	1.79	0.78	2.66	5	2.0
June	78.6	40.5	59.5	94	29	542	1.15	0.38	1.78	3	0.0
July	86.1	46.6	66.3	95	35	759	0.95	0.44	1.45	2	0.0
August	84.4	44.6	64.5	94	31	750	1.05	0.24	1.76	2	0.0
September	75.6	36.6	56.1	89	20	470	1.41	0.43	2.29	3	0.1
October	65.6	28.0	46.8	82	12	224	1.48	0.59	2.34	3	2.1
November	50.1	21.0	35.5	71	-4	40	1.57	0.69	2.31	5	9.8
December	38.3	12.2	25.2	60	-19	5	1.21	0.27	1.95	4	13.9
Yearly :											
Average	61.4	28.2	44.8	---	---	---	----	----	----	---	---
Extreme	98	-33	---	96	-26	---	----	----	----	---	---
Total	---	---	---	---	---	3351	16.32	11.98	18.67	43	69.3
Echo Dam:											
January	34.4	10.2	22.3	54	-24	1	0.91	0.45	1.37	3	12.5
February	39.7	13.3	26.5	60	-20	5	0.96	0.46	1.39	3	10.6
March	48.1	21.9	35.0	68	-6	36	1.36	0.75	1.89	4	10.7
April	57.8	29.5	43.7	77	13	155	1.68	0.73	2.50	5	5.5
May	68.2	36.3	52.3	84	20	385	1.66	0.65	2.50	5	1.9
June	78.8	42.7	60.7	94	29	622	1.12	0.35	1.82	3	0.1
July	88.1	49.3	68.7	97	37	889	0.81	0.21	1.29	2	0.0
August	86.2	47.3	66.7	96	31	829	0.86	0.19	1.44	2	0.0
September	76.4	38.3	57.3	91	20	521	1.38	0.38	2.26	3	0.2
October	64.6	29.4	47.0	82	12	243	1.52	0.46	2.39	4	2.3
November	47.4	21.6	34.5	69	-2	37	1.47	0.64	2.17	4	10.6
December	36.0	12.8	24.4	58	-18	3	1.22	0.35	1.92	3	12.8
Yearly :											
Average	60.5	29.4	44.9	---	---	---	----	----	----	---	---
Extreme	99	-34	---	97	-28	---	----	----	----	---	---
Total	---	---	---	---	---	3726	14.95	11.94	17.80	41	67.1

See footnote at end of table.

Table 1.--Temperature and precipitation--continued

Month	Temperature (Degrees F.)						Precipitation (Inches)				
	avg. daily max.	avg. daily min.	avg	2 yrs.in 10 will have max. temp. >than	2 yrs.in 10 will have min. temp. <than	avg. # of grow. deg. days*	avg.	2 yrs.in 10 will have less than	2 yrs.in 10 will have more than	avg. # of days w/.1 or more	avg. total snow-fall
	°F	°F	°F	°F	°F	Units	In.	In.	In.		In.
Silver Lake Brighton:											
January	31.1	8.0	19.5	51	-21	0	4.92	2.22	7.24	9	61.3
February	33.4	8.9	21.2	53	-18	0	4.76	2.92	6.42	8	61.0
March	37.0	12.9	25.0	54	-13	1	5.43	3.71	7.01	11	70.4
April	44.3	20.0	32.2	62	-3	20	4.43	2.34	6.56	9	48.5
May	53.1	28.3	40.7	69	7	105	2.97	0.96	4.61	6	20.8
June	63.7	36.4	50.1	79	22	307	1.84	0.50	3.17	4	2.3
July	72.1	44.3	58.2	82	30	563	1.69	0.46	2.68	4	0.0
August	70.1	42.6	56.3	81	27	505	1.95	0.76	3.07	4	0.1
September	61.5	35.3	48.4	76	15	272	2.58	0.98	4.09	5	3.7
October	50.8	26.3	38.6	67	4	81	3.51	1.50	5.44	5	23.6
November	37.9	16.1	27.0	57	-7	5	4.87	2.70	6.78	9	55.5
December	31.2	8.7	19.9	52	-19	0	4.90	1.74	7.52	9	60.5
Yearly :											
Average	48.9	24.0	36.4	---	---	---	----	----	----	---	---
Extreme	87	-34	---	83	-25	---	----	----	----	---	---
Total	---	---	---	---	---	1858	43.86	31.76	52.41	83	407.7
Wanship Dam:											
January	35.1	10.6	22.9	53	-22	1	1.17	0.61	1.74	4	13.9
February	39.6	13.8	26.7	58	-18	5	1.12	0.58	1.58	3	12.2
March	46.6	20.9	33.8	66	-7	32	1.52	0.89	2.08	5	9.6
April	57.1	27.8	42.5	76	10	134	1.80	0.85	2.62	5	4.0
May	67.4	34.7	51.0	83	18	349	1.68	0.67	2.54	5	0.4
June	77.4	40.9	59.1	92	26	574	1.14	0.39	1.82	3	0.0
July	85.5	46.9	66.2	95	33	811	1.13	0.46	1.69	3	0.0
August	84.4	45.1	64.7	94	28	762	1.08	0.28	1.72	3	0.0
September	75.2	36.8	56.0	89	18	483	1.50	0.62	2.33	3	0.1
October	63.5	28.1	45.8	80	10	212	1.53	0.51	2.37	4	1.2
November	47.1	21.1	34.1	67	-5	35	1.61	0.73	2.38	5	8.3
December	36.9	12.4	24.7	57	-17	4	1.34	0.33	2.14	4	11.2
Yearly :											
Average	59.6	28.3	44.0	---	---	---	----	----	----	---	---
Extreme	98	-37	---	96	-27	---	----	----	----	---	---
Total	---	---	---	---	---	3403	16.62	13.41	19.56	47	60.9

Average # of days per year with at least 1 inch of snow on the ground: 43

*A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minumum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area. (Threshold: 40.0 deg. F.)

Table 2.--Freeze dates in spring and fall

(Recorded in the period 1961-1990 at Coalville, Echo Dam, Silver Lake Brighton, and Wanship Dam, Utah)

Probability	Temperature		
	24°F or lower	28°F or lower	32°F or lower
Coalville:			
Last freezing temperature in spring:			
1 year in 10 later than--	May 20	June 4	July 4
2 years in 10 later than--	May 15	May 30	June 27
5 years in 10 later than--	May 6	May 19	June 13
First freezing temperature in fall:			
1 yr. in 10 earlier than--	September 10	September 2	August 20
2 yrs. in 10 earlier than--	September 16	September 7	August 26
5 yrs. in 10 earlier than--	September 28	September 17	September 6
Echo Dam:			
Last freezing temperature in spring:			
1 year in 10 later than--	May 19	June 9	June 27
2 years in 10 later than--	May 13	June 1	June 20
5 years in 10 later than--	April 30	May 16	June 9
First freezing temperature in fall:			
1 yr. in 10 earlier than--	September 9	September 3	August 24
2 yrs. in 10 earlier than--	September 16	September 9	August 30
5 yrs. in 10 earlier than--	September 29	September 21	September 10

Table 2.--Freeze dates in spring and fall--continued

Probability	Temperature		
	24°F or lower	28°F or lower	32°F or lower
Silver Lake Brighton:			
Last freezing temperature in spring:			
1 year in 10 later than--	June 21	July 4	July 15
2 years in 10 later than--	June 13	June 27	July 9
5 years in 10 later than--	May 30	June 15	June 28
First freezing temperature in fall:			
1 yr. in 10 earlier than--	September 7	August 20	August 10
2 yrs. in 10 earlier than--	September 12	August 26	August 16
5 yrs. in 10 earlier than--	September 23	September 7	August 28
Wanship Dam:			
Last freezing temperature in spring:			
1 year in 10 later than--	May 30	June 21	July 8
2 years in 10 later than--	May 24	June 14	July 1
5 years in 10 later than--	May 13	June 2	June 18
First freezing temperature in fall:			
1 yr. in 10 earlier than--	September 7	August 26	August 15
2 yrs. in 10 earlier than--	September 12	September 1	August 22
5 yrs. in 10 earlier than--	September 22	September 12	September 3

Table 3.--Growing season

(Recorded in the period 1961-1990 at Coalville, Echo Dam, Silver Lake Brighton, and Wanship Dam, Utah)

Probability	Daily Minimum Temperature		
	# days > 24°F	# days > 28°F	# days > 32°F
Coalville:			
9 years in 10	118	100	57
8 years in 10	127	108	66
5 years in 10	143	121	85
2 years in 10	159	135	103
1 year in 10	167	142	113
Echo Dam:			
9 years in 10	121	95	64
8 years in 10	131	106	74
5 years in 10	151	127	92
2 years in 10	170	147	111
1 year in 10	180	158	120
Silver Lake Brighton:			
9 years in 10	82	52	35
8 years in 10	94	62	44
5 years in 10	116	82	61
2 years in 10	138	101	77
1 year in 10	149	112	86
Wanship Dam:			
9 years in 10	110	78	46
8 years in 10	117	86	56
5 years in 10	132	102	75
2 years in 10	146	117	94
1 year in 10	154	125	104

Table 4.--Acreage and proportionate extent of the soils

Map symbol	Soil name	Acres	Percent
101	Agassiz-Rock outcrop complex, 30 to 70 percent slopes	6,240	0.9
102	Ant Flat loam, 2 to 8 percent slopes	3,419	0.5
103	Ant Flat loam, 8 to 15 percent slopes	2,996	0.4
104	Ant Flat loam, 15 to 30 percent slopes	10,079	1.4
105	Ant Flat-Henefer-Skutum complex, 8 to 30 percent slopes	22,890	3.2
106	Ayoub cobbly loam, 2 to 15 percent slopes	7,318	1.0
107	Ayoub-Dunford-Melling complex, 15 to 30 percent slopes	10,605	1.5
108	Ayoub-Dunford-Melling complex, 30 to 60 percent slopes	7,670	1.1
109	Cluff loam, 8 to 30 percent slopes	646	*
110	Cluff loam, 30 to 60 percent slopes	2,359	0.3
111	Crandall gravelly loam, 2 to 8 percent slopes	3,006	0.4
112	Crandall-Lucky Star gravelly loams, 5 to 30 percent slopes	4,965	0.7
113	Crandall-Lucky Star-Starley Family complex, 30 to 70 percent slopes	21,187	2.9
114	Crandall-Starley Family-Rock outcrop complex, 5 to 30 percent slopes	4,073	0.6
115	Dastrup loam, 2 to 5 percent slopes	1,478	0.2
116	Dastrup loam, 5 to 15 percent slopes	3,359	0.5
117	Dastrup loam, 15 to 30 percent slopes	3,039	0.4
118	Dromedary-Rock outcrop complex, 30 to 70 percent slopes	13,112	1.8
119	Duchesne very cobbly sandy loam, 2 to 15 percent slopes	6,662	0.9
120	Duchesne very cobbly sandy loam, 15 to 30 percent slopes	12,917	1.8
121	Duchesne very cobbly sandy loam, 30 to 60 percent slopes	4,882	0.7
122	Duchesne-Haydenfork complex, 0 to 40 percent slopes	10,005	1.4
123	Dumps, mines	494	*
124	Dunford-Ayoub-Melling complex, 15 to 30 percent slopes	1,505	0.2
125	Dunford-Ayoub-Melling complex, 30 to 60 percent slopes	7,936	1.1
126	Echocreek loam, 2 to 10 percent slopes	6,053	0.8
127	Echocreek-Kovich loams, 0 to 10 percent slopes	12,721	1.8
128	Fewkes gravelly loam, 2 to 8 percent slopes	2,433	0.3
129	Fewkes gravelly loam, 8 to 15 percent slopes	6,448	0.9
130	Fewkes gravelly loam, 15 to 30 percent slopes	8,991	1.2
131	Fewkes-Heiners gravelly loams, 30 to 70 percent slopes	2,538	0.3
132	Fewkes-Hades complex, 15 to 30 percent slopes	5,881	0.8
133	Fewkes-Hades complex, 30 to 60 percent slopes	32,589	4.5
134	Fewkes-Yeates Hollow complex, 5 to 15 percent slopes	4,004	0.6
135	Fewkes-Yeates Hollow complex, 15 to 30 percent slopes	6,394	0.9
136	Hades-Agassiz-Rock outcrop complex, 30 to 70 percent slopes	11,611	1.6
137	Hades-Fewkes complex, 15 to 30 percent slopes	2,303	0.3
138	Hades-Fewkes complex, 30 to 60 percent slopes	17,497	2.4
139	Harter gravelly loam, 2 to 15 percent slopes	2,522	0.3
140	Heiners-Fewkes gravelly loams, 15 to 30 percent slopes	7,025	1.0
141	Heiners-Fewkes-Hades complex, 30 to 70 percent slopes	46,496	6.4
142	Henefer-Harter gravelly loams, 15 to 30 percent slopes	5,177	0.7
143	Horrocks-Agassiz very cobbly loams, 30 to 70 percent slopes	16,114	2.2
144	Horrocks-Cutoff complex, 15 to 30 percent slopes	3,546	0.5
145	Horrocks-Cutoff complex, 30 to 60 percent slopes	10,593	1.5
146	Horrocks-Hades complex, 30 to 60 percent slopes	5,933	0.8
147	Hovarka-Millcreek loams, 0 to 4 percent slopes	4,152	0.6
148	Jana-Richsum-Rock outcrop complex, 30 to 70 percent slopes	18,542	2.6
149	Kovich-Toddspan loams, 0 to 3 percent slopes	6,489	0.9
150	Lucky Star gravelly loam, 15 to 30 percent slopes	4,804	0.7
151	Lucky Star gravelly loam, 30 to 60 percent slopes	19,264	2.7
152	Lucky Star-Dromedary gravelly loams, 30 to 70 percent slopes	5,862	0.8
153	Lucky Star-Fewkes gravelly loams, 30 to 60 percent slopes	10,475	1.4
154	Manila-Ant Flat loams, 2 to 8 percent slopes	3,995	0.6
155	Manila-Ant Flat loams, 8 to 15 percent slopes	1,789	0.2
156	Manila-Harter complex, 2 to 8 percent slopes	4,022	0.6
157	Manila-Henefer complex, 8 to 15 percent slopes	1,909	0.3
158	Melling-Ayoub-Rock outcrop complex, 10 to 30 percent slopes	1,978	0.3
159	Parkcity-Dromedary gravelly loams, 15 to 30 percent slopes	7,110	1.0
160	Parkcity-Dromedary gravelly loams, 30 to 70 percent slopes	15,825	2.2
161	Pits, gravel	512	*
162	Richsum-Heiners complex, 4 to 15 percent slopes	11,798	1.6

See footnote at end of table.

Table 4.--Acreage and proportionate extent of the soils--continued

Map symbol	Soil name	Acres	Percent
163	Richsum-Heiners complex, 15 to 30 percent slopes	17,233	2.4
164	Rock outcrop	15,808	2.2
165	Rock outcrop-Starley Family complex, 30 to 70 percent slopes	18,530	2.6
166	Sessions-Haydenfork complex, 0 to 15 percent slopes	5,672	0.8
167	Sessions-Skutum loams, 2 to 15 percent slopes	4,345	0.6
168	Sessions-Uinta complex, 2 to 30 percent slopes	16,121	2.2
169	Skutum loam, 2 to 15 percent slopes	7,810	1.1
170	Skutum loam, 15 to 30 percent slopes	25,350	3.5
171	Skutum loam, 30 to 60 percent slopes	19,131	2.6
172	Skutum-Uinta association, 15 to 30 percent slopes	13,122	1.8
173	Skutum-Uinta association, 30 to 60 percent slopes	7,062	1.0
174	Snyderville cobbly loam, 1 to 5 percent slopes	5,496	0.8
175	Snyderville cobbly loam, 5 to 10 percent slopes	3,472	0.5
176	Snyderville gravelly loam, 1 to 5 percent slopes	2,451	0.3
177	Uinta-Duchesne complex, 8 to 30 percent slopes	5,677	0.8
178	Wanship loam, 0 to 3 percent slopes	2,417	0.3
179	Wanship-Kovich loams, 0 to 3 percent slopes	11,871	1.6
180	Yeates Hollow-Henefer complex, 3 to 15 percent slopes	1,591	0.2
181	Yeates Hollow-Henefer complex, 15 to 30 percent slopes	13,630	1.9
182	Yeates Hollow-Henefer complex, 30 to 60 percent slopes	17,780	2.4
183	Water	3,061	0.4
184	Dams	10	*
	Total	725,877	100.0

* Less than 0.1 percent.

Table 5.--Land capability and yields per acre of crops and pasture

(Yields in the "N" columns are for nonirrigated areas; those in the "I" columns are for irrigated areas. Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture	
	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM
101:			---	---	---	---	---	---
Agassiz	7e	---						
Rock outcrop	8	---						
102:			---	5.00	---	95.00	---	8.00
Ant Flat	3e	3e						
103:			---	4.50	---	85.00	---	7.00
Ant Flat	4e	4e						
104:			---	---	---	---	---	---
Ant Flat	6e	---						
105:			---	---	---	---	---	---
Ant Flat	6e	---						
Henefer	6e	---						
Skutum	6e	---						
106:			---	---	---	---	---	---
Ayoub	6s	---						
107:			---	---	---	---	---	---
Ayoub	6e	---						
Dunford	6e	---						
Melling	7s	---						
108:			---	---	---	---	---	---
Ayoub	7e	---						
Dunford	7e	---						
Melling	7e	---						
109:			---	---	---	---	---	---
Cluff	6e	---						
110:			---	---	---	---	---	---
Cluff	7e	---						
111:			---	---	---	---	---	---
Crandall	6s	---						
112:			---	---	---	---	---	---
Crandall	6e	---						
Lucky Star	6e	---						
113:			---	---	---	---	---	---
Crandall	7e	---						
Lucky Star	7e	---						
Starley Family	7e	---						
114:			---	---	---	---	---	---
Crandall	6e	---						
Starley Family	6e	---						
Rock outcrop	8	---						
115:			---	5.00	---	95.00	---	8.00
Dastrup	4s	3c						

Table 5.--Land capability and yields per acre of crops and pasture--continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture	
	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM
116:			---	4.50	---	85.00	---	7.00
Dastrup	4s	3e						
117:			---	---	---	---	---	---
Dastrup	6e	---						
118:			---	---	---	---	---	---
Dromedary	7e	---						
Rock outcrop	8	---						
119:			---	---	---	---	---	---
Duchesne	6e	---						
120:			---	---	---	---	---	---
Duchesne	6e	---						
121:			---	---	---	---	---	---
Duchesne	7e	---						
122:			---	---	---	---	---	---
Duchesne	7e	---						
Haydenfork	7w	---						
123:			---	---	---	---	---	---
Dumps, Mines	8	---						
124:			---	---	---	---	---	---
Dunford	6e	---						
Ayoub	6e	---						
Melling	7s	---						
125:			---	---	---	---	---	---
Dunford	7e	---						
Ayoub	7e	---						
Melling	7e	---						
126:			---	5.00	---	95.00	---	8.00
Echocreek	4s	3e						
127:			---	5.00	---	95.00	---	8.00
Echocreek	4s	3e						
Kovich	7w	6w						
128:			---	5.00	---	95.00	---	8.00
Fewkes	3e	3e						
129:			---	4.50	---	85.00	---	7.00
Fewkes	4e	4e						
130:			---	---	---	---	---	---
Fewkes	6e	---						
131:			---	---	---	---	---	---
Fewkes	7e	---						
Heiners	7e	---						
132:			---	---	---	---	---	---
Fewkes	6e	---						
Hades	6e	---						

Table 5.--Land capability and yields per acre of crops and pasture--continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture	
	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM
133:			---	---	---	---	---	---
Fewkes	7e	---						
Hades	7e	---						
134:			---	---	---	---	---	---
Fewkes	4e	---						
Yeates Hollow	6s	---						
135:			---	---	---	---	---	---
Fewkes	6e	---						
Yeates Hollow	6s	---						
136:			---	---	---	---	---	---
Hades	7e	---						
Agassiz	7e	---						
Rock outcrop	8	---						
137:			---	---	---	---	---	---
Hades	6e	---						
Fewkes	6e	---						
138:			---	---	---	---	---	---
Hades	7e	---						
Fewkes	7e	---						
139:			---	4.50	---	85.00	---	7.00
Harter	4e	4e						
140:			---	---	---	---	---	---
Heiners	7s	---						
Fewkes	6e	---						
141:			---	---	---	---	---	---
Heiners	7e	---						
Fewkes	7e	---						
Hades	7e	---						
142:			---	---	---	---	---	---
Henefer	6e	---						
Harter	6e	---						
143:			---	---	---	---	---	---
Horrocks	7e	---						
Agassiz	7e	---						
144:			---	---	---	---	---	---
Horrocks	6e	---						
Cutoff	6e	---						
145:			---	---	---	---	---	---
Horrocks	7e	---						
Cutoff	7e	---						
146:			---	---	---	---	---	---
Horrocks	7e	---						
Hades	7e	---						
147:			---	---	---	---	---	---
Hovarka	7w	---						
Millcreek	4s	---						

Table 5.--Land capability and yields per acre of crops and pasture--continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture	
	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM
148:			---	---	---	---	---	---
Jana	7e	---						
Richsum	7e	---						
Rock outcrop	8	---						
149:			---	---	---	---	---	9.00
Kovich	7w	6w						
Toddspan	7w	6w						
150:			---	---	---	---	---	---
Lucky Star	6e	---						
151:			---	---	---	---	---	---
Lucky Star	7e	---						
152:			---	---	---	---	---	---
Lucky Star	7e	---						
Dromedary	7e	---						
153:			---	---	---	---	---	---
Lucky Star	7e	---						
Fewkes	7e	---						
154:			---	4.50	---	85.00	---	7.00
Manila	4e	4e						
Ant Flat	3e	3e						
155:			---	4.50	---	85.00	---	7.00
Manila	4e	4e						
Ant Flat	4e	4e						
156:			---	5.00	---	95.00	---	8.00
Manila	3e	3e						
Harter	3e	3e						
157:			---	4.50	---	85.00	---	7.00
Manila	4e	4e						
Henefer	4e	4e						
158:			---	---	---	---	---	---
Melling	7s	---						
Ayoub	6e	---						
Rock outcrop	8	---						
159:			---	---	---	---	---	---
Parkcity	6e	---						
Dromedary	6e	---						
160:			---	---	---	---	---	---
Parkcity	7e	---						
Dromedary	7e	---						
161:			---	---	---	---	---	---
Pits, Gravel	8	---						
162:			---	---	---	---	---	---
Richsum	4e	---						
Heiners	7s	---						
163:			---	---	---	---	---	---
Richsum	6e	---						
Heiners	7s	---						

Table 5.--Land capability and yields per acre of crops and pasture--continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture	
	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM
164:			---	---	---	---	---	---
Rock outcrop	8	---						
165:			---	---	---	---	---	---
Rock outcrop	8	---						
Starley Family	7e	---						
166:			---	---	---	---	---	---
Sessions	6c	---						
Haydenfork	7w	---						
167:			---	---	---	---	---	---
Sessions	6c	---						
Skutum	6c	---						
168:			---	---	---	---	---	---
Sessions	6c	---						
Uinta	6e	---						
169:			---	---	---	---	---	---
Skutum	6c	---						
170:			---	---	---	---	---	---
Skutum	6e	---						
171:			---	---	---	---	---	---
Skutum	7e	---						
172:			---	---	---	---	---	---
Skutum	6e	---						
Uinta	6e	---						
173:			---	---	---	---	---	---
Skutum	7e	---						
Uinta	7e	---						
174:			---	---	---	---	---	4.00
Snyderville	6s	4s						
175:			---	---	---	---	---	3.50
Snyderville	6s	4s						
176:			---	3.00	---	60.00	---	5.00
Snyderville	6s	4s						
177:			---	---	---	---	---	---
Uinta	6e	---						
Duchesne	6e	---						
178:			---	---	---	---	---	7.00
Wanship	4w	4w						
179:			---	---	---	---	---	7.00
Wanship	4w	4w						
Kovich	7w	6w						
180:			---	---	---	---	---	---
Yeates Hollow	6s	---						
Henefer	4e	---						

Table 5.--Land capability and yields per acre of crops and pasture--continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture	
	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM
181:			---	---	---	---	---	---
Yeates Hollow	6s	---						
Henefer	6e	---						
182:			---	---	---	---	---	---
Yeates Hollow	7e	---						
Henefer	7e	---						
183:			---	---	---	---	---	---
Water	---	---						
184:			---	---	---	---	---	---
Dams	---	---						

Table 6.--Prime farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name.)

Map symbol	Soil name
102	Ant Flat loam, 2 to 8 percent slopes (Prime farmland if irrigated)
115	Dastrup loam, 2 to 5 percent slopes (Prime farmland if irrigated)
126	Echocreek loam, 2 to 10 percent slopes (Prime farmland if irrigated)
154	Manila-Ant Flat loams, 2 to 8 percent slopes (Prime farmland if irrigated)
156	Manila-Harter complex, 2 to 8 percent slopes (Prime farmland if irrigated)

Table 7.--Rangeland or forestland understory and characteristic plant communities

(Only the soils that support rangeland vegetation suitable for grazing are rated.)

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
101:						
Agassiz	Mountain Shallow Loam (Mountain Big Sagebrush)	1,700	1,100	600	bluebunch wheatgrass	20
					mountain big sagebrush	20
					antelope bitterbrush	10
					muttongrass	10
					Indian ricegrass	5
					arrowleaf balsamroot	5
					bottlebrush squirreltail	5
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					western wheatgrass	5
Rock outcrop	---	---	---	---	---	---
102:						
Ant Flat	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
103:						
Ant Flat	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
104:						
Ant Flat	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
105:						
Ant Flat	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Henefer	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
Skutum	High Mountain Loam (Aspen)	2,500	2,000	1,700	mountain brome	20
					slender wheatgrass	10
					thickleaf peavine	10
					Columbia needlegrass	5
					Kentucky bluegrass	5
					blue wildrye	5
					butterweed groundsel	5
					coneflower	5
					elk sedge	5
					mountain snowberry	5
					nodding bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					sticky geranium	5
					western sweetroot	5
106:						
Ayoub	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
107:						
Ayoub	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
Dunford	Mountain Gravelly Loam (Oak)	2,300	1,900	1,500	Gambel's oak	25
					bluebunch wheatgrass	10
					mountain snowberry	10
					slender wheatgrass	10
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					elk sedge	5
					mountain brome	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					thickleaf peavine	5
Melling	Mountain Shallow Loam (Mountain Big Sagebrush)	1,700	1,100	600	bluebunch wheatgrass	20
					mountain big sagebrush	20
					antelope bitterbrush	10
					muttongrass	10
					Indian ricegrass	5
					arrowleaf balsamroot	5
					bottlebrush squirreltail	5
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					western wheatgrass	5
108:						
Ayoub	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
108:						
Dunford	Mountain Gravelly Loam (Oak)	2,300	1,900	1,500	Gambel's oak	25
					bluebunch wheatgrass	10
					mountain snowberry	10
					slender wheatgrass	10
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					elk sedge	5
					mountain brome	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					thickleaf peavine	5
Melling	Mountain Shallow Loam (Mountain Big Sagebrush)	1,700	1,100	600	bluebunch wheatgrass	20
					mountain big sagebrush	20
					antelope bitterbrush	10
					muttongrass	10
					Indian ricegrass	5
					arrowleaf balsamroot	5
					bottlebrush squirreltail	5
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					western wheatgrass	5
109:						
Cluff	High Mountain Stony Loam (Mixed Conifer)	500	200	100	elk sedge	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					slender wheatgrass	10
					Oregongrape	5
					Wheeler bluegrass	5
					blue wildrye	5
					boxleaf myrtle	5
					common juniper	5
					heartleaf arnica	5
					kinnikinnick	5
					mallow ninebark	5
					mountain snowberry	5
					spike trisetum	5
110:						
Cluff	High Mountain Stony Loam (Mixed Conifer)	500	200	100	elk sedge	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					slender wheatgrass	10
					Oregongrape	5
					Wheeler bluegrass	5
					blue wildrye	5
					boxleaf myrtle	5
					common juniper	5
					heartleaf arnica	5
					kinnikinnick	5
					mallow ninebark	5
					mountain snowberry	5
					spike trisetum	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
111:						
Crandall	Alpine Meadow (Alpine Timothy)	2,000	1,600	1,200	alpine timothy	20
					tufted hairgrass	15
					alpine bentgrass	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					aster	5
					fringed brome	5
					sulphur wildbuckwheat	5
					timber oatgrass	5
112:						
Crandall	High Mountain Gravelly Loam (Mountain Big Sagebrush)	3,000	2,500	1,700	slender wheatgrass	25
					mountain brome	15
					Columbia needlegrass	10
					mountain big sagebrush	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					miscellaneous shrubs	10
					sheep fescue	10
Lucky Star	High Mountain Stony Loam (Aspen)	800	600	400	mountain brome	10
					nodding brome	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					sticky geranium	10
					Columbia needlegrass	5
					Fendler's meadowrue	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					mountain snowberry	5
					miscellaneous shrubs	5
					quaking aspen	5
113:						
Crandall	High Mountain Gravelly Loam (Mountain Big Sagebrush)	3,000	2,500	1,700	slender wheatgrass	25
					mountain brome	15
					Columbia needlegrass	10
					mountain big sagebrush	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					miscellaneous shrubs	10
					sheep fescue	10
Lucky Star	High Mountain Stony Loam (Aspen)	800	600	400	mountain brome	10
					nodding brome	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					sticky geranium	10
					Columbia needlegrass	5
					Fendler's meadowrue	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					mountain snowberry	5
					miscellaneous shrubs	5
					quaking aspen	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
113:						
Starley Family----------	High Mountain Loam (Mountain Big Sagebrush)	3,000	2,500	1,700	slender wheatgrass----------	30
					Columbia needlegrass----------	10
					mountain big sagebrush---------	10
					mountain brome----------	10
					sheep fescue----------	10
					mountain snowberry----------	5
					miscellaneous perennial forbs--	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs----------	5
					sticky geranium----------	5
					thickleaf peavine----------	5
114:						
Crandall----------	High Mountain Gravelly Loam (Mountain Big Sagebrush)	3,000	2,500	1,700	slender wheatgrass----------	25
					mountain brome----------	15
					Columbia needlegrass----------	10
					mountain big sagebrush---------	10
					miscellaneous perennial forbs--	10
					miscellaneous perennial grasses	10
					miscellaneous shrubs----------	10
					sheep fescue----------	10
Starley Family----------	High Mountain Loam (Mountain Big Sagebrush)	3,000	2,500	1,700	slender wheatgrass----------	30
					Columbia needlegrass----------	10
					mountain big sagebrush---------	10
					mountain brome----------	10
					sheep fescue----------	10
					mountain snowberry----------	5
					miscellaneous perennial forbs--	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs----------	5
					sticky geranium----------	5
					thickleaf peavine----------	5
Rock outcrop----------	---	---	---	---	---	---
115:						
Dastrup----------	Upland Loam (Mountain Big Sagebrush)	2,000	1,500	1,000	bluebunch wheatgrass----------	20
					Indian ricegrass----------	10
					basin wildrye----------	10
					mountain big sagebrush---------	10
					needleandthread----------	10
					Oregongrape----------	5
					antelope bitterbrush----------	5
					aster----------	5
					miscellaneous perennial forbs--	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs----------	5
					tapertip hawksbeard----------	5
					western wheatgrass----------	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
116:						
Dastrup	Upland Loam (Mountain Big Sagebrush)	2,000	1,500	1,000	bluebunch wheatgrass	20
					Indian ricegrass	10
					basin wildrye	10
					mountain big sagebrush	10
					needleandthread	10
					Oregongrape	5
					antelope bitterbrush	5
					aster	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					tapertip hawksbeard	5
					western wheatgrass	5
117:						
Dastrup	Upland Loam (Mountain Big Sagebrush)	2,000	1,500	1,000	bluebunch wheatgrass	20
					Indian ricegrass	10
					basin wildrye	10
					mountain big sagebrush	10
					needleandthread	10
					Oregongrape	5
					antelope bitterbrush	5
					aster	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					tapertip hawksbeard	5
					western wheatgrass	5
118:						
Dromedary	High Mountain Stony Loam (Douglas-Fir)	500	200	100	mountain snowberry	20
					Oregongrape	15
					boxleaf myrtle	10
					elk sedge	10
					quaking aspen	10
					Nevada bluegrass	5
					common juniper	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					slender wheatgrass	5
Rock outcrop	---	---	---	---	---	---
119:						
Duchesne	High Mountain Stony Sandy Loam (Lodgepole Pine)	800	600	400	elk sedge	10
					nodding bluegrass	10
					nodding brome	10
					miscellaneous perennial grasses	10
					pinegrass	10
					Oregongrape	5
					boxleaf myrtle	5
					common juniper	5
					fleabane	5
					grouse whortleberry	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous shrubs	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
120:						
Duchesne	High Mountain Stony Sandy Loam (Lodgepole Pine)	800	600	400	elk sedge	10
					nodding bluegrass	10
					nodding brome	10
					miscellaneous perennial grasses	10
					pinegrass	10
					Oregongrape	5
					boxleaf myrtle	5
					common juniper	5
					fleabane	5
					grouse whortleberry	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous shrubs	5
121:						
Duchesne	High Mountain Stony Sandy Loam (Lodgepole Pine)	800	600	400	elk sedge	10
					nodding bluegrass	10
					nodding brome	10
					miscellaneous perennial grasses	10
					pinegrass	10
					Oregongrape	5
					boxleaf myrtle	5
					common juniper	5
					fleabane	5
					grouse whortleberry	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous shrubs	5
122:						
Duchesne	High Mountain Stony Sandy Loam (Lodgepole Pine)	800	600	400	elk sedge	10
					nodding bluegrass	10
					nodding brome	10
					miscellaneous perennial grasses	10
					pinegrass	10
					Oregongrape	5
					boxleaf myrtle	5
					common juniper	5
					fleabane	5
					grouse whortleberry	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous shrubs	5
Haydenfork	Wet Fresh Meadow (Sedge)	6,500	5,000	3,500	sedge	55
					mountain rush	10
					tufted hairgrass	10
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					shrubby cinquefoil	5
					white marshmarigold	5
					willow	5
123:						
Dumps, Mines	---	---	---	---	---	---

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
124:						
Dunford	Mountain Gravelly Loam (Oak)	2,300	1,900	1,500	Gambel's oak	25
					bluebunch wheatgrass	10
					mountain snowberry	10
					slender wheatgrass	10
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					elk sedge	5
					mountain brome	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					thickleaf peavine	5
Ayoub	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
Melling	Mountain Shallow Loam (Mountain Big Sagebrush)	1,700	1,100	600	bluebunch wheatgrass	20
					mountain big sagebrush	20
					antelope bitterbrush	10
					muttongrass	10
					Indian ricegrass	5
					arrowleaf balsamroot	5
					bottlebrush squirreltail	5
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					western wheatgrass	5
125:						
Dunford	Mountain Gravelly Loam (Oak)	2,300	1,900	1,500	Gambel's oak	25
					bluebunch wheatgrass	10
					mountain snowberry	10
					slender wheatgrass	10
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					elk sedge	5
					mountain brome	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
125:						
Ayoub	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
Melling	Mountain Shallow Loam (Mountain Big Sagebrush)	1,700	1,100	600	bluebunch wheatgrass	20
					mountain big sagebrush	20
					antelope bitterbrush	10
					muttongrass	10
					Indian ricegrass	5
					arrowleaf balsamroot	5
					bottlebrush squirreltail	5
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					western wheatgrass	5
126:						
Echocreek	Upland Loam (Basin Wildrye)	2,500	1,500	1,000	basin wildrye	50
					basin big sagebrush	10
					miscellaneous perennial grasses	10
					Nevada bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous shrubs	5
					rubber rabbitbrush	5
					tapertip hawksbeard	5
					western wheatgrass	5
127:						
Echocreek	Upland Loam (Basin Wildrye)	2,500	1,500	1,000	basin wildrye	50
					basin big sagebrush	10
					miscellaneous perennial grasses	10
					Nevada bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous shrubs	5
					rubber rabbitbrush	5
					tapertip hawksbeard	5
					western wheatgrass	5
Kovich	Wet Fresh Meadow (Sedge)	6,500	5,000	3,500	sedge	55
					mountain rush	10
					tufted hairgrass	10
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					shrubby cinquefoil	5
					white marshmarigold	5
					willow	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
128:						
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
129:						
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
130:						
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
131:						
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Heiners	Upland Shallow Loam (Mountain Big Sagebrush)	1,100	900	600	bluebunch wheatgrass	25
					mountain big sagebrush	15
					Indian ricegrass	10
					Nevada bluegrass	10
					antelope bitterbrush	5
					bottlebrush squirreltail	5
					needleandthread	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
132:						
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Hades	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
133:						
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Hades	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
134:						
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Yeates Hollow	Mountain Stony Loam (Mountain Big Sagebrush)	1,700	1,400	850	bluebunch wheatgrass	20
					mountain big sagebrush	15
					slender wheatgrass	10
					Letterman's needlegrass	5
					Nevada bluegrass	5
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					common yarrow	5
					elk sedge	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sheep fescue	5
135:						
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Yeates Hollow	Mountain Stony Loam (Mountain Big Sagebrush)	1,700	1,400	850	bluebunch wheatgrass	20
					mountain big sagebrush	15
					slender wheatgrass	10
					Letterman's needlegrass	5
					Nevada bluegrass	5
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					common yarrow	5
					elk sedge	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sheep fescue	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
136:						
Hades	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
Agassiz	Mountain Shallow Loam (Mountain Big Sagebrush)	1,700	1,100	600	bluebunch wheatgrass	20
					mountain big sagebrush	20
					antelope bitterbrush	10
					muttongrass	10
					Indian ricegrass	5
					arrowleaf balsamroot	5
					bottlebrush squirreltail	5
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					western wheatgrass	5
Rock outcrop	---	---	---	---	---	---
137:						
Hades	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
138:						
Hades	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
139:						
Harter	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
140:						
Heiners	Upland Loamy Shale (Low Sagebrush)	900	700	500	low sagebrush	30
					bluebunch wheatgrass	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					miscellaneous shrubs	10
					Indian ricegrass	5
					spiny phlox	5
					western wheatgrass	5
					yellow rabbitbrush	5
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
141:						
Heiners	Upland Shallow Loam (Mountain Big Sagebrush)	1,100	900	600	bluebunch wheatgrass	25
					mountain big sagebrush	15
					Indian ricegrass	10
					Nevada bluegrass	10
					antelope bitterbrush	5
					bottlebrush squirreltail	5
					needleandthread	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Hades	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
142:						
Henefer	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
142:						
Harter	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
143:						
Horrocks	Mountain Stony Loam (Oak)	1,700	1,400	800	Gambel's oak	25
					bluebunch wheatgrass	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					miscellaneous shrubs	10
					slender wheatgrass	10
					antelope bitterbrush	5
					mountain big sagebrush	5
					muttongrass	5
Agassiz	Mountain Shallow Loam (Mountain Big Sagebrush)	1,700	1,100	600	bluebunch wheatgrass	20
					mountain big sagebrush	20
					antelope bitterbrush	10
					muttongrass	10
					Indian ricegrass	5
					arrowleaf balsamroot	5
					bottlebrush squirreltail	5
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					western wheatgrass	5
144:						
Horrocks	Mountain Stony Loam (Mountain Big Sagebrush)	1,700	1,400	850	bluebunch wheatgrass	20
					mountain big sagebrush	15
					slender wheatgrass	10
					Letterman's needlegrass	5
					Nevada bluegrass	5
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					common yarrow	5
					elk sedge	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sheep fescue	5
Cutoff	Upland Stony Loam (Mountain Big Sagebrush)	1,200	1,100	700	mountain big sagebrush	30
					bluebunch wheatgrass	20
					antelope bitterbrush	10
					bluegrass	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					Indian ricegrass	5
					miscellaneous shrubs	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
145:						
Horrocks	Mountain Stony Loam (Mountain Big Sagebrush)	1,700	1,400	850	bluebunch wheatgrass	20
					mountain big sagebrush	15
					slender wheatgrass	10
					Letterman's needlegrass	5
					Nevada bluegrass	5
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					common yarrow	5
					elk sedge	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sheep fescue	5
Cutoff	Upland Stony Loam (Mountain Big Sagebrush)	1,200	950	700	mountain big sagebrush	30
					bluebunch wheatgrass	20
					antelope bitterbrush	10
					bluegrass	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					Indian ricegrass	5
					miscellaneous shrubs	5
146:						
Horrocks	Mountain Stony Loam (Mountain Big Sagebrush)	1,700	1,400	850	bluebunch wheatgrass	20
					mountain big sagebrush	15
					slender wheatgrass	10
					Letterman's needlegrass	5
					Nevada bluegrass	5
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					common yarrow	5
					elk sedge	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sheep fescue	5
Hades	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
147:						
Hovarka	Wet Fresh Meadow (Sedge)	6,500	5,000	3,500	sedge	55
					mountain rush	10
					tufted hairgrass	10
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					shrubby cinquefoil	5
					white marshmarigold	5
					willow	5
Millcreek	High Mountain Loam (Mountain Big Sagebrush)	3,000	2,500	1,700	slender wheatgrass	30
					Columbia needlegrass	10
					mountain big sagebrush	10
					mountain brome	10
					sheep fescue	10
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
148:						
Jana	Upland Gravelly Loam (Utah Juniper)	800	600	400	bluebunch wheatgrass	20
					mountain big sagebrush	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					miscellaneous shrubs	10
					Indian ricegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					mountain snowberry	5
					needleandthread	5
					yellow rabbitbrush	5
Richsum	Upland Loam (Mountain Big Sagebrush)	2,000	1,500	1,000	bluebunch wheatgrass	20
					Indian ricegrass	10
					basin wildrye	10
					mountain big sagebrush	10
					needleandthread	10
					Oregongrape	5
					antelope bitterbrush	5
					aster	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					tapertip hawksbeard	5
					western wheatgrass	5
Rock outcrop	---	---	---	---	---	---
149:						
Kovich	Wet Fresh Meadow (Sedge)	6,500	5,000	3,500	sedge	55
					mountain rush	10
					tufted hairgrass	10
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					shrubby cinquefoil	5
					white marshmarigold	5
					willow	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
149:						
Toddspan	Wet Fresh Meadow (Sedge)	6,500	5,000	3,500	sedge	55
					mountain rush	10
					tufted hairgrass	10
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					shrubby cinquefoil	5
					white marshmarigold	5
					willow	5
150:						
Lucky Star	High Mountain Stony Loam (Aspen)	800	600	400	mountain brome	10
					nodding brome	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					sticky geranium	10
					Columbia needlegrass	5
					Fendler's meadowrue	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					mountain snowberry	5
					miscellaneous shrubs	5
					quaking aspen	5
151:						
Lucky Star	High Mountain Stony Loam (Aspen)	800	600	400	mountain brome	10
					nodding brome	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					sticky geranium	10
					Columbia needlegrass	5
					Fendler's meadowrue	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					mountain snowberry	5
					miscellaneous shrubs	5
					quaking aspen	5
152:						
Lucky Star	High Mountain Stony Loam (Aspen)	800	600	400	mountain brome	10
					nodding brome	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					sticky geranium	10
					Columbia needlegrass	5
					Fendler's meadowrue	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					mountain snowberry	5
					miscellaneous shrubs	5
					quaking aspen	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
152:						
Dromedary	High Mountain Stony Loam (Douglas-Fir)	500	200	100	mountain snowberry	20
					Oregongrape	15
					boxleaf myrtle	10
					elk sedge	10
					quaking aspen	10
					Nevada bluegrass	5
					common juniper	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					slender wheatgrass	5
153:						
Lucky Star	High Mountain Stony Loam (Aspen)	800	600	400	mountain brome	10
					nodding brome	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					sticky geranium	10
					Columbia needlegrass	5
					Fendler's meadowrue	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					mountain snowberry	5
					miscellaneous shrubs	5
					quaking aspen	5
Fewkes	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
154:						
Manila	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Ant Flat	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
155:						
Manila	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Ant Flat	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
156:						
Manila	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
Harter	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
157:						
Manila	Mountain Loam (Mountain Big Sagebrush)	2,200	2,000	1,500	bluebunch wheatgrass	45
					basin wildrye	10
					miscellaneous shrubs	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
157:						
Henefer	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
158:						
Melling	Mountain Shallow Loam (Mountain Big Sagebrush)	1,700	1,100	600	bluebunch wheatgrass	20
					mountain big sagebrush	20
					antelope bitterbrush	10
					muttongrass	10
					Indian ricegrass	5
					arrowleaf balsamroot	5
					bottlebrush squirreltail	5
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					western wheatgrass	5
Ayoub	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
Rock outcrop	---	---	---	---	---	---
159:						
Parkcity	High Mountain Stony Loam (Aspen)	800	600	400	mountain brome	10
					nodding brome	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					sticky geranium	10
					Columbia needlegrass	5
					Fendler's meadowrue	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					mountain snowberry	5
					miscellaneous shrubs	5
					quaking aspen	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
159:						
Dromedary	High Mountain Stony Loam (Douglas-Fir)	500	200	100	mountain snowberry	20
					Oregongrape	15
					boxleaf myrtle	10
					elk sedge	10
					quaking aspen	10
					Nevada bluegrass	5
					common juniper	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					slender wheatgrass	5
160:						
Parkcity	High Mountain Stony Loam (Aspen)	800	600	400	mountain brome	10
					nodding brome	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					sticky geranium	10
					Columbia needlegrass	5
					Fendler's meadowrue	5
					Nevada bluegrass	5
					elk sedge	5
					mountain big sagebrush	5
					mountain snowberry	5
					miscellaneous shrubs	5
					quaking aspen	5
Dromedary	High Mountain Stony Loam (Douglas-Fir)	500	200	100	mountain snowberry	20
					Oregongrape	15
					boxleaf myrtle	10
					elk sedge	10
					quaking aspen	10
					Nevada bluegrass	5
					common juniper	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					slender wheatgrass	5
161:						
Pits, Gravel	---	---	---	---	---	---
162:						
Richsum	Upland Loam (Mountain Big Sagebrush)	2,000	1,500	1,000	bluebunch wheatgrass	20
					Indian ricegrass	10
					basin wildrye	10
					mountain big sagebrush	10
					needleandthread	10
					Oregongrape	5
					antelope bitterbrush	5
					aster	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					tapertip hawksbeard	5
					western wheatgrass	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
162:						
Heiners	Upland Shallow Loam (Mountain Big Sagebrush)	1,100	900	600	bluebunch wheatgrass	25
					mountain big sagebrush	15
					Indian ricegrass	10
					Nevada bluegrass	10
					antelope bitterbrush	5
					bottlebrush squirreltail	5
					needleandthread	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
163:						
Richsum	Upland Loam (Mountain Big Sagebrush)	2,000	1,500	1,000	bluebunch wheatgrass	20
					Indian ricegrass	10
					basin wildrye	10
					mountain big sagebrush	10
					needleandthread	10
					Oregongrape	5
					antelope bitterbrush	5
					aster	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					tapertip hawksbeard	5
					western wheatgrass	5
Heiners	Upland Shallow Loam (Mountain Big Sagebrush)	1,100	900	600	bluebunch wheatgrass	25
					mountain big sagebrush	15
					Indian ricegrass	10
					Nevada bluegrass	10
					antelope bitterbrush	5
					bottlebrush squirreltail	5
					needleandthread	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
164:						
Rock outcrop	---	---	---	---	---	---
165:						
Rock outcrop	---	---	---	---	---	---
Starley Family	High Mountain Loam (Mountain Big Sagebrush)	3,000	2,500	1,700	slender wheatgrass	30
					Columbia needlegrass	10
					mountain big sagebrush	10
					mountain brome	10
					sheep fescue	10
					mountain snowberry	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
166:						
Sessions	High Mountain Loam (Silver Sagebrush)	2,200	1,900	1,600	silver sagebrush	20
					slender wheatgrass	20
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					Nevada bluegrass	5
					mountain brome	5
					mountain snowberry	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
Haydenfork	Wet Fresh Meadow (Sedge)	6,500	5,000	3,500	sedge	55
					mountain rush	10
					tufted hairgrass	10
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					shrubby cinquefoil	5
					white marshmarigold	5
					willow	5
167:						
Sessions	High Mountain Loam (Silver Sagebrush)	2,200	1,900	1,600	silver sagebrush	20
					slender wheatgrass	20
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					Nevada bluegrass	5
					mountain brome	5
					mountain snowberry	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
Skutum	High Mountain Loam (Aspen)	2,500	2,000	1,700	mountain brome	20
					slender wheatgrass	10
					thickleaf peavine	10
					Columbia needlegrass	5
					Kentucky bluegrass	5
					blue wildrye	5
					butterweed groundsel	5
					coneflower	5
					elk sedge	5
					mountain snowberry	5
					nodding bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					sticky geranium	5
					western sweetroot	5
168:						
Sessions	High Mountain Loam (Silver Sagebrush)	2,200	1,900	1,600	silver sagebrush	20
					slender wheatgrass	20
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					Nevada bluegrass	5
					mountain brome	5
					mountain snowberry	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
168:						
Uinta	High Mountain Stony Loam (Mixed Conifer)	500	200	100	elk sedge	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					slender wheatgrass	10
					Oregongrape	5
					Wheeler bluegrass	5
					blue wildrye	5
					boxleaf myrtle	5
					common juniper	5
					heartleaf arnica	5
					kinnikinnick	5
					mallow ninebark	5
					mountain snowberry	5
					spike trisetum	5
169:						
Skutum	High Mountain Loam (Aspen)	2,500	2,000	1,700	mountain brome	20
					slender wheatgrass	10
					thickleaf peavine	10
					Columbia needlegrass	5
					Kentucky bluegrass	5
					blue wildrye	5
					butterweed groundsel	5
					coneflower	5
					elk sedge	5
					mountain snowberry	5
					nodding bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					sticky geranium	5
					western sweetroot	5
170:						
Skutum	High Mountain Loam (Aspen)	2,500	2,000	1,700	mountain brome	20
					slender wheatgrass	10
					thickleaf peavine	10
					Columbia needlegrass	5
					Kentucky bluegrass	5
					blue wildrye	5
					butterweed groundsel	5
					coneflower	5
					elk sedge	5
					mountain snowberry	5
					nodding bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					sticky geranium	5
					western sweetroot	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
171:						
Skutum	High Mountain Loam (Aspen)	2,500	2,000	1,700	mountain brome	20
					slender wheatgrass	10
					thickleaf peavine	10
					Columbia needlegrass	5
					Kentucky bluegrass	5
					blue wildrye	5
					butterweed groundsel	5
					coneflower	5
					elk sedge	5
					mountain snowberry	5
					nodding bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					sticky geranium	5
					western sweetroot	5
172:						
Skutum	High Mountain Loam (Aspen)	2,500	2,000	1,700	mountain brome	20
					slender wheatgrass	10
					thickleaf peavine	10
					Columbia needlegrass	5
					Kentucky bluegrass	5
					blue wildrye	5
					butterweed groundsel	5
					coneflower	5
					elk sedge	5
					mountain snowberry	5
					nodding bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					sticky geranium	5
					western sweetroot	5
Uinta	High Mountain Stony Loam (Mixed Conifer)	500	200	100	elk sedge	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					slender wheatgrass	10
					Oregongrape	5
					Wheeler bluegrass	5
					blue wildrye	5
					boxleaf myrtle	5
					common juniper	5
					heartleaf arnica	5
					kinnikinnick	5
					mallow ninebark	5
					mountain snowberry	5
					spike trisetum	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
173:						
Skutum	High Mountain Loam (Aspen)	2,500	2,000	1,700	mountain brome	20
					slender wheatgrass	10
					thickleaf peavine	10
					Columbia needlegrass	5
					Kentucky bluegrass	5
					blue wildrye	5
					butterweed groundsel	5
					coneflower	5
					elk sedge	5
					mountain snowberry	5
					nodding bluegrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					sticky geranium	5
					western sweetroot	5
Uinta	High Mountain Stony Loam (Mixed Conifer)	500	200	100	elk sedge	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					slender wheatgrass	10
					Oregongrape	5
					Wheeler bluegrass	5
					blue wildrye	5
					boxleaf myrtle	5
					common juniper	5
					heartleaf arnica	5
					kinnikinnick	5
					mallow ninebark	5
					mountain snowberry	5
					spike trisetum	5
174:						
Snyderville	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
175:						
Snyderville	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
176:						
Snyderville	Mountain Gravelly Loam (Mountain Big Sagebrush)	2,000	1,300	900	bluebunch wheatgrass	15
					slender wheatgrass	15
					Letterman's needlegrass	10
					mountain big sagebrush	10
					Columbia needlegrass	5
					Nevada bluegrass	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					muttongrass	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sticky geranium	5
					thickleaf peavine	5
177:						
Uinta	High Mountain Stony Loam (Mixed Conifer)	500	200	100	elk sedge	10
					miscellaneous perennial forbs	10
					miscellaneous perennial grasses	10
					slender wheatgrass	10
					Oregongrape	5
					Wheeler bluegrass	5
					blue wildrye	5
					boxleaf myrtle	5
					common juniper	5
					heartleaf arnica	5
					kinnikinnick	5
					mallow ninebark	5
					mountain snowberry	5
					spike trisetum	5
Duchesne	High Mountain Stony Sandy Loam (Lodgepole Pine)	800	600	400	elk sedge	10
					nodding bluegrass	10
					nodding brome	10
					miscellaneous perennial grasses	10
					pinegrass	10
					Oregongrape	5
					boxleaf myrtle	5
					common juniper	5
					fleabane	5
					grouse whortleberry	5
					heartleaf arnica	5
					miscellaneous perennial forbs	5
					miscellaneous shrubs	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
178:						
Wanship	Semiwet Fresh Meadow (Redtop)	4,200	2,500	1,750	sedge	20
					timothy	10
					tufted hairgrass	10
					basin wildrye	5
					field horsetail	5
					meadow foxtail	5
					mountain brome	5
					mountain rush	5
					muttongrass	5
					miscellaneous perennial forbs	5
					redtop	5
					shrubby cinquefoil	5
					silver sagebrush	5
					slender wheatgrass	5
					sticky geranium	5
179:						
Wanship	Semiwet Fresh Meadow (Redtop)	4,200	2,500	1,750	sedge	20
					timothy	10
					tufted hairgrass	10
					basin wildrye	5
					field horsetail	5
					meadow foxtail	5
					mountain brome	5
					mountain rush	5
					muttongrass	5
					miscellaneous perennial forbs	5
					redtop	5
					shrubby cinquefoil	5
					silver sagebrush	5
					slender wheatgrass	5
					sticky geranium	5
Kovich	Wet Fresh Meadow (Sedge)	6,500	5,000	3,500	sedge	55
					mountain rush	10
					tufted hairgrass	10
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					shrubby cinquefoil	5
					white marshmarigold	5
					willow	5
180:						
Yeates Hollow	Mountain Stony Loam (Mountain Big Sagebrush)	1,700	1,400	850	bluebunch wheatgrass	20
					mountain big sagebrush	15
					slender wheatgrass	10
					Letterman's needlegrass	5
					Nevada bluegrass	5
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					common yarrow	5
					elk sedge	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sheep fescue	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
180:						
Henefer	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
181:						
Yeates Hollow	Mountain Stony Loam (Mountain Big Sagebrush)	1,700	1,400	850	bluebunch wheatgrass	20
					mountain big sagebrush	15
					slender wheatgrass	10
					Letterman's needlegrass	5
					Nevada bluegrass	5
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					common yarrow	5
					elk sedge	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sheep fescue	5
Henefer	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
182:						
Yeates Hollow	Mountain Stony Loam (Mountain Big Sagebrush)	1,700	1,400	850	bluebunch wheatgrass	20
					mountain big sagebrush	15
					slender wheatgrass	10
					Letterman's needlegrass	5
					Nevada bluegrass	5
					Saskatoon serviceberry	5
					antelope bitterbrush	5
					birchleaf mountain mahogany	5
					common yarrow	5
					elk sedge	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					miscellaneous shrubs	5
					sheep fescue	5

Table 7.--Rangeland or forestland understory and characteristic plant communities--continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lbs./acre	Lbs./acre	Lbs./acre		Pct.
182:						
Henefer	Mountain Loam (Oak)	2,300	1,650	1,450	Gambel's oak	30
					mountain snowberry	10
					miscellaneous shrubs	10
					Kentucky bluegrass	5
					Oregongrape	5
					Saskatoon serviceberry	5
					bluebunch wheatgrass	5
					elk sedge	5
					mountain big sagebrush	5
					miscellaneous perennial forbs	5
					miscellaneous perennial grasses	5
					slender wheatgrass	5
					thickleaf peavine	5
183:						
Water	---	---	---	---	---	---
184:						
Dams	---	---	---	---	---	---

Table 8.--Forest productivity

Map symbol and soil name	Potential productivity		
	Common trees	Site index	Volume of wood fiber
			cu ft/ac
101:			
Agassiz	---	---	---
Rock outcrop	---	---	---
102:			
Ant Flat	---	---	---
103:			
Ant Flat	---	---	---
104:			
Ant Flat	---	---	---
105:			
Ant Flat	---	---	---
Henefer	---	---	---
Skutum	quaking aspen	75	43
106:			
Ayoub	---	---	---
107:			
Ayoub	---	---	---
Dunford	---	---	---
Melling	---	---	---
108:			
Ayoub	---	---	---
Dunford	---	---	---
Melling	---	---	---
109:			
Cluff	Engelmann's spruce	80	72
	Rocky Mountain Douglas-fir	50	29
	subalpine fir	60	43
	white fir	50	86
110:			
Cluff	Engelmann's spruce	80	72
	Rocky Mountain Douglas-fir	50	29
	subalpine fir	60	43
	white fir	50	86
111:			
Crandall	Engelmann's spruce	80	72
	Rocky Mountain Douglas-fir	50	29
	subalpine fir	60	43
	white fir	50	86
112:			
Crandall	---	---	---

Table 8.--Forest productivity--continued

Map symbol and soil name	Potential productivity		
	Common trees	Site index	Volume of wood fiber
			cu ft/ac
112:			
Lucky Star	quaking aspen	77	45
113:			
Crandall	---	---	---
Lucky Star	quaking aspen	77	45
Starley Family	---	---	---
114:			
Crandall	---	---	---
Starley Family	---	---	---
Rock outcrop	---	---	---
115:			
Dastrup	---	---	---
116:			
Dastrup	---	---	---
117:			
Dastrup	---	---	---
118:			
Dromedary	Douglas fir (obsolete)	65	35
Rock outcrop	---	---	---
119:			
Duchesne	lodgepole pine	40	40
120:			
Duchesne	lodgepole pine	40	40
121:			
Duchesne	lodgepole pine	40	40
122:			
Duchesne	lodgepole pine	40	40
Haydenfork	Engelmann's spruce	40	29
123:			
Dumps, mines	---	---	---
124:			
Dunford	---	---	---
Ayoub	---	---	---
Melling	---	---	---
125:			
Dunford	---	---	---
Ayoub	---	---	---

Table 8.--Forest productivity--continued

Map symbol and soil name	Potential productivity		
	Common trees	Site index	Volume of wood fiber
			cu ft/ac
125:			
Melling	---	---	---
126:			
Echocreek	---	---	---
127:			
Echocreek	---	---	---
Kovich	---	---	---
128:			
Fewkes	---	---	---
129:			
Fewkes	---	---	---
130:			
Fewkes	---	---	---
131:			
Fewkes	---	---	---
Heiners	---	---	---
132:			
Fewkes	---	---	---
Hades	---	---	---
133:			
Fewkes	---	---	---
Hades	---	---	---
134:			
Fewkes	---	---	---
Yeates Hollow	---	---	---
135:			
Fewkes	---	---	---
Yeates Hollow	---	---	---
136:			
Hades	---	---	---
Agassiz	---	---	---
Rock outcrop	---	---	---
137:			
Hades	---	---	---
Fewkes	---	---	---
138:			
Hades	---	---	---
Fewkes	---	---	---

Table 8.--Forest productivity--continued

Map symbol and soil name	Potential productivity		
	Common trees	Site index	Volume of wood fiber
			cu ft/ac
139:			
Harter	---	---	---
140:			
Heiners	---	---	---
Fewkes	---	---	---
141:			
Heiners	---	---	---
Fewkes	---	---	---
Hades	---	---	---
142:			
Henefer	---	---	---
Harter	---	---	---
143:			
Horrocks	---	---	---
Agassiz	---	---	---
144:			
Horrocks	---	---	---
Cutoff	---	---	---
145:			
Horrocks	---	---	---
Cutoff	---	---	---
146:			
Horrocks	---	---	---
Hades	---	---	---
147:			
Hovarka	---	---	---
Millcreek	---	---	---
148:			
Jana	Utah juniper	40	12
Richsum	---	---	---
Rock outcrop	---	---	---
149:			
Kovich	---	---	---
Toddspan	---	---	---
150:			
Lucky Star	quaking aspen	77	45

Table 8.--Forest productivity--continued

Map symbol and soil name	Potential productivity		
	Common trees	Site index	Volume of wood fiber
			cu ft/ac
151:			
Lucky Star	quaking aspen	77	45
152:			
Lucky Star	quaking aspen	75	45
Dromedary	Douglas fir (obsolete)	65	35
153:			
Lucky Star	quaking aspen	70	45
Fewkes	---	---	---
154:			
Manila	---	---	---
Ant Flat	---	---	---
155:			
Manila	---	---	---
Ant Flat	---	---	---
156:			
Manila	---	---	---
Harter	---	---	---
157:			
Manila	---	---	---
Henefer	---	---	---
158:			
Melling	---	---	---
Ayoub	---	---	---
Rock outcrop	---	---	---
159:			
Parkcity	quaking aspen	75	43
Dromedary	Douglas fir (obsolete)	65	35
160:			
Parkcity	quaking aspen	75	43
Dromedary	Douglas fir (obsolete)	65	35
161:			
Pits	---	---	---
162:			
Richsum	---	---	---
Heiners	---	---	---

Table 8.--Forest productivity--continued

Map symbol and soil name	Potential productivity		
	Common trees	Site index	Volume of wood fiber
			cu ft/ac
163:			
Richsum	---	---	---
Heiners	---	---	---
164:			
Rock outcrop	---	---	---
Agassiz	---	---	---
Starley Family	---	---	---
Hades	---	---	---
Parkcity	quaking aspen	75	43
165:			
Rock outcrop	---	---	---
Starley Family	---	---	---
166:			
Sessions	---	---	---
Haydenfork	---	---	---
167:			
Sessions	---	---	---
Skutum	quaking aspen	75	43
168:			
Sessions	---	---	---
Uinta	Engelmann's spruce	40	29
	subalpine fir	40	29
169:			
Skutum	quaking aspen	75	43
170:			
Skutum	quaking aspen	75	43
171:			
Skutum	quaking aspen	75	43
172:			
Skutum	quaking aspen	75	43
Uinta	Engelmann's spruce	40	29
	subalpine fir	40	29
173:			
Skutum	quaking aspen	75	43
Uinta	Engelmann's spruce	40	29
	subalpine fir	40	29
174:			
Snyderville	---	---	---

Table 8.--Forest productivity--continued

Map symbol and soil name	Potential productivity		
	Common trees	Site index	Volume of wood fiber
			cu ft/ac
175:			
Snyderville	---	---	---
176:			
Snyderville	---	---	---
177:			
Uinta	Engelmann's spruce	40	29
	subalpine fir	40	29
Duchesne	lodgepole pine	40	29
178:			
Wanship	---	---	---
179:			
Wanship	---	---	---
Kovich	---	---	---
180:			
Yeates Hollow	---	---	---
Henefer	---	---	---
181:			
Yeates Hollow	---	---	---
Henefer	---	---	---
182:			
Yeates Hollow	---	---	---
Henefer	---	---	---
183:			
Water	---	---	---
184:			
Dams	---	---	---

Table 9A.--Recreation

(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
101:							
Agassiz	60	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	Content of large stones	1.00
		Content of large stones	0.42	Content of large stones	0.42	Depth to bedrock	1.00
						Gravel content	0.71
Rock outcrop	25	Not rated		Not rated		Not rated	
102:							
Ant Flat	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.41	Restricted permeability	0.41	Slope	0.77
						Restricted permeability	0.41
103:							
Ant Flat	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
104:							
Ant Flat	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
105:							
Ant Flat	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
Henefer	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Restricted permeability	0.41
Skutum	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
106:							
Ayoub	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.17
						Depth to bedrock	0.10

Table 9A.--Recreation--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
107:							
Ayoub	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.17
						Depth to bedrock	0.10
Dunford	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Gravel content	0.26
						Depth to bedrock	0.06
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00		
		Content of large stones	0.61	Content of large stones	0.61	Slope	1.00
						Depth to bedrock	1.00
						Gravel content	1.00
108:							
Ayoub	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.17
						Depth to bedrock	0.10
Dunford	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Gravel content	0.26
						Depth to bedrock	0.06
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00		
		Content of large stones	0.61	Content of large stones	0.61	Slope	1.00
						Depth to bedrock	1.00
						Gravel content	1.00
109:							
Cluff	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
110:							
Cluff	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21

Table 9A.--Recreation--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
111:							
Crandall	90	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.16	Gravel content	0.16	Slope	0.77
						Dusty	0.50
						Content of large stones	0.03
112:							
Crandall	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Gravel content	0.16	Gravel content	0.16	Dusty	0.50
						Content of large stones	0.03
Lucky Star	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.22	Gravel content	0.22	Slope	1.00
						Content of large stones	0.01
113:							
Crandall	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	1.00
		Gravel content	0.16	Gravel content	0.16	Dusty	0.50
						Content of large stones	0.03
Lucky Star	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
Starley Family	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Restricted permeability	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Slope	1.00
		Content of large stones	0.20	Content of large stones	0.20	Content of large stones	1.00
						Gravel content	0.83
114:							
Crandall	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Gravel content	0.16	Gravel content	0.16	Dusty	0.50
						Content of large stones	0.03
Starley Family	30	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.20	Content of large stones	0.20	Content of large stones	1.00
						Gravel content	0.83

Table 9A.--Recreation--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
114:							
Rock outcrop	10	Not rated		Not rated		Not rated	
115:							
Dastrup	90	Not limited		Not limited		Somewhat limited	
						Slope	0.48
116:							
Dastrup	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
117:							
Dastrup	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
118:							
Dromedary	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Content of large stones	0.03
Rock outcrop	15	Not rated		Not rated		Not rated	
119:							
Duchesne	85	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
						Gravel content	0.86
120:							
Duchesne	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	1.00
						Gravel content	0.86
121:							
Duchesne	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	1.00
						Gravel content	0.86
122:							
Duchesne	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.18	Content of large stones	0.18	Slope	1.00
						Gravel content	0.86
Haydenfork	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.95	Depth to saturated zone	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
						Slope	0.05

Table 9A.--Recreation--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
123:							
Dumps, Mines	100	Not rated		Not rated		Not rated	
124:							
Dunford	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Gravel content	0.26
						Depth to bedrock	0.06
Ayoub	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.17
						Depth to bedrock	0.10
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.61	Content of large stones	0.61	Depth to bedrock	1.00
						Gravel content	1.00
125:							
Dunford	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Gravel content	0.26
						Depth to bedrock	0.06
Ayoub	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.17
						Depth to bedrock	0.10
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.61	Content of large stones	0.61	Depth to bedrock	1.00
						Gravel content	1.00
126:							
Echocreek	85	Not limited		Not limited		Somewhat limited	
						Slope	0.77
127:							
Echocreek	65	Not limited		Not limited		Somewhat limited	
						Slope	0.94

Table 9A.--Recreation--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
127:							
Kovich	20	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	0.21	Flooding	0.60
		Restricted permeability	0.21			Restricted permeability	0.21
						Slope	0.05
						Content of large stones	0.01
128:							
Fewkes	85	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
						Slope	0.77
129:							
Fewkes	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
130:							
Fewkes	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
131:							
Fewkes	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
Heiners	25	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
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
132:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
133:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
134:							
Fewkes	55	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
		Slope	0.16	Slope	0.16	Slope	1.00

Table 9A.--Recreation--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
134:							
Yeates Hollow-------	30	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.41	Restricted permeability	0.41	Content of large stones	1.00
		Content of large stones	0.35	Content of large stones	0.35	Slope	1.00
		Slope	0.04	Slope	0.04	Gravel content	0.67
						Restricted permeability	0.41
135:							
Fewkes--------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
Yeates Hollow-------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Content of large stones	1.00
		Content of large stones	0.35	Content of large stones	0.35	Gravel content	0.67
						Restricted permeability	0.41
136:							
Hades---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Agassiz-------------	30	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
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	1.00
						Gravel content	0.71
Rock outcrop--------	10	Not rated		Not rated		Not rated	
137:							
Hades---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fewkes--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
138:							
Hades---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fewkes--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
139:							
Harter--------------	85	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Slope	1.00
						Restricted permeability	0.41

Table 9A.--Recreation--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
140:							
Heiners	60	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
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
141:							
Heiners	35	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
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
Hades	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
142:							
Henefer	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Restricted permeability	0.41
Harter	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Restricted permeability	0.41
143:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	1.00
						Gravel content	1.00
Agassiz	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
		Content of large stones	0.42	Content of large stones	0.42	Content of large stones	1.00
						Gravel content	0.71

Table 9A.--Recreation--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
144:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	1.00
						Gravel content	1.00
Cutoff	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.98	Gravel content	0.98	Slope	1.00
						Content of large stones	0.20
						Depth to bedrock	0.01
145:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	1.00
						Gravel content	1.00
Cutoff	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.98	Gravel content	0.98	Slope	1.00
						Content of large stones	0.20
						Depth to bedrock	0.01
146:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	1.00
						Gravel content	1.00
Hades	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
147:							
Hovarka	45	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to saturated zone	0.95	Flooding	1.00
		Depth to saturated zone	1.00	Flooding	0.40	Depth to saturated zone	1.00
Millcreek	40	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Slope	0.05
						Content of large stones	0.01
148:							
Jana	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Gravel content	0.96	Gravel content	0.96	Depth to bedrock	1.00
						Content of large stones	0.32
Richsum	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 9A.--Recreation--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
148:							
Rock outcrop--------	10	Not rated		Not rated		Not rated	
149:							
Kovich----------	45	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to	0.75	Depth to	1.00
		Depth to	1.00	saturated zone		saturated zone	
		saturated zone		Restricted	0.21	Flooding	0.60
		Restricted	0.21	permeability		Restricted	0.21
		permeability				permeability	
						Slope	0.05
						Content of large	0.01
						stones	
Toddspan----------	40	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to	0.95	Depth to	1.00
		Depth to	1.00	saturated zone		saturated zone	
		saturated zone		Restricted	0.21	Flooding	0.60
		Restricted	0.21	permeability		Restricted	0.21
		permeability				permeability	
						Slope	0.05
						Content of large	0.01
						stones	
150:							
Lucky Star----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large	0.01
						stones	
151:							
Lucky Star----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large	0.01
						stones	
152:							
Lucky Star----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large	0.01
						stones	
Dromedary----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Content of large	0.03
						stones	
153:							
Lucky Star----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large	0.01
						stones	

Table 9A.--Recreation--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
153:							
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.25	Gravel content	0.25	Gravel content	1.00
154:							
Manila	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
Ant Flat	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.41	Restricted permeability	0.41	Slope	0.77
						Restricted permeability	0.41
155:							
Manila	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
Ant Flat	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
156:							
Manila	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.41	Restricted permeability	0.41	Slope	0.77
						Restricted permeability	0.41
Harter	40	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Slope	0.77
						Restricted permeability	0.41
157:							
Manila	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Restricted permeability	0.41
Henefer	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Restricted permeability	0.41
158:							
Melling	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00		
		Content of large stones	0.61	Content of large stones	0.61	Slope	1.00
						Depth to bedrock	1.00
						Gravel content	1.00

Table 9A.--Recreation--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
158:							
Ayoub	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Gravel content	0.17
						Depth to bedrock	0.10
Rock outcrop	10	Not rated		Not rated		Not rated	
159:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Content of large stones	0.03
160:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.02	Gravel content	0.02	Gravel content	1.00
						Content of large stones	0.03
161:							
Pits, Gravel	100	Not rated		Not rated		Not rated	
162:							
Richsum	70	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Heiners	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
						Content of large stones	0.01
163:							
Richsum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 9A.--Recreation--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
163:							
Heiners	30	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
		Gravel content	0.22	Gravel content	0.22	Gravel content	1.00
						Content of large stones	0.01
164:							
Rock outcrop	90	Not rated		Not rated		Not rated	
165:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Starley Family	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Restricted permeability	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Slope	1.00
		Content of large stones	0.20	Content of large stones	0.20	Content of large stones	1.00
						Gravel content	0.83
166:							
Sessions	60	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Dusty	0.50
						Restricted permeability	0.41
						Content of large stones	0.01
Haydenfork	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
						Slope	0.05
167:							
Sessions	55	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Dusty	0.50
						Restricted permeability	0.41
						Content of large stones	0.01
Skutum	30	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.96	Restricted permeability	0.96	Slope	1.00
						Restricted permeability	0.96

Table 9A.--Recreation--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
168:							
Sessions	60	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Dusty	0.50
		Slope	0.16	Slope	0.16	Restricted permeability	0.41
						Content of large stones	0.01
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Content of large stones	0.84
						Gravel content	0.26
						Restricted permeability	0.21
169:							
Skutum	85	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.96	Restricted permeability	0.96	Slope	1.00
		Slope	0.16	Slope	0.16	Restricted permeability	0.96
170:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
171:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
172:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Content of large stones	0.84
						Gravel content	0.26
						Restricted permeability	0.21
173:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96

Table 9A.--Recreation--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
173:							
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Content of large stones	0.84
						Gravel content	0.26
						Restricted permeability	0.21
174:							
Snyderville	85	Not limited		Not limited		Somewhat limited	
						Content of large stones	0.92
						Gravel content	0.22
						Slope	0.21
175:							
Snyderville	85	Not limited		Not limited		Very limited	
						Slope	1.00
						Content of large stones	0.92
						Gravel content	0.22
176:							
Snyderville	85	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.16	Gravel content	0.16	Gravel content	1.00
						Slope	0.21
						Content of large stones	0.03
177:							
Uinta	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Content of large stones	0.84
						Gravel content	0.26
						Restricted permeability	0.21
Duchesne	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	1.00
						Gravel content	0.86
178:							
Wanship	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.06	Depth to saturated zone	0.14
		Depth to saturated zone	0.14			Slope	0.05
						Content of large stones	0.01

Table 9A.--Recreation--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
179:							
Wanship	55	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.06	Depth to saturated zone	0.14
		Depth to saturated zone	0.14			Slope	0.05
						Content of large stones	0.01
Kovich	30	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	0.21	Flooding	0.60
		Restricted permeability	0.21			Restricted permeability	0.21
						Slope	0.05
						Content of large stones	0.01
180:							
Yeates Hollow	55	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.41	Restricted permeability	0.41	Content of large stones	1.00
		Content of large stones	0.35	Content of large stones	0.35	Slope	1.00
		Slope	0.04	Slope	0.04	Gravel content	0.67
						Restricted permeability	0.41
Henefer	30	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Slope	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.41
181:							
Yeates Hollow	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Content of large stones	1.00
		Content of large stones	0.35	Content of large stones	0.35	Gravel content	0.67
						Restricted permeability	0.41
Henefer	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Restricted permeability	0.41
182:							
Yeates Hollow	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Content of large stones	1.00
		Content of large stones	0.35	Content of large stones	0.35	Gravel content	0.67
						Restricted permeability	0.41

Table 9A.--Recreation--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
182:							
Henefer	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Restricted permeability	0.41	Restricted permeability	0.41	Gravel content	1.00
		Gravel content	0.25	Gravel content	0.25	Restricted permeability	0.41
183:							
Water	100	Not rated		Not rated		Not rated	
184:							
Dams	100	Not rated		Not rated		Not rated	

Table 9B.--Recreation

(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
101:							
Agassiz	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42	Content of large stones	0.42	Droughty	1.00
						Content of large stones	1.00
						Depth to bedrock	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
102:							
Ant Flat	85	Not limited		Not limited		Not limited	
103:							
Ant Flat	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
104:							
Ant Flat	90	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
105:							
Ant Flat	40	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
Henefer	30	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Gravel content	0.25
Skutum	20	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
106:							
Ayoub	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Depth to bedrock	0.10
						Slope	0.04
107:							
Ayoub	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Content of large stones	0.01	Slope	1.00
		Content of large stones	0.01			Content of large stones	0.99
						Depth to bedrock	0.10
Dunford	20	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
						Content of large stones	0.84
						Depth to bedrock	0.06

Table 9B.--Recreation--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
107:							
Melling	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Content of large stones	0.61	Depth to bedrock	1.00
		Content of large stones	0.61			Slope	1.00
						Content of large stones	1.00
						Droughty	1.00
108:							
Ayoub	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Depth to bedrock	0.10
Dunford	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Depth to bedrock	0.06
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Content of large stones	0.61	Content of large stones	0.61	Slope	1.00
						Content of large stones	1.00
						Droughty	1.00
109:							
Cluff	85	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
110:							
Cluff	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
111:							
Crandall	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Gravel content	0.16
						Content of large stones	0.03
112:							
Crandall	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Dusty	0.50	Slope	1.00
		Dusty	0.50			Gravel content	0.16
						Content of large stones	0.03
Lucky Star	30	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Gravel content	0.22
						Droughty	0.13
						Content of large stones	0.01
113:							
Crandall	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Gravel content	0.16
						Content of large stones	0.03

Table 9B.--Recreation--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
113:							
Lucky Star----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
						Droughty	0.13
						Content of large stones	0.01
Starley Family------	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.20	Content of large stones	0.20	Droughty	1.00
						Content of large stones	1.00
114:							
Crandall----------	50	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Slope	0.08			Gravel content	0.16
						Content of large stones	0.03
Starley Family------	30	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.20	Content of large stones	0.20	Droughty	1.00
		Slope	0.08			Content of large stones	1.00
						Slope	1.00
Rock outcrop--------	10	Not rated		Not rated		Not rated	
115:							
Dastrup----------	90	Not limited		Not limited		Not limited	
116:							
Dastrup----------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.16
117:							
Dastrup----------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
118:							
Dromedary----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.06
						Content of large stones	0.03
						Gravel content	0.02
Rock outcrop--------	15	Not rated		Not rated		Not rated	
119:							
Duchesne----------	85	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	1.00
						Droughty	0.17
						Slope	0.16

Table 9B.--Recreation--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
120:							
Duchesne	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Content of large stones	0.18	Slope	1.00
		Content of large stones	0.18			Content of large stones	1.00
						Droughty	0.17
121:							
Duchesne	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	1.00
						Droughty	0.17
122:							
Duchesne	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Content of large stones	0.18	Content of large stones	1.00
		Content of large stones	0.18			Slope	1.00
						Droughty	0.17
Haydenfork	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	0.89	Depth to saturated zone	0.89	Depth to saturated zone	0.95
123:							
Dumps, Mines	100	Not rated		Not rated		Not rated	
124:							
Dunford	45	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
						Content of large stones	0.84
						Depth to bedrock	0.06
Ayoub	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Content of large stones	0.01	Slope	1.00
		Content of large stones	0.01			Content of large stones	0.99
						Depth to bedrock	0.10
Melling	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Content of large stones	0.61	Depth to bedrock	1.00
		Content of large stones	0.61			Slope	1.00
						Content of large stones	1.00
						Droughty	1.00
125:							
Dunford	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
						Depth to bedrock	0.06
Ayoub	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.99
						Depth to bedrock	0.10

Table 9B.--Recreation--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
125:							
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Content of large stones	0.61	Content of large stones	0.61	Slope	1.00
						Content of large stones	1.00
						Droughty	1.00
126:							
Echocreek	85	Not limited		Not limited		Not limited	
127:							
Echocreek	65	Not limited		Not limited		Not limited	
Kovich	20	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
						Flooding	0.60
						Content of large stones	0.01
128:							
Fewkes	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.25
129:							
Fewkes	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Gravel content	0.25
130:							
Fewkes	85	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
						Gravel content	0.25
131:							
Fewkes	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.25
Heiners	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	1.00
						Droughty	0.99
						Gravel content	0.22
						Content of large stones	0.01
132:							
Fewkes	55	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
						Gravel content	0.25
Hades	30	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
133:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.25

Table 9B.--Recreation--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
133:							
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
134:							
Fewkes	55	Not limited		Not limited		Somewhat limited	
						Gravel content	0.25
						Slope	0.16
Yeates Hollow	30	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.35	Content of large stones	0.35	Content of large stones	1.00
						Slope	0.04
						Droughty	0.01
135:							
Fewkes	55	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Gravel content	0.25
Yeates Hollow	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Content of large stones	0.35	Slope	1.00
		Content of large stones	0.35			Content of large stones	1.00
						Droughty	0.01
136:							
Hades	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Agassiz	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Content of large stones	0.42	Content of large stones	0.42	Slope	1.00
						Droughty	1.00
						Content of large stones	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	
137:							
Hades	55	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
Fewkes	30	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Gravel content	0.25
138:							
Hades	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.25
139:							
Harter	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.25

Table 9B.--Recreation--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
140:							
Heiners	60	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Depth to bedrock	1.00
						Droughty	0.99
						Gravel content	0.22
						Content of large stones	0.01
Fewkes	25	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Gravel content	0.25
141:							
Heiners	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	1.00
						Droughty	0.99
						Gravel content	0.22
						Content of large stones	0.01
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.25
Hades	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
142:							
Henefer	45	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Gravel content	0.25
Harter	40	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Gravel content	0.25
143:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	1.00
						Droughty	0.01
Agassiz	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Content of large stones	0.42	Content of large stones	0.42	Slope	1.00
						Droughty	1.00
						Content of large stones	1.00
144:							
Horrocks	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Content of large stones	0.14	Slope	1.00
		Content of large stones	0.14			Content of large stones	1.00
						Droughty	0.01

Table 9B.--Recreation--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
144:							
Cutoff	25	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Gravel content	0.98
						Content of large stones	0.20
						Droughty	0.01
						Depth to bedrock	0.01
145:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	1.00
						Droughty	0.01
Cutoff	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.98
						Content of large stones	0.20
						Droughty	0.01
						Depth to bedrock	0.01
146:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Content of large stones	0.14	Content of large stones	1.00
						Droughty	0.01
Hades	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
147:							
Hovarka	45	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.89	Depth to saturated zone	0.89	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.95
Millcreek	40	Not limited		Not limited		Somewhat limited	
						Content of large stones	0.01
148:							
Jana	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	1.00
						Depth to bedrock	1.00
						Gravel content	0.96
						Content of large stones	0.32
Richsum	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	

Table 9B.--Recreation--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
149:							
Kovich	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
						Flooding	0.60
						Content of large stones	0.01
Toddspan	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.89	Depth to saturated zone	0.89	Depth to saturated zone	0.95
						Flooding	0.60
						Content of large stones	0.01
150:							
Lucky Star	85	Somewhat limited		Not limited		Very limited	
		Slope	0.92			Slope	1.00
						Gravel content	0.22
						Droughty	0.13
						Content of large stones	0.01
151:							
Lucky Star	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
						Droughty	0.13
						Content of large stones	0.01
152:							
Lucky Star	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
						Droughty	0.13
						Content of large stones	0.01
Dromedary	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.06
						Content of large stones	0.03
						Gravel content	0.02
153:							
Lucky Star	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
						Droughty	0.13
						Content of large stones	0.01
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.25
154:							
Manila	50	Not limited		Not limited		Somewhat limited	
						Slope	0.63

Table 9B.--Recreation--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
154:							
Ant Flat	35	Not limited		Not limited		Not limited	
155:							
Manila	50	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Ant Flat	35	Not limited		Not limited		Somewhat limited	
						Slope	0.63
156:							
Manila	50	Not limited		Not limited		Not limited	
Harter	40	Not limited		Not limited		Somewhat limited	
						Gravel content	0.25
157:							
Manila	60	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Henefer	25	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Gravel content	0.25
158:							
Melling	50	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.61	Content of large stones	0.61	Depth to bedrock	1.00
		Slope	0.50			Content of large stones	1.00
						Droughty	1.00
						Slope	1.00
Ayoub	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Content of large stones	0.01	Slope	1.00
		Content of large stones	0.01			Content of large stones	0.99
						Depth to bedrock	0.10
Rock outcrop	10	Not rated		Not rated		Not rated	
159:							
Parkcity	70	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Gravel content	0.22
						Content of large stones	0.01
Dromedary	20	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Droughty	0.06
						Content of large stones	0.03
						Gravel content	0.02
160:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.22
						Content of large stones	0.01

Table 9B.--Recreation--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
160:							
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Droughty	0.06
						Content of large stones	0.03
						Gravel content	0.02
161:							
Pits, Gravel	100	Not rated		Not rated		Not rated	
162:							
Richsum	70	Not limited		Not limited		Somewhat limited	
						Slope	0.16
Heiners	20	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	0.99
						Gravel content	0.22
						Slope	0.16
						Content of large stones	0.01
163:							
Richsum	60	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
Heiners	30	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
						Depth to bedrock	1.00
						Droughty	0.99
						Gravel content	0.22
						Content of large stones	0.01
164:							
Rock outcrop	90	Not rated		Not rated		Not rated	
165:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Starley Family	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.20	Content of large stones	0.20	Droughty	1.00
						Content of large stones	1.00
166:							
Sessions	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Content of large stones	0.01
Haydenfork	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
167:							
Sessions	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Content of large stones	0.01

Table 9B.--Recreation--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
167:							
Skutum	30	Not limited		Not limited		Not limited	
168:							
Sessions	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Slope	0.16
						Content of large stones	0.01
Uinta	25	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Content of large stones	0.84
169:							
Skutum	85	Not limited		Not limited		Somewhat limited	
						Slope	0.16
170:							
Skutum	85	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
171:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
172:							
Skutum	60	Somewhat limited		Not limited		Very limited	
		Slope	0.98			Slope	1.00
Uinta	25	Somewhat limited		Not limited		Very limited	
		Slope	0.98			Slope	1.00
						Content of large stones	0.84
173:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.84
174:							
Snyderville	85	Not limited		Not limited		Somewhat limited	
						Content of large stones	0.92
						Droughty	0.04
175:							
Snyderville	85	Not limited		Not limited		Somewhat limited	
						Content of large stones	0.92
						Droughty	0.04
176:							
Snyderville	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.16
						Droughty	0.04
						Content of large stones	0.03

Table 9B.--Recreation--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
177:							
Uinta	55	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
						Content of large stones	0.84
Duchesne	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.82	Content of large stones	0.18	Content of large stones	1.00
		Content of large stones	0.18			Slope	1.00
						Droughty	0.17
178:							
Wanship	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.06
						Content of large stones	0.01
179:							
Wanship	55	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.06
						Content of large stones	0.01
Kovich	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
						Flooding	0.60
						Content of large stones	0.01
180:							
Yeates Hollow	55	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.35	Content of large stones	0.35	Content of large stones	1.00
						Slope	0.04
						Droughty	0.01
Henefer	30	Not limited		Not limited		Somewhat limited	
						Gravel content	0.25
						Slope	0.04
181:							
Yeates Hollow	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.92	Content of large stones	0.35	Slope	1.00
		Content of large stones	0.35			Content of large stones	1.00
						Droughty	0.01
Henefer	30	Somewhat limited		Not limited		Very limited	
		Slope	0.82			Slope	1.00
						Gravel content	0.25
182:							
Yeates Hollow	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.35	Content of large stones	0.35	Content of large stones	1.00
						Droughty	0.01

Table 9B.--Recreation--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
182:							
Henefer	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.25
183:							
Water	100	Not rated		Not rated		Not rated	
184:							
Dams	100	Not rated		Not rated		Not rated	

Table 10.--Wildlife habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable.)

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
101:											
Agassiz	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---
102:											
Ant Flat	Fair	Good	Good	Fair	Good	Very poor	Very poor	Fair	Good	Very poor	Good
103:											
Ant Flat	Poor	Fair	Fair	Fair	Good	Very poor	Very poor	Fair	Fair	Very poor	Good
104:											
Ant Flat	Poor	Fair	Fair	Fair	Good	Very poor	Very poor	Fair	Fair	Very poor	Good
105:											
Ant Flat	Poor	Fair	Fair	Fair	Good	Very poor	Very poor	Fair	Fair	Very poor	Good
Henefer	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Skutum	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
106:											
Ayoub	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Poor	Very poor	Fair
107:											
Ayoub	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Dunford	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Poor	Very poor	Fair
Melling	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
108:											
Ayoub	Very poor	Very poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Poor	Very poor	Fair
Dunford	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Melling	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
109:											
Cluff	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
110:											
Cluff	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good

Table 10.--Wildlife habitat--continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
111:											
Crandall	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
112:											
Crandall	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Lucky Star	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
113:											
Crandall	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Fair	Fair	Very poor	Good
Lucky Star	Very poor	Very poor	Good	Fair	Good	Poor	Very poor	Poor	Poor	Very poor	Good
Starley Family	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
114:											
Crandall	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Starley Family	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---
115:											
Dastrup	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
116:											
Dastrup	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
117:											
Dastrup	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
118:											
Dromedary	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---
119:											
Duchesne	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
120:											
Duchesne	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
121:											
Duchesne	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
122:											
Duchesne	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good

Table 10.--Wildlife habitat--continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
122:											
Haydenfork	Very poor	Very poor	Poor	Poor	Poor	Good	Good	Very poor	Poor	Good	Poor
123:											
Dumps, Mines	---	---	---	---	---	---	---	---	---	---	---
124:											
Dunford	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Ayoub	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Poor	Very poor	Fair
Melling	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
125:											
Dunford	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Ayoub	Very poor	Very poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Poor	Very poor	Fair
Melling	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
126:											
Echocreek	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
127:											
Echocreek	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Kovich	Very poor	Very poor	Fair	Poor	Fair	Good	Fair	Poor	Fair	Fair	Fair
128:											
Fewkes	Fair	Good	Good	Fair	Good	Very poor	Very poor	Fair	Good	Very poor	Good
129:											
Fewkes	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
130:											
Fewkes	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
131:											
Fewkes	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Heiners	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
132:											
Fewkes	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Hades	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good

Table 10.--Wildlife habitat--continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
133:											
Fewkes	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Hades	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
134:											
Fewkes	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Yeates Hollow	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
135:											
Fewkes	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Yeates Hollow	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
136:											
Hades	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
Agassiz	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---
137:											
Hades	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Fewkes	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
138:											
Hades	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
Fewkes	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
139:											
Harter	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
140:											
Heiners	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
Fewkes	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
141:											
Heiners	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
Fewkes	Poor	Very poor	Very poor	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair

Table 10.--Wildlife habitat--continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
141:											
Hades	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
142:											
Henefer	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Harter	Poor	Fair	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
143:											
Horrocks	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Agassiz	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
144:											
Horrocks	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Cutoff	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
145:											
Horrocks	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Cutoff	Very poor	Very poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
146:											
Horrocks	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Hades	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
147:											
Hovarka	Very poor	Very poor	Fair	Fair	Fair	Good	Fair	Poor	Fair	Fair	Fair
Millcreek	Very poor	Very poor	Fair	Fair	Fair	Poor	Poor	Poor	Fair	Poor	Fair
148:											
Jana	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
Richsum	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---
149:											
Kovich	Very poor	Very poor	Fair	Poor	Fair	Good	Fair	Poor	Fair	Fair	Fair
Toddspan	Very poor	Very poor	Fair	Fair	Fair	Good	Fair	Poor	Fair	Fair	Fair

Table 10.--Wildlife habitat--continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
150:											
Lucky Star	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
151:											
Lucky Star	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
152:											
Lucky Star	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
Dromedary	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Very poor	Fair	Very poor	Fair
153:											
Lucky Star	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
Fewkes	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
154:											
Manila	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Ant Flat	Fair	Good	Good	Fair	Good	Very poor	Very poor	Fair	Good	Very poor	Good
155:											
Manila	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Ant Flat	Poor	Fair	Fair	Fair	Good	Very poor	Very poor	Fair	Fair	Very poor	Good
156:											
Manila	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Harter	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
157:											
Manila	Fair	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
Henefer	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
158:											
Melling	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
Ayoub	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Poor	Very poor	Fair
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---
159:											
Parkcity	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good

Table 10.--Wildlife habitat--continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
159:											
Dromedary	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
160:											
Parkcity	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
Dromedary	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Very poor	Fair	Very poor	Fair
161:											
Pits, Gravel	---	---	---	---	---	---	---	---	---	---	---
162:											
Richsum	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Heiners	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
163:											
Richsum	Poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Heiners	Very poor	Very poor	Poor	Very poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
164:											
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---
Agassiz	Very poor	Very poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
Starley Family	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Hades	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
Parkcity	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
165:											
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---
Starley Family	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
166:											
Sessions	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
Haydenfork	Very poor	Very poor	Poor	Poor	Poor	Good	Good	Very poor	Poor	Good	Poor
167:											
Sessions	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
Skutum	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good

Table 10.--Wildlife habitat--continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
168:											
Sessions	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
Uinta	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Very poor	Fair	Very poor	Fair
169:											
Skutum	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
170:											
Skutum	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
171:											
Skutum	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
172:											
Skutum	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
Uinta	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Very poor	Fair	Very poor	Fair
173:											
Skutum	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor	Good
Uinta	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Very poor	Fair	Very poor	Fair
174:											
Snyderville	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
175:											
Snyderville	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
176:											
Snyderville	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
177:											
Uinta	Very poor	Very poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Duchesne	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
178:											
Wanship	Poor	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair	Good
179:											
Wanship	Poor	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair	Good
Kovich	Very poor	Very poor	Fair	Poor	Fair	Good	Fair	Poor	Fair	Fair	Fair

Table 10.--Wildlife habitat--continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
180:											
Yeates Hollow	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Henefer	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
181:											
Yeates Hollow	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Henefer	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor	Good
182:											
Yeates Hollow	Very poor	Very poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
Henefer	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor	Good
183:											
Water	---	---	---	---	---	---	---	---	---	---	---
184:											
Dams	---	---	---	---	---	---	---	---	---	---	---

Table 11A.--Building site development

(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
101:							
Agassiz	60	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
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
102:							
Ant Flat	85	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
						Slope	0.12
103:							
Ant Flat	85	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Slope	0.63	Shrink-swell	1.00
		Slope	0.63	Shrink-swell	0.50	Slope	1.00
104:							
Ant Flat	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
105:							
Ant Flat	40	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Slope	1.00	Shrink-swell	1.00
		Slope	1.00	Shrink-swell	0.50	Slope	1.00
Henefer	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Skutum	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
106:							
Ayoub	85	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.04	Slope	0.04	Depth to hard bedrock	0.10
107:							
Ayoub	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to hard bedrock	0.10

Table 11A.--Building site development--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
107:							
Dunford	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.06	Shrink-swell	0.50	Depth to hard bedrock	0.06
Melling	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
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	0.63
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
108:							
Ayoub	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to hard bedrock	0.10
Dunford	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.06	Shrink-swell	0.50	Depth to hard bedrock	0.06
Melling	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
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	0.63
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
109:							
Cluff	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
		Content of large stones	0.03	Depth to hard bedrock	0.13	Content of large stones	0.03
				Content of large stones	0.03		
110:							
Cluff	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
		Content of large stones	0.03	Depth to hard bedrock	0.13	Content of large stones	0.03
				Content of large stones	0.03		
111:							
Crandall	90	Not limited		Somewhat limited		Somewhat limited	
				Depth to hard bedrock	0.08	Slope	0.12

Table 11A.--Building site development--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
112:							
Crandall	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.08		
Lucky Star	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03
113:							
Crandall	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.08		
Lucky Star	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03
Starley Family	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.17
114:							
Crandall	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.08		
Starley Family	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.17
Rock outcrop	10	Not rated		Not rated		Not rated	
115:							
Dastrup	90	Not limited		Not limited		Not limited	
116:							
Dastrup	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
117:							
Dastrup	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
118:							
Dromedary	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
		Content of large stones	0.33	Content of large stones	0.33	Content of large stones	0.33

Table 11A.--Building site development--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
118:							
Rock outcrop	15	Not rated		Not rated		Not rated	
119:							
Duchesne	85	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.30	Content of large stones	0.30	Slope	1.00
		Slope	0.16	Slope	0.16	Content of large stones	0.30
120:							
Duchesne	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.30	Content of large stones	0.30	Content of large stones	0.30
121:							
Duchesne	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.30	Content of large stones	0.30	Content of large stones	0.30
122:							
Duchesne	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.30	Content of large stones	0.30	Content of large stones	0.30
Haydenfork	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
123:							
Dumps, Mines	100	Not rated		Not rated		Not rated	
124:							
Dunford	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.06	Shrink-swell	0.50	Depth to hard bedrock	0.06
Ayoub	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to hard bedrock	0.10
Melling	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
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	0.63
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 11A.--Building site development--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
125:							
Dunford	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.06	Shrink-swell	0.50	Depth to hard bedrock	0.06
Ayoub	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to hard bedrock	0.10
Melling	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
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	0.63
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
126:							
Echocreek	85	Not limited		Not limited		Somewhat limited	
						Slope	0.12
127:							
Echocreek	65	Not limited		Not limited		Somewhat limited	
						Slope	0.47
Kovich	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
128:							
Fewkes	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
129:							
Fewkes	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
130:							
Fewkes	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
131:							
Fewkes	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Heiners	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01

Table 11A.--Building site development--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
132:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
133:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
134:							
Fewkes	55	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.16	Slope	0.16	Shrink-swell	0.50
Yeates Hollow	30	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.85	Depth to hard bedrock	0.93	Slope	1.00
		Shrink-swell	0.50	Content of large stones	0.85	Content of large stones	0.85
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
135:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Yeates Hollow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85	Depth to hard bedrock	0.93	Content of large stones	0.85
		Shrink-swell	0.50	Content of large stones	0.85	Shrink-swell	0.50
				Shrink-swell	0.50		
136:							
Hades	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Agassiz	30	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
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	

Table 11A.--Building site development--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
137:							
Hades	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
138:							
Hades	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
139:							
Harter	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
						Shrink-swell	0.50
140:							
Heiners	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
141:							
Heiners	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Hades	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
142:							
Henefer	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Harter	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 11A.--Building site development--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
143:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.27	Content of large stones	0.27	Content of large stones	0.27
Agassiz	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
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
144:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.27	Content of large stones	0.27	Content of large stones	0.27
Cutoff	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Depth to hard bedrock	0.01
145:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.27	Content of large stones	0.27	Content of large stones	0.27
Cutoff	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Depth to hard bedrock	0.01
146:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.27	Content of large stones	0.27	Content of large stones	0.27
Hades	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
147:							
Hovarka	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Millcreek	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.56		

Table 11A.--Building site development--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
148:							
Jana	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	0.02
Richsum	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	
149:							
Kovich	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Toddspan	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
150:							
Lucky Star	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03
151:							
Lucky Star	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03
152:							
Lucky Star	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03
Dromedary	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
		Content of large stones	0.33	Content of large stones	0.33	Content of large stones	0.33
153:							
Lucky Star	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.03	Content of large stones	0.03	Content of large stones	0.03
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 11A.--Building site development--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
154:							
Manila	50	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.63	Slope	0.63	Slope	1.00
Ant Flat	35	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
						Slope	0.12
155:							
Manila	50	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.63	Slope	0.63	Slope	1.00
Ant Flat	35	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Slope	0.63	Shrink-swell	1.00
		Slope	0.63	Shrink-swell	0.50	Slope	1.00
156:							
Manila	50	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	0.12
Harter	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
157:							
Manila	60	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.63	Slope	0.63	Slope	1.00
Henefer	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
158:							
Melling	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to hard bedrock	1.00
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	0.63
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Ayoub	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.10	Slope	1.00	Depth to hard bedrock	0.10
Rock outcrop	10	Not rated		Not rated		Not rated	
159:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
		Content of large stones	0.33	Content of large stones	0.33	Content of large stones	0.33

Table 11A.--Building site development--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
160:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
		Content of large stones	0.33	Content of large stones	0.33	Content of large stones	0.33
161:							
Pits, Gravel	100	Not rated		Not rated		Not rated	
162:							
Richsum	70	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Heiners	20	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Slope	0.16	Slope	0.16	Depth to soft bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
163:							
Richsum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Heiners	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
164:							
Rock outcrop	90	Not rated		Not rated		Not rated	
165:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Starley Family	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17	Content of large stones	0.17	Content of large stones	0.17
166:							
Sessions	60	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	1.00
Haydenfork	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
167:							
Sessions	55	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	1.00

Table 11A.--Building site development--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
167:							
Skutum	30	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
						Shrink-swell	0.50
168:							
Sessions	60	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
169:							
Skutum	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.16	Slope	0.16	Shrink-swell	0.50
170:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
171:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
172:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
173:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
174:							
Snyderville	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Content of large stones	0.18	Content of large stones	0.18	Content of large stones	0.18
175:							
Snyderville	85	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.18	Content of large stones	0.18	Slope	1.00
						Content of large stones	0.18
176:							
Snyderville	85	Not limited		Not limited		Not limited	

Table 11A.--Building site development--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
177:							
Uinta	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Duchesne	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.30	Content of large stones	0.30	Content of large stones	0.30
178:							
Wanship	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.14	Depth to saturated zone	1.00	Depth to saturated zone	0.14
179:							
Wanship	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.14	Depth to saturated zone	1.00	Depth to saturated zone	0.14
Kovich	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
180:							
Yeates Hollow	55	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.85	Depth to hard bedrock	0.93	Slope	1.00
		Shrink-swell	0.50	Content of large stones	0.85	Content of large stones	0.85
		Slope	0.04	Shrink-swell	0.50	Shrink-swell	0.50
				Slope	0.04		
Henefer	30	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Slope	0.04	Slope	1.00
		Slope	0.04			Shrink-swell	0.50
181:							
Yeates Hollow	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85	Depth to hard bedrock	0.93	Content of large stones	0.85
		Shrink-swell	0.50	Content of large stones	0.85	Shrink-swell	0.50
				Shrink-swell	0.50		
Henefer	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50

Table 11A.--Building site development--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
182:							
Yeates Hollow-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.85	Depth to hard bedrock	0.93	Content of large stones	0.85
		Shrink-swell	0.50	Content of large stones	0.85	Shrink-swell	0.50
				Shrink-swell	0.50		
Henefer-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
183:							
Water---------------	100	Not rated		Not rated		Not rated	
184:							
Dams----------------	100	Not rated		Not rated		Not rated	

Table 11B.--Building site development

(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
101:							
Agassiz	60	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Slope	1.00	Droughty	1.00
		Content of large stones	1.00	Content of large stones	1.00	Content of large stones	1.00
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
102:							
Ant Flat	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
103:							
Ant Flat	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Shrink-swell	1.00	Too clayey	0.28		
		Slope	0.63	Cutbanks cave	0.10		
		Frost action	0.50				
104:							
Ant Flat	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
105:							
Ant Flat	40	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	1.00	Too clayey	0.28		
		Slope	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
Henefer	30	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Low strength	1.00	Slope	1.00	Gravel content	0.25
		Shrink-swell	0.50	Too clayey	0.03		
		Frost action	0.50				
Skutum	20	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Low strength	1.00	Slope	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
106:							
Ayoub	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to bedrock	0.10
		Slope	0.04	Slope	0.04	Slope	0.04

Table 11B.--Building site development--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
107:							
Ayoub	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to bedrock	0.10
Dunford	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.84
		Frost action	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.06
		Depth to hard bedrock	0.06				
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to hard bedrock	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Droughty	1.00
		Frost action	0.50				
108:							
Ayoub	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to bedrock	0.10
Dunford	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.84
		Frost action	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.06
		Depth to hard bedrock	0.06				
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to hard bedrock	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Droughty	1.00
		Frost action	0.50				
109:							
Cluff	85	Very limited		Very limited		Very limited	
		Low strength	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to hard bedrock	0.13		
		Shrink-swell	0.50	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
		Content of large stones	0.03	Content of large stones	0.03		

Table 11B.--Building site development--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
110:							
Cluff	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.13		
		Shrink-swell	0.50	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
		Content of large stones	0.03	Content of large stones	0.03		
111:							
Crandall	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.16
				Depth to hard bedrock	0.08	Content of large stones	0.03
112:							
Crandall	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.16
				Depth to hard bedrock	0.08	Content of large stones	0.03
Lucky Star	30	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.22
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.13
						Content of large stones	0.01
113:							
Crandall	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.16
				Depth to hard bedrock	0.08	Content of large stones	0.03
Lucky Star	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.22
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.13
						Content of large stones	0.01
Starley Family	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.17	Droughty	1.00
		Content of large stones	0.17	Cutbanks cave	0.10	Content of large stones	1.00
114:							
Crandall	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.16
				Depth to hard bedrock	0.08	Content of large stones	0.03

Table 11B.--Building site development--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
114:							
Starley Family------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Droughty	1.00
		Frost action	0.50	Content of large stones	0.17	Content of large stones	1.00
		Content of large stones	0.17	Cutbanks cave	0.10	Slope	1.00
Rock outcrop--------	10	Not rated		Not rated		Not rated	
115:							
Dastrup------------	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.22				
116:							
Dastrup------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.16	Slope	0.16
		Low strength	0.22	Cutbanks cave	0.10		
		Slope	0.16				
117:							
Dastrup------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
		Low strength	0.22				
118:							
Dromedary----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Content of large stones	0.33	Droughty	0.06
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.03
		Content of large stones	0.33			Gravel content	0.02
Rock outcrop--------	15	Not rated		Not rated		Not rated	
119:							
Duchesne-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Frost action	0.50	Content of large stones	0.30	Content of large stones	1.00
		Content of large stones	0.30	Slope	0.16	Droughty	0.17
		Slope	0.16	Cutbanks cave	0.10	Slope	0.16
120:							
Duchesne-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.30	Content of large stones	1.00
		Content of large stones	0.30	Cutbanks cave	0.10	Droughty	0.17
121:							
Duchesne-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.30	Content of large stones	1.00
		Content of large stones	0.30	Cutbanks cave	0.10	Droughty	0.17

Table 11B.--Building site development--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
122:							
Duchesne	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Frost action	0.50	Content of large stones	0.30	Slope	1.00
		Content of large stones	0.30	Cutbanks cave	0.10	Droughty	0.17
Haydenfork	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.95
		Depth to saturated zone	0.95	Cutbanks cave	1.00		
		Shrink-swell	0.50				
123:							
Dumps, Mines	100	Not rated		Not rated		Not rated	
124:							
Dunford	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.84
		Frost action	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.06
		Depth to hard bedrock	0.06				
Ayoub	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to bedrock	0.10
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to hard bedrock	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Droughty	1.00
		Frost action	0.50				
125:							
Dunford	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.84
		Frost action	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.06
		Depth to hard bedrock	0.06				
Ayoub	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.99
		Depth to hard bedrock	0.10	Depth to hard bedrock	1.00	Depth to bedrock	0.10

Table 11B.--Building site development--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
125:							
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to hard bedrock	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63	Content of large stones	0.63	Content of large stones	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Droughty	1.00
		Frost action	0.50				
126:							
Echocreek	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
127:							
Echocreek	65	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Kovich	20	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Low strength	1.00	Flooding	0.60	Content of large stones	0.01
		Depth to saturated zone	0.75				
		Shrink-swell	0.50				
128:							
Fewkes	85	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
129:							
Fewkes	85	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.78	Cutbanks cave	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
130:							
Fewkes	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
131:							
Fewkes	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
Heiners	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.99
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.22
						Content of large stones	0.01

Table 11B.--Building site development--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
132:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
133:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
134:							
Fewkes	55	Somewhat limited		Very limited		Somewhat limited	
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50	Slope	0.16	Slope	0.16
		Frost action	0.50				
		Slope	0.16				
Yeates Hollow	30	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	0.93	Content of large stones	1.00
		Content of large stones	0.85	Content of large stones	0.85	Slope	0.04
		Shrink-swell	0.50	Too clayey	0.28	Droughty	0.01
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.04	Slope	0.04		
135:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
Yeates Hollow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.93	Content of large stones	1.00
		Content of large stones	0.85	Content of large stones	0.85	Droughty	0.01
		Shrink-swell	0.50	Too clayey	0.28		
		Frost action	0.50	Cutbanks cave	0.10		

Table 11B.--Building site development--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
136:							
Hades	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
Agassiz	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to hard bedrock	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	
137:							
Hades	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
138:							
Hades	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
139:							
Harter	85	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50	Too clayey	0.28		
		Frost action	0.50				
140:							
Heiners	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.99
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.22
						Content of large stones	0.01

Table 11B.--Building site development--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
140:							
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
141:							
Heiners	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
						Droughty	0.99
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.22
		Content of large stones	0.01	Content of large stones	0.01	Gravel content	0.22
						Content of large stones	0.01
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
Hades	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
142:							
Henefer	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50	Too clayey	0.03		
		Frost action	0.50				
Harter	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50	Too clayey	0.28		
		Frost action	0.50				
143:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	1.00
		Content of large stones	0.27	Content of large stones	0.27	Droughty	0.01
Agassiz	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Depth to hard bedrock	1.00	Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00	Droughty	1.00
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	1.00

Table 11B.--Building site development--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
144:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	1.00
		Content of large stones	0.27	Content of large stones	0.27	Droughty	0.01
Cutoff	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.98
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Content of large stones	0.20
						Droughty	0.01
						Depth to bedrock	0.01
145:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	1.00
		Content of large stones	0.27	Content of large stones	0.27	Droughty	0.01
Cutoff	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.98
		Depth to hard bedrock	0.01	Depth to hard bedrock	1.00	Content of large stones	0.20
						Droughty	0.01
						Depth to bedrock	0.01
146:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	1.00
		Content of large stones	0.27	Content of large stones	0.27	Droughty	0.01
Hades	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
147:							
Hovarka	45	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00			Depth to saturated zone	0.95
		Depth to saturated zone	0.95	Cutbanks cave	1.00		
		Low strength	0.22	Flooding	0.80		
Millcreek	40	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Content of large stones	0.01
		Flooding	0.40	Depth to saturated zone	0.56		

Table 11B.--Building site development--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
148:							
Jana	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Droughty	1.00
						Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.96
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	0.32
Richsum	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
		Low strength	0.22				
Rock outcrop	10	Not rated		Not rated		Not rated	
149:							
Kovich	45	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Flooding	1.00				
		Low strength	1.00	Cutbanks cave	1.00	Flooding	0.60
		Depth to saturated zone	0.75	Flooding	0.60	Content of large stones	0.01
		Shrink-swell	0.50				
Toddspan	40	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.95
		Flooding	1.00				
		Depth to saturated zone	0.95	Cutbanks cave	1.00	Flooding	0.60
				Flooding	0.60	Content of large stones	0.01
150:							
Lucky Star	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.22
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.13
						Content of large stones	0.01
151:							
Lucky Star	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.22
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.13
						Content of large stones	0.01
152:							
Lucky Star	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.22
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.13
						Content of large stones	0.01

Table 11B.--Building site development--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
152:							
Dromedary	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Content of large stones	0.33	Droughty	0.06
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.03
		Content of large stones	0.33			Gravel content	0.02
153:							
Lucky Star	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.22
		Content of large stones	0.03	Content of large stones	0.03	Droughty	0.13
						Content of large stones	0.01
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50				
		Frost action	0.50				
154:							
Manila	50	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Slope	0.63
		Shrink-swell	1.00	Slope	0.63		
		Slope	0.63	Too clayey	0.03		
		Frost action	0.50				
Ant Flat	35	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
155:							
Manila	50	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Slope	0.63
		Shrink-swell	1.00	Slope	0.63		
		Slope	0.63	Too clayey	0.03		
		Frost action	0.50				
Ant Flat	35	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Shrink-swell	1.00	Too clayey	0.28		
		Slope	0.63	Cutbanks cave	0.10		
		Frost action	0.50				
156:							
Manila	50	Very limited		Very limited		Not limited	
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	1.00	Too clayey	0.03		
		Frost action	0.50				
Harter	40	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50	Too clayey	0.28		
		Frost action	0.50				

Table 11B.--Building site development--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
157:							
Manila	60	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Slope	0.63
		Shrink-swell	1.00	Slope	0.63		
		Slope	0.63	Too clayey	0.03		
		Frost action	0.50				
Henefer	25	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Gravel content	0.25
		Shrink-swell	0.50	Too clayey	0.03		
		Frost action	0.50				
158:							
Melling	50	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Content of large stones	0.63	Content of large stones	0.63	Droughty	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10	Slope	1.00
		Frost action	0.50				
Ayoub	30	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	1.00	Content of large stones	0.99
		Depth to hard bedrock	0.10	Slope	1.00	Depth to bedrock	0.10
Rock outcrop	10	Not rated		Not rated		Not rated	
159:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.22
						Content of large stones	0.01
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Content of large stones	0.33	Droughty	0.06
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.03
		Content of large stones	0.33			Gravel content	0.02
160:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.22
						Content of large stones	0.01
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Content of large stones	0.33	Droughty	0.06
		Frost action	0.50	Cutbanks cave	0.10	Content of large stones	0.33
		Content of large stones	0.33			Gravel content	0.02
161:							
Pits, Gravel	100	Not rated		Not rated		Not rated	

Table 11B.--Building site development--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
162:							
Richsum	70	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.16
		Low strength	0.22	Slope	0.16		
		Slope	0.16				
Heiners	20	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
						Droughty	0.99
		Frost action	0.50	Slope	0.16	Gravel content	0.22
		Slope	0.16	Cutbanks cave	0.10	Slope	0.16
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
163:							
Richsum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
		Low strength	0.22				
Heiners	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
						Droughty	0.99
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.22
		Content of large stones	0.01	Content of large stones	0.01	Content of large stones	0.01
164:							
Rock outcrop	90	Not rated		Not rated		Not rated	
165:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Starley Family	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Content of large stones	0.17	Droughty	1.00
		Content of large stones	0.17	Cutbanks cave	0.10	Content of large stones	1.00
166:							
Sessions	60	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Content of large stones	0.01
		Shrink-swell	1.00	Too clayey	0.03		
		Frost action	0.50				
Haydenfork	25	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
167:							
Sessions	55	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Content of large stones	0.01
		Shrink-swell	1.00	Too clayey	0.03		
		Frost action	0.50				

Table 11B.--Building site development--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
167:							
Skutum	30	Very limited		Very limited		Not limited	
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
168:							
Sessions	60	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Slope	0.16
		Shrink-swell	1.00	Slope	0.16	Content of large stones	0.01
		Frost action	0.50	Too clayey	0.03		
		Slope	0.16				
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00	Content of large stones	0.84
		Frost action	0.50				
169:							
Skutum	85	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Slope	0.16
		Shrink-swell	0.50	Slope	0.16		
		Frost action	0.50				
		Slope	0.16				
170:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
171:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
172:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.84
		Frost action	0.50				
173:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				

Table 11B.--Building site development--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
173:							
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00	Content of large stones	0.84
		Frost action	0.50				
174:							
Snyderville	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.92
		Content of large stones	0.18	Content of large stones	0.18	Droughty	0.04
175:							
Snyderville	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Content of large stones	0.92
		Content of large stones	0.18	Content of large stones	0.18	Droughty	0.04
176:							
Snyderville	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.16
						Droughty	0.04
						Content of large stones	0.03
177:							
Uinta	55	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00	Content of large stones	0.84
		Frost action	0.50				
Duchesne	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Content of large stones	1.00
		Frost action	0.50	Content of large stones	0.30	Slope	1.00
		Content of large stones	0.30	Cutbanks cave	0.10	Droughty	0.17
178:							
Wanship	90	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Depth to saturated zone	0.06
		Flooding	0.40	Depth to saturated zone	1.00	Content of large stones	0.01
		Depth to saturated zone	0.06				
179:							
Wanship	55	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Depth to saturated zone	0.06
		Flooding	0.40	Depth to saturated zone	1.00	Content of large stones	0.01
		Depth to saturated zone	0.06				
Kovich	30	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Low strength	1.00	Flooding	0.60	Content of large stones	0.01
		Depth to saturated zone	0.75				
		Shrink-swell	0.50				

Table 11B.--Building site development--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
180:							
Yeates Hollow-------	55	Very limited		Somewhat limited		Very limited	
		Low strength	1.00	Depth to hard bedrock	0.93	Content of large stones	1.00
		Content of large stones	0.85	Content of large stones	0.85	Slope	0.04
		Shrink-swell	0.50			Droughty	0.01
		Frost action	0.50	Too clayey	0.28		
		Slope	0.04	Cutbanks cave	0.10		
				Slope	0.04		
Henefer-------------	30	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50	Slope	0.04	Slope	0.04
		Frost action	0.50	Too clayey	0.03		
		Slope	0.04				
181:							
Yeates Hollow-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.93	Content of large stones	1.00
		Content of large stones	0.85	Content of large stones	0.85	Droughty	0.01
		Shrink-swell	0.50				
		Frost action	0.50	Too clayey	0.28		
				Cutbanks cave	0.10		
Henefer-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50	Too clayey	0.03		
		Frost action	0.50				
182:							
Yeates Hollow-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to hard bedrock	0.93	Content of large stones	1.00
		Content of large stones	0.85	Content of large stones	0.85	Droughty	0.01
		Shrink-swell	0.50				
		Frost action	0.50	Too clayey	0.28		
				Cutbanks cave	0.10		
Henefer-------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	1.00	Gravel content	0.25
		Shrink-swell	0.50	Too clayey	0.03		
		Frost action	0.50				
183:							
Water---------------	100	Not rated		Not rated		Not rated	
184:							
Dams----------------	100	Not rated		Not rated		Not rated	

Table 12A.--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	
		Rating class and limiting features	Value	Rating class and limiting features	Value
101:					
Agassiz	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
				Seepage	0.53
Rock outcrop	25	Not rated		Not rated	
102:					
Ant Flat	85	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.67
103:					
Ant Flat	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.63		
104:					
Ant Flat	90	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00		
105:					
Ant Flat	40	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00		
Henefer	30	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00		
Skutum	20	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
		Depth to bedrock	0.47	Depth to soft bedrock	0.05
106:					
Ayoub	85	Very limited		Very limited	
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	0.04		

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
107:					
Ayoub	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
Dunford	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
Melling	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.63	Content of large stones	1.00
108:					
Ayoub	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
Dunford	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
Melling	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.63	Content of large stones	1.00
109:					
Cluff	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
		Depth to bedrock	0.59	Depth to hard bedrock	0.13
		Content of large stones	0.03		
110:					
Cluff	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
		Depth to bedrock	0.59	Depth to hard bedrock	0.13
		Content of large stones	0.03		

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
111:					
Crandall	90	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.67
				Seepage	0.53
		Depth to bedrock	0.52	Depth to hard bedrock	0.08
112:					
Crandall	55	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
				Seepage	0.53
		Slope	1.00	Depth to hard bedrock	0.08
		Depth to bedrock	0.52		
Lucky Star	30	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.46	Slope	1.00
		Content of large stones	0.03		
113:					
Crandall	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
		Depth to bedrock	0.52	Depth to hard bedrock	0.08
Lucky Star	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.03		
Starley Family	15	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Content of large stones	0.17	Seepage	0.53
114:					
Crandall	50	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
				Seepage	0.53
		Slope	1.00	Depth to hard bedrock	0.08
		Depth to bedrock	0.52		
Starley Family	30	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Content of large stones	0.17	Seepage	0.53
Rock outcrop	10	Not rated		Not rated	
115:					
Dastrup	90	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.33

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
116:					
Dastrup	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.16		
117:					
Dastrup	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
118:					
Dromedary	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.33	Content of large stones	0.81
Rock outcrop	15	Not rated		Not rated	
119:					
Duchesne	85	Somewhat limited		Very limited	
		Restricted permeability	0.46	Seepage	1.00
				Slope	1.00
		Content of large stones	0.30	Content of large stones	0.70
		Slope	0.16		
120:					
Duchesne	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.30	Content of large stones	0.70
121:					
Duchesne	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.30	Content of large stones	0.70
122:					
Duchesne	60	Very limited		Very limited	
		Slope	1.00	Seepage	1.00
		Restricted permeability	0.46	Slope	1.00
				Content of large stones	0.70
		Content of large stones	0.30		
Haydenfork	25	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.53
				Slope	0.01

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
123:					
Dumps, Mines	100	Not rated		Not rated	
124:					
Dunford	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
Ayoub	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
Melling	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Content of large stones	0.63	Slope	1.00
				Content of large stones	1.00
125:					
Dunford	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
Ayoub	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00		
Melling	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
		Content of large stones	0.63	Slope	1.00
				Content of large stones	1.00
126:					
Echocreek	85	Somewhat limited		Somewhat limited	
		Restricted permeability	0.46	Slope	0.67
				Seepage	0.53
127:					
Echocreek	65	Somewhat limited		Somewhat limited	
		Restricted permeability	0.46	Slope	0.91
				Seepage	0.53
Kovich	20	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.53
				Slope	0.01

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
128:					
Fewkes	85	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.67
				Seepage	0.28
129:					
Fewkes	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.63	Seepage	0.28
130:					
Fewkes	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
131:					
Fewkes	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
Heiners	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.53
				Content of large stones	0.15
132:					
Fewkes	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
Hades	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
133:					
Fewkes	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
Hades	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
134:					
Fewkes	55	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.16	Seepage	0.28

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
134:					
Yeates Hollow-------	30	Very limited		Very limited	
		Restricted permeability	1.00	Content of large stones	1.00
		Depth to bedrock	0.98	Slope	1.00
		Content of large stones	0.85	Depth to hard bedrock	0.93
		Slope	0.04		
135:					
Fewkes--------------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
Yeates Hollow-------	30	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Depth to bedrock	0.98	Depth to hard bedrock	0.93
		Content of large stones	0.85		
136:					
Hades---------------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
Agassiz-------------	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
				Seepage	0.53
Rock outcrop--------	10	Not rated		Not rated	
137:					
Hades---------------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
Fewkes--------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
138:					
Hades---------------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
Fewkes--------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
139:					
Harter	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
				Seepage	0.53
140:					
Heiners	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.53
				Content of large stones	0.15
Fewkes	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
141:					
Heiners	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.53
				Content of large stones	0.15
Fewkes	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
Hades	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
142:					
Henefer	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
Harter	40	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
143:					
Horrocks	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Content of large stones	1.00
		Depth to bedrock	0.30	Seepage	0.53
		Content of large stones	0.27		

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
143:					
Agassiz	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	1.00	Content of large stones	1.00
				Seepage	0.53
144:					
Horrocks	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Content of large stones	1.00
		Depth to bedrock	0.30	Seepage	0.53
		Content of large stones	0.27		
Cutoff	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Restricted permeability	0.46	Seepage	0.53
145:					
Horrocks	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Content of large stones	1.00
		Depth to bedrock	0.30	Seepage	0.53
		Content of large stones	0.27		
Cutoff	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Restricted permeability	0.46	Seepage	0.53
146:					
Horrocks	65	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Content of large stones	1.00
		Depth to bedrock	0.30	Seepage	0.53
		Content of large stones	0.27		
Hades	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.53
147:					
Hovarka	45	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.46		

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
147:					
Millcreek	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.60
		Restricted permeability	0.46	Flooding	0.40
		Flooding	0.40	Slope	0.01
148:					
Jana	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.02		
Richsum	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.69	Seepage	0.53
		Restricted permeability	0.46	Depth to soft bedrock	0.26
Rock outcrop	10	Not rated		Not rated	
149:					
Kovich	45	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.53
				Slope	0.01
Toddspan	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Slope	0.01
150:					
Lucky Star	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.03		
151:					
Lucky Star	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.03		

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
152:					
Lucky Star----------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.03		
Dromedary----------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.33	Content of large stones	0.81
153:					
Lucky Star----------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.03		
Fewkes--------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.28
154:					
Manila--------------	50	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.63	Seepage	0.53
Ant Flat------------	35	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.67
155:					
Manila--------------	50	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.63	Seepage	0.53
Ant Flat------------	35	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.63		
156:					
Manila--------------	50	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.67
				Seepage	0.53
Harter--------------	40	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.67
				Seepage	0.53

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
157:					
Manila	60	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.63	Seepage	0.53
Henefer	25	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.63		
158:					
Melling	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.63	Content of large stones	1.00
Ayoub	30	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00		
Rock outcrop	10	Not rated		Not rated	
159:					
Parkcity	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	0.53
Dromedary	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.33	Content of large stones	0.81
160:					
Parkcity	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	0.53
Dromedary	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.33	Content of large stones	0.81
161:					
Pits, Gravel	100	Not rated		Not rated	
162:					
Richsum	70	Somewhat limited		Very limited	
		Depth to bedrock	0.69	Slope	1.00
		Restricted permeability	0.46	Seepage	0.53
		Slope	0.16	Depth to soft bedrock	0.26

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
162:					
Heiners	20	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	0.16	Slope	1.00
		Content of large stones	0.01	Seepage	0.53
				Content of large stones	0.15
163:					
Richsum	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Depth to bedrock	0.69	Seepage	0.53
		Restricted permeability	0.46	Depth to soft bedrock	0.26
Heiners	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Content of large stones	0.01	Seepage	0.53
				Content of large stones	0.15
164:					
Rock outcrop	90	Not rated		Not rated	
165:					
Rock outcrop	50	Not rated		Not rated	
Starley Family	30	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Content of large stones	0.17	Seepage	0.53
166:					
Sessions	60	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
Haydenfork	25	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.53
				Slope	0.01
167:					
Sessions	55	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
Skutum	30	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Depth to bedrock	0.47	Seepage	0.53
				Depth to soft bedrock	0.05

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
168:					
Sessions	60	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.16		
Uinta	25	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
169:					
Skutum	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Depth to bedrock	0.47	Seepage	0.53
		Slope	0.16	Depth to soft bedrock	0.05
170:					
Skutum	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
		Depth to bedrock	0.47	Depth to soft bedrock	0.05
171:					
Skutum	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
		Depth to bedrock	0.47	Depth to soft bedrock	0.05
172:					
Skutum	60	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
		Depth to bedrock	0.47	Depth to soft bedrock	0.05
Uinta	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	1.00
173:					
Skutum	60	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	0.53
		Depth to bedrock	0.47	Depth to soft bedrock	0.05
Uinta	25	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	1.00

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
174:					
Snyderville	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.46	Content of large stones	0.43
		Content of large stones	0.18	Slope	0.09
175:					
Snyderville	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.46	Slope	1.00
		Content of large stones	0.18	Content of large stones	0.43
176:					
Snyderville	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.46	Slope	0.09
177:					
Uinta	55	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
Duchesne	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.46	Seepage	1.00
		Content of large stones	0.30	Content of large stones	0.70
178:					
Wanship	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
				Slope	0.01
179:					
Wanship	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40
				Slope	0.01
Kovich	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.53
				Slope	0.01

Table 12A.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
180:					
Yeates Hollow-------	55	Very limited		Very limited	
		Restricted permeability	1.00	Content of large stones	1.00
		Depth to bedrock	0.98	Slope	1.00
		Content of large stones	0.85	Depth to hard bedrock	0.93
		Slope	0.04		
Henefer-------------	30	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.04		
181:					
Yeates Hollow-------	55	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Depth to bedrock	0.98	Depth to hard bedrock	0.93
		Content of large stones	0.85		
Henefer-------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
182:					
Yeates Hollow-------	55	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Content of large stones	1.00
		Depth to bedrock	0.98	Depth to hard bedrock	0.93
		Content of large stones	0.85		
Henefer-------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
183:					
Water---------------	100	Not rated		Not rated	
184:					
Dams----------------	100	Not rated		Not rated	

Table 12B.--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	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101:							
Agassiz	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
Rock outcrop	25	Not rated		Not rated		Not rated	
102:							
Ant Flat	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
103:							
Ant Flat	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
104:							
Ant Flat	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
105:							
Ant Flat	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Henefer	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Too clayey	1.00
						Gravel content	0.09
Skutum	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.05	Slope	1.00
		Slope	1.00			Hard to compact	1.00
						Depth to bedrock	0.05
						Gravel content	0.01
106:							
Ayoub	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.04	Slope	0.04	Slope	0.04
						Gravel content	0.01
107:							
Ayoub	45	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
						Gravel content	0.01

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107:							
Dunford	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
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.01
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.02
108:							
Ayoub	45	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
						Gravel content	0.01
Dunford	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
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.01
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.02
109:							
Cluff	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.13	Slope	1.00
		Slope	1.00			Hard to compact	1.00
		Content of large stones	0.13			Depth to bedrock	0.13
						Content of large stones	0.13
110:							
Cluff	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.13	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
		Content of large stones	0.13			Depth to bedrock	0.13
						Content of large stones	0.13
111:							
Crandall	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.08	Too clayey	0.50
		Too clayey	0.50			Gravel content	0.12
		Content of large stones	0.01			Depth to bedrock	0.08
						Content of large stones	0.01

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
112:							
Crandall	55	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.08	Too clayey	0.50
		Too clayey	0.50			Gravel content	0.12
		Content of large stones	0.01			Depth to bedrock	0.08
						Content of large stones	0.01
Lucky Star	30	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Slope	1.00
		Content of large stones	0.14	Slope	1.00	Seepage	0.52
						Content of large stones	0.14
						Gravel content	0.06
113:							
Crandall	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.08	Too clayey	0.50
		Too clayey	0.50			Gravel content	0.12
		Content of large stones	0.01			Depth to bedrock	0.08
						Content of large stones	0.01
Lucky Star	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Seepage	1.00	Seepage	0.52
						Content of large stones	0.14
						Gravel content	0.06
Starley Family	15	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17			Content of large stones	0.17
114:							
Crandall	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to bedrock	0.08	Too clayey	0.50
		Too clayey	0.50			Gravel content	0.12
		Content of large stones	0.01			Depth to bedrock	0.08
						Content of large stones	0.01
Starley Family	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17			Content of large stones	0.17
Rock outcrop	10	Not rated		Not rated		Not rated	
115:							
Dastrup	90	Not limited		Not limited		Not limited	
116:							
Dastrup	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16	Slope	0.16

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
117:							
Dastrup	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
118:							
Dromedary	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Seepage	1.00	Content of large stones	0.45
Rock outcrop	15	Not rated		Not rated		Not rated	
119:							
Duchesne	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Content of large stones	0.42	Slope	0.16	Content of large stones	0.42
		Slope	0.16			Slope	0.16
						Gravel content	0.03
120:							
Duchesne	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42			Content of large stones	0.42
						Gravel content	0.03
121:							
Duchesne	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42			Content of large stones	0.42
						Gravel content	0.03
122:							
Duchesne	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42			Content of large stones	0.42
						Gravel content	0.03
Haydenfork	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
123:							
Dumps, Mines	100	Not rated		Not rated		Not rated	
124:							
Dunford	45	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
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.01
Ayoub	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
						Gravel content	0.01

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
124:							
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.02
125:							
Dunford	45	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
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.01
Ayoub	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
						Gravel content	0.01
Melling	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.02
126:							
Echocreek	85	Not limited		Not limited		Not limited	
127:							
Echocreek	65	Not limited		Not limited		Not limited	
Kovich	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone		Too sandy	0.50
		Too sandy	1.00				
128:							
Fewkes	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
129:							
Fewkes	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
130:							
Fewkes	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
131:							
Fewkes	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131:							
Heiners	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.08
						Content of large stones	0.01
132:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
133:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Hades	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
134:							
Fewkes	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.16	Too clayey	0.50
		Slope	0.16			Slope	0.16
Yeates Hollow	30	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.93	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Content of large stones	0.89			Depth to bedrock	0.93
		Slope	0.04			Content of large stones	0.89
						Slope	0.04
135:							
Fewkes	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Yeates Hollow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.93	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
		Content of large stones	0.89			Depth to bedrock	0.93
						Content of large stones	0.89
136:							
Hades	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
136:							
Agassiz	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	
137:							
Hades	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
138:							
Hades	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
139:							
Harter	85	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
						Gravel content	0.23
140:							
Heiners	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.08
						Content of large stones	0.01
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
141:							
Heiners	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.08
						Content of large stones	0.01
Fewkes	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Hades	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
142:							
Henefer	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Too clayey	1.00
						Gravel content	0.09
Harter	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
						Gravel content	0.23
143:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00			Gravel content	0.17
		Content of large stones	0.17			Content of large stones	0.17
Agassiz	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	1.00			Content of large stones	1.00
144:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00			Gravel content	0.17
		Content of large stones	0.17			Content of large stones	0.17
Cutoff	25	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
						Gravel content	0.99
145:							
Horrocks	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00			Gravel content	0.17
		Content of large stones	0.17			Content of large stones	0.17
Cutoff	25	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
						Gravel content	0.99
146:							
Horrocks	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00			Gravel content	0.17
		Content of large stones	0.17			Content of large stones	0.17
Hades	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
147:							
Hovarka	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	1.00
		Too sandy	1.00				
Millcreek	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Flooding	0.40		
		Flooding	0.40				
148:							
Jana	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.02			Gravel content	0.62
						Content of large stones	0.02
Richsum	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.26	Depth to bedrock	0.26
Rock outcrop	10	Not rated		Not rated		Not rated	
149:							
Kovich	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	0.50
		Too sandy	1.00				
Toddspan	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00			Too sandy	0.50
		Too sandy	1.00			Content of large stones	0.03
		Content of large stones	0.03				
150:							
Lucky Star	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Seepage	1.00	Seepage	0.52
						Content of large stones	0.14
						Gravel content	0.06
151:							
Lucky Star	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Seepage	1.00	Seepage	0.52
						Content of large stones	0.14
						Gravel content	0.06

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
152:							
Lucky Star	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Seepage	1.00	Seepage	0.52
						Content of large stones	0.14
						Gravel content	0.06
Dromedary	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Seepage	1.00	Content of large stones	0.45
153:							
Lucky Star	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.14	Seepage	1.00	Seepage	0.52
						Content of large stones	0.14
						Gravel content	0.06
Fewkes	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
154:							
Manila	50	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Hard to compact	1.00
						Slope	0.63
Ant Flat	35	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
155:							
Manila	50	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Hard to compact	1.00
						Slope	0.63
Ant Flat	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Too clayey	0.50			Too clayey	0.50
156:							
Manila	50	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Harter	40	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
						Gravel content	0.23
157:							
Manila	60	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Hard to compact	1.00
						Slope	0.63

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157:							
Henefer	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Too clayey	1.00
						Slope	0.63
						Gravel content	0.09
158:							
Melling	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.63			Content of large stones	0.63
		Too clayey	0.50			Too clayey	0.50
						Gravel content	0.02
Ayoub	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.01
Rock outcrop	10	Not rated		Not rated		Not rated	
159:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02			Content of large stones	0.02
						Gravel content	0.01
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Seepage	1.00	Content of large stones	0.45
160:							
Parkcity	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.02			Content of large stones	0.02
						Gravel content	0.01
Dromedary	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.45	Seepage	1.00	Content of large stones	0.45
161:							
Pits, Gravel	100	Not rated		Not rated		Not rated	
162:							
Richsum	70	Very limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	1.00	Depth to bedrock	0.26	Depth to bedrock	0.26
		Slope	0.16	Slope	0.16	Slope	0.16
Heiners	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.16	Slope	0.16	Slope	0.16
		Content of large stones	0.01			Gravel content	0.08
						Content of large stones	0.01

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
163:							
Richsum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.26	Depth to bedrock	0.26
Heiners	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Content of large stones	0.01			Gravel content	0.08
						Content of large stones	0.01
164:							
Rock outcrop	90	Not rated		Not rated		Not rated	
165:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Starley Family	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.17			Content of large stones	0.17
166:							
Sessions	60	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Haydenfork	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
167:							
Sessions	55	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Skutum	30	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.05	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	0.05
						Gravel content	0.01
168:							
Sessions	60	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.16	Too clayey	1.00
		Slope	0.16			Hard to compact	1.00
						Slope	0.16
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Slope	1.00
		Too clayey	0.50	Slope	1.00	Too clayey	0.50
						Gravel content	0.06

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
169:							
Skutum	85	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Slope	0.16	Too clayey	1.00
		Too clayey	1.00	Depth to bedrock	0.05	Hard to compact	1.00
		Slope	0.16			Slope	0.16
						Depth to bedrock	0.05
						Gravel content	0.01
170:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	0.05
						Gravel content	0.01
171:							
Skutum	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	0.05
						Gravel content	0.01
172:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	0.05
						Gravel content	0.01
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50	Seepage	1.00	Too clayey	0.50
						Gravel content	0.06
173:							
Skutum	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.05	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to bedrock	0.05
						Gravel content	0.01
Uinta	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50	Seepage	1.00	Too clayey	0.50
						Gravel content	0.06
174:							
Snyderville	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
		Content of large stones	0.47			Content of large stones	0.47
						Gravel content	0.01

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
175:							
Snyderville	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
		Content of large stones	0.47			Content of large stones	0.47
						Gravel content	0.01
176:							
Snyderville	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00			Seepage	1.00
		Content of large stones	0.05			Gravel content	0.24
						Content of large stones	0.05
177:							
Uinta	55	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Slope	1.00
		Too clayey	0.50	Slope	1.00	Too clayey	0.50
						Gravel content	0.06
Duchesne	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Content of large stones	0.42			Content of large stones	0.42
						Gravel content	0.03
178:							
Wanship	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.73
		Too sandy	1.00	Flooding	0.40	Too sandy	0.50
		Flooding	0.40			Content of large stones	0.01
		Content of large stones	0.01				
179:							
Wanship	55	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.73
		Too sandy	1.00	Flooding	0.40	Too sandy	0.50
		Flooding	0.40			Content of large stones	0.01
		Content of large stones	0.01				
Kovich	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	0.50
		Too sandy	1.00				

Table 12B.--Sanitary facilities--continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
180:							
Yeates Hollow-------	55	Very limited		Somewhat limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	0.93	Too clayey	1.00
		Too clayey	1.00	Slope	0.04	Hard to compact	1.00
		Content of large stones	0.89			Depth to bedrock	0.93
		Slope	0.04			Content of large stones	0.89
						Slope	0.04
Henefer----------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Too clayey	1.00
						Gravel content	0.09
						Slope	0.04
181:							
Yeates Hollow-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.93	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
		Content of large stones	0.89			Depth to bedrock	0.93
						Content of large stones	0.89
Henefer----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Too clayey	1.00
						Gravel content	0.09
182:							
Yeates Hollow-------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	0.93	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
		Content of large stones	0.89			Depth to bedrock	0.93
						Content of large stones	0.89
Henefer----------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Too clayey	1.00
						Gravel content	0.09
183:							
Water----------	100	Not rated		Not rated		Not rated	
184:							
Dams----------	100	Not rated		Not rated		Not rated	

Table 13A.--Construction materials

(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 greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. 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	
		Rating class	Value	Rating class	Value
101:					
Agassiz	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	25	Not rated		Not rated	
102:					
Ant Flat	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
103:					
Ant Flat	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
104:					
Ant Flat	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
105:					
Ant Flat	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Henefer	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Skutum	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
106:					
Ayoub	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
107:					
Ayoub	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dunford	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Melling	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
108:					
Ayoub	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dunford	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Melling	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
109:					
Cluff	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
110:					
Cluff	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
111:					
Crandall	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
112:					
Crandall	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lucky Star	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
113:					
Crandall	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lucky Star	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Starley Family	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
114:					
Crandall	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Starley Family	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	10	Not rated		Not rated	

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
115:					
Dastrup	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
116:					
Dastrup	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
117:					
Dastrup	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
118:					
Dromedary	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	15	Not rated		Not rated	
119:					
Duchesne	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
120:					
Duchesne	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
121:					
Duchesne	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
122:					
Duchesne	60	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Haydenfork	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
123:					
Dumps, Mines	100	Not rated		Not rated	
124:					
Dunford	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ayoub	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Melling	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
125:					
Dunford	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ayoub	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Melling	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
126:					
Echocreek	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
127:					
Echocreek	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kovich	20	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
128:					
Fewkes	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
129:					
Fewkes	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
130:					
Fewkes	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
131:					
Fewkes	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Heiners	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
132:					
Fewkes	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hades	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
133:					
Fewkes	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hades	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
134:					
Fewkes	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Yeates Hollow	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
135:					
Fewkes	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Yeates Hollow	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
136:					
Hades	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Agassiz	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	10	Not rated		Not rated	
137:					
Hades	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Fewkes	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
138:					
Hades	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Fewkes	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
139:					
Harter	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
140:					
Heiners	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Fewkes	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
141:					
Heiners	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Fewkes	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hades	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
142:					
Henefer	45	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Harter	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
143:					
Horrocks	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Agassiz	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
144:					
Horrocks	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Cutoff	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
145:					
Horrocks	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Cutoff	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
146:					
Horrocks	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
146:					
Hades	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
147:					
Hovarka	45	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
Millcreek	40	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.01
148:					
Jana	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Richsum	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	10	Not rated		Not rated	
149:					
Kovich	45	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Toddspan	40	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
150:					
Lucky Star	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
151:					
Lucky Star	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
152:					
Lucky Star	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dromedary	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
153:					
Lucky Star	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Fewkes	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
154:					
Manila	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ant Flat	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
155:					
Manila	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ant Flat	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
156:					
Manila	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Harter	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
157:					
Manila	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Henefer	25	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
158:					
Melling	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ayoub	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rock outcrop	10	Not rated		Not rated	
159:					
Parkcity	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dromedary	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
160:					
Parkcity	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
160:					
Dromedary	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
161:					
Pits, Gravel	100	Not rated		Not rated	
162:					
Richsum	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Heiners	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
163:					
Richsum	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Heiners	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
164:					
Rock outcrop	90	Not rated		Not rated	
165:					
Rock outcrop	50	Not rated		Not rated	
Starley Family	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
166:					
Sessions	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Haydenfork	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
167:					
Sessions	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Skutum	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
168:					
Sessions	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
168:					
Uinta	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
169:					
Skutum	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
170:					
Skutum	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
171:					
Skutum	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
172:					
Skutum	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Uinta	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
173:					
Skutum	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Uinta	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
174:					
Snyderville	85	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.06	Thickest layer	0.00
175:					
Snyderville	85	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.06	Thickest layer	0.00
176:					
Snyderville	85	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.19	Thickest layer	0.00
177:					
Uinta	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Duchesne	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 13A.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
178:					
Wanship	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
179:					
Wanship	55	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Kovich	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
180:					
Yeates Hollow	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Henefer	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
181:					
Yeates Hollow	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Henefer	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
182:					
Yeates Hollow	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Henefer	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
183:					
Water	100	Not rated		Not rated	
184:					
Dams	100	Not rated		Not rated	

Table 13B.--Construction materials

(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		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101:							
Agassiz	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Cobble content	0.46	Cobble content	0.72	Depth to bedrock	0.00
		Stone content	0.86	Stone content	0.86		
Rock outcrop	25	Not rated		Not rated		Not rated	
102:							
Ant Flat	85	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
		Carbonate content	0.80	Shrink-swell	0.78		
		Water erosion	0.90				
103:							
Ant Flat	85	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.37
		Carbonate content	0.80	Shrink-swell	0.78		
		Water erosion	0.90				
104:							
Ant Flat	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.00
		Carbonate content	0.80	Slope	0.08		
		Water erosion	0.90	Shrink-swell	0.78		
105:							
Ant Flat	40	Fair		Poor		Poor	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.00
		Carbonate content	0.80	Slope	0.50		
		Water erosion	0.90	Shrink-swell	0.78		
Henefer	30	Poor		Fair		Poor	
		Too clayey	0.00	Slope	0.50	Too clayey	0.00
		Low content of organic matter	0.50			Slope	0.00
						Rock fragments	0.03
						Hard to reclaim	0.08
Skutum	20	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Slope	0.50	Too clayey	0.00
				Depth to bedrock	0.95	Slope	0.00
				Shrink-swell	0.98	Hard to reclaim	0.68
106:							
Ayoub	85	Fair		Poor		Poor	
		Droughty	0.52	Depth to bedrock	0.00	Rock fragments	0.00
		Low content of organic matter	0.88	Stone content	0.99	Depth to bedrock	0.90
		Depth to bedrock	0.90			Slope	0.96

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107:							
Ayoub	45	Fair		Poor		Poor	
		Droughty	0.52	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.18	Rock fragments	0.00
		Depth to bedrock	0.90	Stone content	0.99	Depth to bedrock	0.90
Dunford	20	Fair		Poor		Poor	
		Low content of organic matter	0.50	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.88	Slope	0.18	Rock fragments	0.00
		Depth to bedrock	0.93	Shrink-swell	0.87	Too clayey	0.64
		Too clayey	0.98			Depth to bedrock	0.93
Melling	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.18	Rock fragments	0.00
		Cobble content	0.73	Cobble content	0.72	Depth to bedrock	0.00
		Too clayey	0.98	Shrink-swell	0.87	Too clayey	0.93
108:							
Ayoub	45	Fair		Poor		Poor	
		Droughty	0.52	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.90	Stone content	0.99	Depth to bedrock	0.90
Dunford	20	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Droughty	0.88	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.93	Shrink-swell	0.87	Too clayey	0.64
		Too clayey	0.98			Depth to bedrock	0.93
Melling	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Cobble content	0.73	Cobble content	0.72	Depth to bedrock	0.00
		Too clayey	0.98	Shrink-swell	0.87	Too clayey	0.93
109:							
Cluff	85	Fair		Poor		Poor	
		Too clayey	0.12	Low strength	0.00	Hard to reclaim	0.00
		Low content of organic matter	0.50	Slope	0.68	Rock fragments	0.00
		Too acid	0.95	Cobble content	0.71	Slope	0.00
		Stone content	0.99	Depth to bedrock	0.87	Too clayey	0.09
		No cobble limitation	0.99	Shrink-swell	0.94		
				Stone content	0.99		
110:							
Cluff	85	Fair		Poor		Poor	
		Too clayey	0.12	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Low strength	0.00	Hard to reclaim	0.00
		Too acid	0.95	Cobble content	0.71	Rock fragments	0.00
		Stone content	0.99	Depth to bedrock	0.87	Too clayey	0.09
		No cobble limitation	0.99	Shrink-swell	0.94		
				Stone content	0.99		

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
111:							
Crandall	90	Fair		Fair		Poor	
		Low content of organic matter	0.88	Depth to bedrock	0.92	Rock fragments	0.00
				Cobble content	0.96	Hard to reclaim	0.00
		Too clayey	0.98	Stone content	0.99	Too clayey	0.70
		Stone content	0.99				
112:							
Crandall	55	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.50	Rock fragments	0.00
				Depth to bedrock	0.92	Hard to reclaim	0.00
		Too clayey	0.98	Cobble content	0.96	Slope	0.00
		Stone content	0.99	Stone content	0.99	Too clayey	0.70
Lucky Star	30	Fair		Fair		Poor	
		Low content of organic matter	0.50	Cobble content	0.81	Rock fragments	0.00
				Slope	0.92	Hard to reclaim	0.00
		Stone content	0.89	Stone content	0.94	Slope	0.00
113:							
Crandall	50	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Depth to bedrock	0.92	Rock fragments	0.00
		Too clayey	0.98	Cobble content	0.96	Hard to reclaim	0.00
		Stone content	0.99	Stone content	0.99	Too clayey	0.70
Lucky Star	20	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Cobble content	0.81	Rock fragments	0.00
		Stone content	0.89	Stone content	0.94	Hard to reclaim	0.00
Starley Family	15	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.00	Cobble content	0.39		
				Stone content	0.97		
		Stone content	0.97				
		No cobble limitation	0.99				
114:							
Crandall	50	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.92	Rock fragments	0.00
				Depth to bedrock	0.92	Hard to reclaim	0.00
		Too clayey	0.98	Cobble content	0.96	Slope	0.00
		Stone content	0.99	Stone content	0.99	Too clayey	0.70
Starley Family	30	Poor		Fair		Poor	
		Droughty	0.00	Cobble content	0.39	Slope	0.00
		Low content of organic matter	0.00	Slope	0.92		
				Stone content	0.97		
		Stone content	0.97				
		No cobble limitation	0.99				
Rock outcrop	10	Not rated		Not rated		Not rated	
115:							
Dastrup	90	Fair		Fair		Fair	
		Low content of organic matter	0.12	Low strength	0.78	Rock fragments	0.28
						Carbonate content	0.46
		Carbonate content	0.46			Hard to reclaim	0.95

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116:							
Dastrup	85	Fair		Fair		Fair	
		Low content of organic matter	0.12	Low strength	0.78	Rock fragments	0.28
		Carbonate content	0.46			Carbonate content	0.46
						Slope	0.84
						Hard to reclaim	0.95
117:							
Dastrup	85	Fair		Fair		Poor	
		Low content of organic matter	0.12	Slope	0.18	Slope	0.00
				Low strength	0.78	Rock fragments	0.28
		Carbonate content	0.46			Carbonate content	0.46
						Hard to reclaim	0.95
118:							
Dromedary	70	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Cobble content	0.10	Hard to reclaim	0.00
		Cobble content	0.84	Shrink-swell	0.97	Rock fragments	0.00
		Too clayey	0.98			Too clayey	0.64
		Droughty	0.99				
Rock outcrop	15	Not rated		Not rated		Not rated	
119:							
Duchesne	85	Fair		Fair		Poor	
		Low content of organic matter	0.50	Cobble content	0.15	Hard to reclaim	0.00
						Rock fragments	0.00
		Too acid	0.84			Slope	0.84
		Cobble content	0.87				
		Droughty	0.95				
120:							
Duchesne	85	Fair		Fair		Poor	
		Low content of organic matter	0.50	Cobble content	0.15	Slope	0.00
				Slope	0.18	Hard to reclaim	0.00
		Too acid	0.84			Rock fragments	0.00
		Cobble content	0.87				
		Droughty	0.95				
121:							
Duchesne	85	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Cobble content	0.15	Hard to reclaim	0.00
		Too acid	0.84			Rock fragments	0.00
		Cobble content	0.87				
		Droughty	0.95				
122:							
Duchesne	60	Fair		Fair		Poor	
		Low content of organic matter	0.50	Cobble content	0.15	Hard to reclaim	0.00
				Slope	0.18	Rock fragments	0.00
		Too acid	0.84			Slope	0.00
		Cobble content	0.87				
		Droughty	0.95				
Haydenfork	25	Fair		Fair		Fair	
		Low content of organic matter	0.50	Depth to saturated zone	0.03	Depth to saturated zone	0.03
		Too acid	0.95	Shrink-swell	0.91		

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
123:							
Dumps, Mines	100	Not rated		Not rated		Not rated	
124:							
Dunford	45	Fair		Poor		Poor	
		Low content of organic matter	0.50	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.88	Slope	0.18	Rock fragments	0.00
		Depth to bedrock	0.93	Shrink-swell	0.87	Too clayey	0.64
		Too clayey	0.98			Depth to bedrock	0.93
Ayoub	20	Fair		Poor		Poor	
		Droughty	0.52	Depth to bedrock	0.00	Slope	0.00
		Low content of organic matter	0.88	Slope	0.18	Rock fragments	0.00
		Depth to bedrock	0.90	Stone content	0.99	Depth to bedrock	0.90
Melling	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.18	Rock fragments	0.00
		Cobble content	0.73	Cobble content	0.72	Depth to bedrock	0.00
		Too clayey	0.98	Shrink-swell	0.87	Too clayey	0.93
125:							
Dunford	45	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Droughty	0.88	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.93	Shrink-swell	0.87	Too clayey	0.64
		Too clayey	0.98			Depth to bedrock	0.93
Ayoub	20	Fair		Poor		Poor	
		Droughty	0.52	Slope	0.00	Slope	0.00
		Low content of organic matter	0.88	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.90	Stone content	0.99	Depth to bedrock	0.90
Melling	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Cobble content	0.73	Cobble content	0.72	Depth to bedrock	0.00
		Too clayey	0.98	Shrink-swell	0.87	Too clayey	0.93
126:							
Echocreek	85	Fair		Good		Good	
		Low content of organic matter	0.50				
		Water erosion	0.90				
127:							
Echocreek	65	Fair		Good		Good	
		Low content of organic matter	0.50				
		Water erosion	0.90				
Kovich	20	Fair		Fair		Poor	
		Low content of organic matter	0.50	Depth to saturated zone	0.14	Hard to reclaim	0.00
						Depth to saturated zone	0.14

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
128:							
Fewkes	85	Fair		Fair		Poor	
		Low content of organic matter	0.50	Low strength	0.22	Rock fragments	0.00
		Carbonate content	0.68	Shrink-swell	0.89	Hard to reclaim	0.95
129:							
Fewkes	85	Fair		Fair		Poor	
		Low content of organic matter	0.50	Low strength	0.22	Rock fragments	0.00
		Carbonate content	0.68	Shrink-swell	0.89	Slope	0.37
						Hard to reclaim	0.95
130:							
Fewkes	85	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.18	Slope	0.00
		Carbonate content	0.68	Low strength	0.22	Rock fragments	0.00
				Shrink-swell	0.89	Hard to reclaim	0.95
131:							
Fewkes	60	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Carbonate content	0.68	Low strength	0.22	Rock fragments	0.00
				Shrink-swell	0.89	Hard to reclaim	0.95
Heiners	25	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too alkaline	0.00			Rock fragments	0.00
		Low content of organic matter	0.50			Carbonate content	0.80
		Carbonate content	0.80				
132:							
Fewkes	55	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.18	Slope	0.00
		Carbonate content	0.68	Low strength	0.22	Rock fragments	0.00
				Shrink-swell	0.89	Hard to reclaim	0.95
Hades	30	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.18	Slope	0.00
		Too clayey	0.98	Low strength	0.22	Too clayey	0.98
				Shrink-swell	0.94		
133:							
Fewkes	55	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Carbonate content	0.68	Low strength	0.22	Rock fragments	0.00
				Shrink-swell	0.89	Hard to reclaim	0.95
Hades	30	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Too clayey	0.98	Low strength	0.22	Too clayey	0.98
				Shrink-swell	0.94		
134:							
Fewkes	55	Fair		Fair		Poor	
		Low content of organic matter	0.50	Low strength	0.22	Rock fragments	0.00
		Carbonate content	0.68	Shrink-swell	0.89	Slope	0.84
						Hard to reclaim	0.95

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
134:							
Yeates Hollow-------	30	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.34	Depth to bedrock	0.07	Hard to reclaim	0.00
		Stone content	0.42	Stone content	0.10	Rock fragments	0.00
		Low content of organic matter	0.88	Cobble content	0.11	Slope	0.96
		Cobble content	0.88	Shrink-swell	0.96		
135:							
Fewkes--------------	55	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Carbonate content	0.68	Low strength	0.22	Rock fragments	0.00
				Shrink-swell	0.89	Hard to reclaim	0.95
Yeates Hollow-------	30	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Droughty	0.34	Depth to bedrock	0.07	Too clayey	0.00
		Stone content	0.42	Slope	0.08	Hard to reclaim	0.00
		Low content of organic matter	0.88	Stone content	0.10	Rock fragments	0.00
		Cobble content	0.88	Cobble content	0.11		
				Shrink-swell	0.96		
136:							
Hades---------------	50	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Too clayey	0.98	Low strength	0.22	Too clayey	0.98
				Shrink-swell	0.94		
Agassiz-------------	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Cobble content	0.46	Cobble content	0.72	Depth to bedrock	0.00
		Stone content	0.86	Stone content	0.86		
Rock outcrop--------	10	Not rated		Not rated		Not rated	
137:							
Hades---------------	55	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.08	Slope	0.00
		Too clayey	0.98	Low strength	0.22	Too clayey	0.98
				Shrink-swell	0.94		
Fewkes--------------	30	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.08	Slope	0.00
		Carbonate content	0.68	Low strength	0.22	Rock fragments	0.00
				Shrink-swell	0.89	Hard to reclaim	0.95
138:							
Hades---------------	55	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Too clayey	0.98	Low strength	0.22	Too clayey	0.98
				Shrink-swell	0.94		
Fewkes--------------	30	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Carbonate content	0.68	Low strength	0.22	Rock fragments	0.00
				Shrink-swell	0.89	Hard to reclaim	0.95

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
139:							
Harter	85	Fair		Poor		Poor	
		Too clayey	0.12	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Shrink-swell	0.95	Too clayey	0.08
						Hard to reclaim	0.68
140:							
Heiners	60	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.08	Depth to bedrock	0.00
		Too alkaline	0.00			Rock fragments	0.00
		Low content of organic matter	0.50			Carbonate content	0.80
		Carbonate content	0.80				
Fewkes	25	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.08	Slope	0.00
				Low strength	0.22	Rock fragments	0.00
		Carbonate content	0.68	Shrink-swell	0.89	Hard to reclaim	0.95
141:							
Heiners	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too alkaline	0.00			Rock fragments	0.00
		Low content of organic matter	0.50			Carbonate content	0.80
		Carbonate content	0.80				
Fewkes	25	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Low strength	0.22	Rock fragments	0.00
		Carbonate content	0.68	Shrink-swell	0.89	Hard to reclaim	0.95
Hades	25	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Low strength	0.22	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.94		
142:							
Henefer	45	Poor		Fair		Poor	
		Too clayey	0.00	Slope	0.08	Slope	0.00
		Low content of organic matter	0.50			Too clayey	0.00
						Rock fragments	0.03
						Hard to reclaim	0.08
Harter	40	Fair		Poor		Poor	
		Too clayey	0.12	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.50	Slope	0.08	Rock fragments	0.00
				Shrink-swell	0.95	Too clayey	0.08
						Hard to reclaim	0.68
143:							
Horrocks	65	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Cobble content	0.17	Rock fragments	0.00
		Too clayey	0.98	Cobble content	0.17	Hard to reclaim	0.02
		Cobble content	0.98			Too clayey	0.86

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
143:							
Agassiz	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Cobble content	0.46	Cobble content	0.72	Depth to bedrock	0.00
		Stone content	0.86	Stone content	0.86		
144:							
Horrocks	60	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.08	Slope	0.00
				Cobble content	0.17	Rock fragments	0.00
		Too clayey	0.98			Hard to reclaim	0.02
		Cobble content	0.98			Too clayey	0.86
Cutoff	25	Poor		Poor		Poor	
		Too alkaline	0.00	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.17	Slope	0.08	Rock fragments	0.00
		Carbonate content	0.80			Carbonate content	0.80
		Low content of organic matter	0.88			Depth to bedrock	0.99
		Depth to bedrock	0.99				
145:							
Horrocks	60	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Cobble content	0.17	Rock fragments	0.00
		Too clayey	0.98			Hard to reclaim	0.02
		Cobble content	0.98			Too clayey	0.86
Cutoff	25	Poor		Poor		Poor	
		Too alkaline	0.00	Slope	0.00	Slope	0.00
		Droughty	0.17	Depth to bedrock	0.00	Rock fragments	0.00
		Carbonate content	0.80			Carbonate content	0.80
		Low content of organic matter	0.88			Depth to bedrock	0.99
		Depth to bedrock	0.99				
146:							
Horrocks	65	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Cobble content	0.17	Rock fragments	0.00
		Too clayey	0.98			Hard to reclaim	0.02
		Cobble content	0.98			Too clayey	0.86
Hades	20	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Low strength	0.22	Too clayey	0.98
		Too clayey	0.98	Shrink-swell	0.94		
147:							
Hovarka	45	Fair		Fair		Poor	
		Low content of organic matter	0.50	Depth to saturated zone	0.03	Hard to reclaim	0.00
						Depth to saturated zone	0.03
Millcreek	40	Fair		Good		Poor	
		Low content of organic matter	0.50			Rock fragments	0.00
						Hard to reclaim	0.00
		Droughty	0.91				

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
148:							
Jana	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Low content of organic matter	0.50			Depth to bedrock	0.00
		Carbonate content	0.80			Carbonate content	0.80
Richsum	30	Fair		Poor		Poor	
		Carbonate content	0.46	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Depth to bedrock	0.74		
		Water erosion	0.90				
Rock outcrop	10	Not rated		Not rated		Not rated	
149:							
Kovich	45	Fair		Fair		Poor	
		Low content of organic matter	0.50	Depth to saturated zone	0.14	Hard to reclaim	0.00
						Depth to saturated zone	0.14
Toddspan	40	Fair		Fair		Poor	
		Low content of organic matter	0.50	Depth to saturated zone	0.03	Hard to reclaim	0.00
		Stone content	0.99	Cobble content	0.92	Depth to saturated zone	0.03
150:							
Lucky Star	85	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.08	Slope	0.00
		Stone content	0.89	Cobble content	0.81	Rock fragments	0.00
				Stone content	0.94	Hard to reclaim	0.00
151:							
Lucky Star	85	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Stone content	0.89	Cobble content	0.81	Rock fragments	0.00
				Stone content	0.94	Hard to reclaim	0.00
152:							
Lucky Star	55	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Stone content	0.89	Cobble content	0.81	Rock fragments	0.00
				Stone content	0.94	Hard to reclaim	0.00
Dromedary	30	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Cobble content	0.84	Cobble content	0.10	Hard to reclaim	0.00
		Too clayey	0.98	Shrink-swell	0.97	Rock fragments	0.00
		Droughty	0.99			Too clayey	0.64
153:							
Lucky Star	55	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Stone content	0.89	Cobble content	0.81	Rock fragments	0.00
				Stone content	0.94	Hard to reclaim	0.00

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
153:							
Fewkes	30	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Low strength	0.22	Rock fragments	0.00
		Carbonate content	0.68	Shrink-swell	0.89	Hard to reclaim	0.95
154:							
Manila	50	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.88	Shrink-swell	0.59	Slope	0.37
Ant Flat	35	Fair		Poor		Good	
		Low content of organic matter	0.12	Low strength	0.00		
				Shrink-swell	0.78		
		Carbonate content	0.80				
		Water erosion	0.90				
155:							
Manila	50	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.88	Shrink-swell	0.59	Slope	0.37
Ant Flat	35	Fair		Poor		Fair	
		Low content of organic matter	0.12	Low strength	0.00	Slope	0.37
				Shrink-swell	0.78		
		Carbonate content	0.80				
		Water erosion	0.90				
156:							
Manila	50	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.88	Shrink-swell	0.59		
Harter	40	Fair		Poor		Poor	
		Too clayey	0.12	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Shrink-swell	0.95	Too clayey	0.08
						Hard to reclaim	0.68
157:							
Manila	60	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.88	Shrink-swell	0.59	Slope	0.37
Henefer	25	Poor		Fair		Poor	
		Too clayey	0.00			Too clayey	0.00
		Low content of organic matter	0.50			Rock fragments	0.03
						Hard to reclaim	0.08
						Slope	0.37
158:							
Melling	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.50	Depth to bedrock	0.00
		Cobble content	0.73	Cobble content	0.72	Slope	0.00
		Too clayey	0.98	Shrink-swell	0.87	Too clayey	0.93

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
158:							
Ayoub	30	Fair		Poor		Poor	
		Droughty	0.52	Depth to bedrock	0.00	Rock fragments	0.00
		Low content of organic matter	0.88	Slope	0.50	Slope	0.00
		Depth to bedrock	0.90	Stone content	0.99	Depth to bedrock	0.90
Rock outcrop	10	Not rated		Not rated		Not rated	
159:							
Parkcity	70	Fair		Fair		Poor	
		Low content of organic matter	0.50	Slope	0.50	Slope	0.00
				Cobble content	0.90	Hard to reclaim	0.00
						Rock fragments	0.00
Dromedary	20	Fair		Fair		Poor	
		Low content of organic matter	0.50	Cobble content	0.10	Slope	0.00
		Cobble content	0.84	Slope	0.50	Hard to reclaim	0.00
		Too clayey	0.98	Shrink-swell	0.97	Rock fragments	0.00
		Droughty	0.99			Too clayey	0.64
160:							
Parkcity	70	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
				Cobble content	0.90	Hard to reclaim	0.00
						Rock fragments	0.00
Dromedary	20	Fair		Poor		Poor	
		Low content of organic matter	0.50	Slope	0.00	Slope	0.00
		Cobble content	0.84	Cobble content	0.10	Hard to reclaim	0.00
		Too clayey	0.98	Shrink-swell	0.97	Rock fragments	0.00
		Droughty	0.99			Too clayey	0.64
161:							
Pits, Gravel	100	Not rated		Not rated		Not rated	
162:							
Richsum	70	Fair		Fair		Fair	
		Carbonate content	0.46	Depth to bedrock	0.74	Slope	0.84
		Low content of organic matter	0.50				
		Water erosion	0.90				
Heiners	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00			Rock fragments	0.00
		Too alkaline	0.00			Carbonate content	0.80
		Low content of organic matter	0.50			Slope	0.84
		Carbonate content	0.80				
163:							
Richsum	60	Fair		Fair		Poor	
		Carbonate content	0.46	Slope	0.18	Slope	0.00
		Low content of organic matter	0.50	Depth to bedrock	0.74		
		Water erosion	0.90				

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
163:							
Heiners	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.18	Depth to bedrock	0.00
		Too alkaline	0.00			Rock fragments	0.00
		Low content of organic matter	0.50			Carbonate content	0.80
		Carbonate content	0.80				
164:							
Rock outcrop	90	Not rated		Not rated		Not rated	
165:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Starley Family	30	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.00	Cobble content	0.39		
		Stone content	0.97	Stone content	0.97		
		No cobble limitation	0.99				
166:							
Sessions	60	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Shrink-swell	0.34		
		Carbonate content	0.92				
Haydenfork	25	Fair		Poor		Poor	
		Low content of organic matter	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.95	Shrink-swell	0.91		
167:							
Sessions	55	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Shrink-swell	0.34		
		Carbonate content	0.92				
Skutum	30	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Depth to bedrock	0.95	Too clayey	0.00
				Shrink-swell	0.98	Hard to reclaim	0.68
168:							
Sessions	60	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Shrink-swell	0.34	Slope	0.84
		Carbonate content	0.92				
Uinta	25	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.92	Slope	0.00
				Shrink-swell	0.97	Rock fragments	0.12
						Hard to reclaim	0.68

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
169:							
Skutum	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Rock fragments	0.00
		Low content of organic matter	0.50	Depth to bedrock	0.95	Too clayey	0.00
				Shrink-swell	0.98	Hard to reclaim	0.68
						Slope	0.84
170:							
Skutum	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.50	Slope	0.18	Rock fragments	0.00
				Depth to bedrock	0.95	Too clayey	0.00
				Shrink-swell	0.98	Hard to reclaim	0.68
171:							
Skutum	85	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Low strength	0.00	Rock fragments	0.00
				Depth to bedrock	0.95	Too clayey	0.00
				Shrink-swell	0.98	Hard to reclaim	0.68
172:							
Skutum	60	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Low content of organic matter	0.50	Slope	0.02	Rock fragments	0.00
				Depth to bedrock	0.95	Too clayey	0.00
				Shrink-swell	0.98	Hard to reclaim	0.68
Uinta	25	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.02	Slope	0.00
				Shrink-swell	0.97	Rock fragments	0.12
						Hard to reclaim	0.68
173:							
Skutum	60	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50	Low strength	0.00	Rock fragments	0.00
				Depth to bedrock	0.95	Too clayey	0.00
				Shrink-swell	0.98	Hard to reclaim	0.68
Uinta	25	Fair		Poor		Poor	
		Low content of organic matter	0.88	Slope	0.00	Slope	0.00
				Shrink-swell	0.97	Rock fragments	0.12
						Hard to reclaim	0.68
174:							
Snyderville	85	Fair		Fair		Poor	
		Low content of organic matter	0.12	Cobble content	0.47	Rock fragments	0.00
				Stone content	0.89	Hard to reclaim	0.00
		Droughty	0.42				
		Stone content	0.64				
		Cobble content	0.97				
175:							
Snyderville	85	Fair		Fair		Poor	
		Low content of organic matter	0.12	Cobble content	0.47	Rock fragments	0.00
				Stone content	0.89	Hard to reclaim	0.00
		Droughty	0.42				
		Stone content	0.64				
		Cobble content	0.97				

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
176:							
Snyderville	85	Fair		Fair		Poor	
		Low content of organic matter	0.12	Stone content	0.96	Rock fragments	0.00
				No cobble limitation	0.99	Hard to reclaim	0.00
		Droughty	0.42				
		Stone content	0.72				
177:							
Uinta	55	Fair		Fair		Poor	
		Low content of organic matter	0.88	Slope	0.18	Slope	0.00
				Shrink-swell	0.97	Rock fragments	0.12
						Hard to reclaim	0.68
Duchesne	30	Fair		Fair		Poor	
		Low content of organic matter	0.50	Cobble content	0.15	Hard to reclaim	0.00
				Slope	0.18	Rock fragments	0.00
		Too acid	0.84			Slope	0.00
		Cobble content	0.87				
		Droughty	0.95				
178:							
Wanship	90	Fair		Fair		Poor	
		Low content of organic matter	0.50	Depth to saturated zone	0.71	Rock fragments	0.00
						Hard to reclaim	0.00
		Droughty	0.78			Depth to saturated zone	0.71
		Stone content	0.99				
179:							
Wanship	55	Fair		Fair		Poor	
		Low content of organic matter	0.50	Depth to saturated zone	0.71	Rock fragments	0.00
						Hard to reclaim	0.00
		Droughty	0.78			Depth to saturated zone	0.71
		Stone content	0.99				
Kovich	30	Fair		Fair		Poor	
		Low content of organic matter	0.50	Depth to saturated zone	0.14	Hard to reclaim	0.00
						Depth to saturated zone	0.14
180:							
Yeates Hollow	55	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Droughty	0.34	Depth to bedrock	0.07	Hard to reclaim	0.00
		Stone content	0.42	Stone content	0.10	Rock fragments	0.00
		Low content of organic matter	0.88	Cobble content	0.11	Slope	0.96
				Shrink-swell	0.96		
		Cobble content	0.88				
Henefer	30	Poor		Fair		Poor	
		Too clayey	0.00			Too clayey	0.00
		Low content of organic matter	0.50			Rock fragments	0.03
						Hard to reclaim	0.08
						Slope	0.96

Table 13B.--Construction materials--continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
181:							
Yeates Hollow-------	55	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Droughty	0.34	Depth to bedrock	0.07	Too clayey	0.00
		Stone content	0.42	Slope	0.08	Hard to reclaim	0.00
		Low content of organic matter	0.88	Stone content	0.10	Rock fragments	0.00
				Cobble content	0.11		
		Cobble content	0.88	Shrink-swell	0.96		
Henefer----------	30	Poor		Fair		Poor	
		Too clayey	0.00	Slope	0.18	Slope	0.00
		Low content of organic matter	0.50			Too clayey	0.00
						Rock fragments	0.03
						Hard to reclaim	0.08
182:							
Yeates Hollow-------	55	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Droughty	0.34	Low strength	0.00	Too clayey	0.00
		Stone content	0.42	Depth to bedrock	0.07	Hard to reclaim	0.00
		Low content of organic matter	0.88	Stone content	0.10	Rock fragments	0.00
				Cobble content	0.11		
		Cobble content	0.88	Shrink-swell	0.96		
Henefer----------	30	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.50			Too clayey	0.00
						Rock fragments	0.03
						Hard to reclaim	0.08
183:							
Water----------	100	Not rated		Not rated		Not rated	
184:							
Dams----------	100	Not rated		Not rated		Not rated	

Table 14.--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		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101:							
Agassiz	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Deep to water	1.00
		Slope	1.00	Content of large stones	1.00		
Rock outcrop	25	Not rated		Not rated		Not rated	
102:							
Ant Flat	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Deep to water	1.00
103:							
Ant Flat	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Deep to water	1.00
		Slope	0.01				
104:							
Ant Flat	90	Somewhat limited		Not limited		Very limited	
		Slope	0.21			Deep to water	1.00
		Seepage	0.04				
105:							
Ant Flat	40	Somewhat limited		Not limited		Very limited	
		Slope	0.12			Deep to water	1.00
		Seepage	0.04				
Henefer	30	Somewhat limited		Not limited		Very limited	
		Slope	0.12			Deep to water	1.00
		Seepage	0.04				
Skutum	20	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.01	Deep to water	1.00
		Slope	0.12				
		Depth to bedrock	0.01				
106:							
Ayoub	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.69	Thin layer	0.70	Deep to water	1.00
		Seepage	0.04				
107:							
Ayoub	45	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.69	Thin layer	0.70	Deep to water	1.00
		Slope	0.18				
		Seepage	0.04				
Dunford	20	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.66	Thin layer	0.66	Deep to water	1.00
		Slope	0.18				
		Seepage	0.04				
Melling	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Deep to water	1.00
		Slope	0.18	Content of large stones	0.63		

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
108:							
Ayoub	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.70	Deep to water	1.00
		Depth to bedrock	0.69				
		Seepage	0.04				
Dunford	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.66	Deep to water	1.00
		Depth to bedrock	0.66				
		Seepage	0.04				
Melling	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Deep to water	1.00
		Slope	0.97	Content of large stones	0.63		
109:							
Cluff	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.10	Hard to pack	0.68	Deep to water	1.00
		Seepage	0.04	Thin layer	0.03		
		Depth to bedrock	0.03	Content of large stones	0.03		
110:							
Cluff	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Hard to pack	0.68	Deep to water	1.00
		Seepage	0.04	Thin layer	0.03		
		Depth to bedrock	0.03	Content of large stones	0.03		
111:							
Crandall	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.02	Deep to water	1.00
		Depth to bedrock	0.02				
112:							
Crandall	55	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.02	Deep to water	1.00
		Slope	0.12				
		Depth to bedrock	0.02				
Lucky Star	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.03	Deep to water	1.00
		Slope	0.06				
113:							
Crandall	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.02	Deep to water	1.00
		Seepage	0.72				
		Depth to bedrock	0.02				
Lucky Star	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.03	Deep to water	1.00
		Slope	0.97				
Starley Family	15	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.17	Deep to water	1.00

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
114:							
Crandall	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.02	Deep to water	1.00
		Slope	0.06				
		Depth to bedrock	0.02				
Starley Family	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.06	Content of large stones	0.17	Deep to water	1.00
Rock outcrop	10	Not rated		Not rated		Not rated	
115:							
Dastrup	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Piping	0.52	Deep to water	1.00
116:							
Dastrup	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Piping	0.52	Deep to water	1.00
117:							
Dastrup	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.18	Piping	0.52	Deep to water	1.00
		Seepage	0.04				
118:							
Dromedary	70	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.33	Deep to water	1.00
		Slope	1.00				
Rock outcrop	15	Not rated		Not rated		Not rated	
119:							
Duchesne	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Content of large stones	0.30	Deep to water	1.00
120:							
Duchesne	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Content of large stones	0.30	Deep to water	1.00
		Slope	0.18				
121:							
Duchesne	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.30	Deep to water	1.00
		Seepage	0.72				
122:							
Duchesne	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Content of large stones	0.30	Deep to water	1.00
		Slope	0.18				
Haydenfork	25	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Ponding	1.00	Cutbanks cave	1.00
				Depth to saturated zone	1.00	Slow refill	0.28
				Piping	0.69		

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
123:							
Dumps, Mines	100	Not rated		Not rated		Not rated	
124:							
Dunford	45	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.66	Thin layer	0.66	Deep to water	1.00
		Slope	0.18				
		Seepage	0.04				
Ayoub	20	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.69	Thin layer	0.70	Deep to water	1.00
		Slope	0.18				
		Seepage	0.04				
Melling	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Deep to water	1.00
		Slope	0.18	Content of large stones	0.63		
125:							
Dunford	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.66	Deep to water	1.00
		Depth to bedrock	0.66				
		Seepage	0.04				
Ayoub	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.70	Deep to water	1.00
		Depth to bedrock	0.69				
		Seepage	0.04				
Melling	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Deep to water	1.00
		Slope	0.97	Content of large stones	0.63		
126:							
Echocreek	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Deep to water	1.00
127:							
Echocreek	65	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Deep to water	1.00
Kovich	20	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
						Slow refill	0.28
128:							
Fewkes	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.54	Piping	0.27	Deep to water	1.00
129:							
Fewkes	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.54	Piping	0.27	Deep to water	1.00
		Slope	0.01				
130:							
Fewkes	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.54	Piping	0.27	Deep to water	1.00
		Slope	0.18				

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131:							
Fewkes	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.27	Deep to water	1.00
		Seepage	0.54				
Heiners	25	Somewhat limited		Very limited		Very limited	
		Slope	0.99	Thin layer	1.00	Deep to water	1.00
		Depth to bedrock	0.50	Content of large stones	0.01		
		Seepage	0.04				
132:							
Fewkes	55	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.54	Piping	0.27	Deep to water	1.00
		Slope	0.18				
Hades	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.18	Piping	0.22	Deep to water	1.00
		Seepage	0.04				
133:							
Fewkes	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.27	Deep to water	1.00
		Seepage	0.54				
Hades	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.22	Deep to water	1.00
		Seepage	0.04				
134:							
Fewkes	55	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.54	Piping	0.27	Deep to water	1.00
Yeates Hollow	30	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.33	Hard to pack	0.88	Deep to water	1.00
		Seepage	0.04	Content of large stones	0.85		
				Thin layer	0.34		
135:							
Fewkes	55	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.54	Piping	0.27	Deep to water	1.00
		Slope	0.28				
Yeates Hollow	30	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.33	Hard to pack	0.88	Deep to water	1.00
		Slope	0.21	Content of large stones	0.85		
		Seepage	0.04	Thin layer	0.34		
136:							
Hades	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.22	Deep to water	1.00
		Seepage	0.04				
Agassiz	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Deep to water	1.00
		Slope	1.00	Content of large stones	1.00		
Rock outcrop	10	Not rated		Not rated		Not rated	

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
137:							
Hades	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.21	Piping	0.22	Deep to water	1.00
		Seepage	0.04				
Fewkes	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.54	Piping	0.27	Deep to water	1.00
		Slope	0.21				
138:							
Hades	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.22	Deep to water	1.00
		Seepage	0.04				
Fewkes	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.27	Deep to water	1.00
		Seepage	0.54				
139:							
Harter	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.72	Deep to water	1.00
140:							
Heiners	60	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.50	Thin layer	1.00	Deep to water	1.00
		Slope	0.21	Content of large stones	0.01		
		Seepage	0.04				
Fewkes	25	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.54	Piping	0.27	Deep to water	1.00
		Slope	0.21				
141:							
Heiners	35	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Deep to water	1.00
		Depth to bedrock	0.50	Content of large stones	0.01		
		Seepage	0.04				
Fewkes	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.27	Deep to water	1.00
		Seepage	0.54				
Hades	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.22	Deep to water	1.00
		Seepage	0.04				
142:							
Henefer	45	Somewhat limited		Not limited		Very limited	
		Slope	0.21			Deep to water	1.00
		Seepage	0.04				
Harter	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.21	Hard to pack	0.72	Deep to water	1.00
		Seepage	0.04				
143:							
Horrocks	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.27	Deep to water	1.00
		Seepage	0.72				

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
143:							
Agassiz	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Deep to water	1.00
		Slope	1.00	Content of large stones	1.00		
144:							
Horrocks	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Content of large stones	0.27	Deep to water	1.00
		Slope	0.21				
Cutoff	25	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.56	Deep to water	1.00
		Depth to bedrock	0.56				
		Slope	0.21				
145:							
Horrocks	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.27	Deep to water	1.00
		Seepage	0.72				
Cutoff	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.56	Deep to water	1.00
		Seepage	0.72				
		Depth to bedrock	0.56				
146:							
Horrocks	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Content of large stones	0.27	Deep to water	1.00
		Seepage	0.72				
Hades	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.22	Deep to water	1.00
		Seepage	0.04				
147:							
Hovarka	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.03		
Millcreek	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.01	Cutbanks cave	1.00
						Deep to water	0.85
148:							
Jana	50	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Deep to water	1.00
		Depth to bedrock	0.78	Content of large stones	0.02		
		Seepage	0.04				
Richsum	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Piping	0.88	Deep to water	1.00
		Seepage	0.72	Thin layer	0.06		
		Depth to bedrock	0.01				
Rock outcrop	10	Not rated		Not rated		Not rated	

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149:							
Kovich	45	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
						Slow refill	0.28
Toddspan	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.03		
150:							
Lucky Star	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.03	Deep to water	1.00
		Slope	0.21				
151:							
Lucky Star	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.03	Deep to water	1.00
		Slope	0.97				
152:							
Lucky Star	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.03	Deep to water	1.00
		Slope	0.97				
Dromedary	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.33	Deep to water	1.00
		Slope	0.99				
153:							
Lucky Star	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.03	Deep to water	1.00
		Slope	0.94				
Fewkes	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.94	Piping	0.27	Deep to water	1.00
		Seepage	0.54				
154:							
Manila	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.73	Deep to water	1.00
		Slope	0.01				
Ant Flat	35	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Deep to water	1.00
155:							
Manila	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.73	Deep to water	1.00
		Slope	0.01				
Ant Flat	35	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Deep to water	1.00
		Slope	0.01				
156:							
Manila	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.73	Deep to water	1.00
Harter	40	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.72	Deep to water	1.00

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157:							
Manila	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.73	Deep to water	1.00
		Slope	0.01				
Henefer	25	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Deep to water	1.00
		Slope	0.01				
158:							
Melling	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Deep to water	1.00
		Slope	0.12	Content of large stones	0.63		
Ayoub	30	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.69	Thin layer	0.70	Deep to water	1.00
		Slope	0.12				
		Seepage	0.04				
Rock outcrop	10	Not rated		Not rated		Not rated	
159:							
Parkcity	70	Somewhat limited		Not limited		Very limited	
		Seepage	0.72			Deep to water	1.00
		Slope	0.12				
Dromedary	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.33	Deep to water	1.00
		Slope	0.12				
160:							
Parkcity	70	Somewhat limited		Not limited		Very limited	
		Slope	0.97			Deep to water	1.00
		Seepage	0.72				
Dromedary	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Content of large stones	0.33	Deep to water	1.00
		Slope	1.00				
161:							
Pits, Gravel	100	Not rated		Not rated		Not rated	
162:							
Richsum	70	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.88	Deep to water	1.00
		Depth to bedrock	0.01	Thin layer	0.06		
Heiners	20	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.50	Thin layer	1.00	Deep to water	1.00
		Seepage	0.04	Content of large stones	0.01		
163:							
Richsum	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Piping	0.88	Deep to water	1.00
		Slope	0.18	Thin layer	0.06		
		Depth to bedrock	0.01				

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
163:							
Heiners	30	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.50	Thin layer	1.00	Deep to water	1.00
		Slope	0.18	Content of large stones	0.01		
		Seepage	0.04				
164:							
Rock outcrop	90	Not rated		Not rated		Not rated	
165:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Starley Family	30	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Content of large stones	0.17	Deep to water	1.00
166:							
Sessions	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.54	Deep to water	1.00
Haydenfork	25	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Ponding	1.00	Cutbanks cave	1.00
				Depth to saturated zone	1.00	Slow refill	0.28
				Piping	0.69		
167:							
Sessions	55	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.54	Deep to water	1.00
Skutum	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.01	Deep to water	1.00
		Depth to bedrock	0.01				
168:							
Sessions	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.04	Hard to pack	0.54	Deep to water	1.00
Uinta	25	Very limited		Not limited		Very limited	
		Seepage	1.00			Deep to water	1.00
		Slope	0.06				
169:							
Skutum	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.01	Deep to water	1.00
		Depth to bedrock	0.01				
170:							
Skutum	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.01	Deep to water	1.00
		Slope	0.18				
		Depth to bedrock	0.01				
171:							
Skutum	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.01	Deep to water	1.00
		Seepage	0.72				
		Depth to bedrock	0.01				

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
172:							
Skutum	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Thin layer	0.01	Deep to water	1.00
		Slope	0.24				
		Depth to bedrock	0.01				
Uinta	25	Very limited		Not limited		Very limited	
		Seepage	1.00			Deep to water	1.00
		Slope	0.24				
173:							
Skutum	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.88	Thin layer	0.01	Deep to water	1.00
		Seepage	0.72				
		Depth to bedrock	0.01				
Uinta	25	Very limited		Not limited		Very limited	
		Seepage	1.00			Deep to water	1.00
		Slope	0.97				
174:							
Snyderville	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.19	Deep to water	1.00
				Content of large stones	0.18		
175:							
Snyderville	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.19	Deep to water	1.00
				Content of large stones	0.18		
176:							
Snyderville	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.19	Deep to water	1.00
177:							
Uinta	55	Very limited		Not limited		Very limited	
		Seepage	1.00			Deep to water	1.00
		Slope	0.18				
Duchesne	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Content of large stones	0.30	Deep to water	1.00
		Slope	0.18				
178:							
Wanship	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.97	Cutbanks cave	1.00
						Deep to water	0.01
179:							
Wanship	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.97	Cutbanks cave	1.00
						Deep to water	0.01
Kovich	30	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	1.00	Cutbanks cave	1.00
						Slow refill	0.28

Table 14.--Water management--continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
180:							
Yeates Hollow-------	55	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.33	Hard to pack	0.88	Deep to water	1.00
		Seepage	0.04	Content of large stones	0.85		
				Thin layer	0.34		
Henefer-------------	30	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Deep to water	1.00
181:							
Yeates Hollow-------	55	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.33	Hard to pack	0.88	Deep to water	1.00
		Slope	0.21	Content of large stones	0.85		
		Seepage	0.04	Thin layer	0.34		
Henefer-------------	30	Somewhat limited		Not limited		Very limited	
		Slope	0.18			Deep to water	1.00
		Seepage	0.04				
182:							
Yeates Hollow-------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Hard to pack	0.88	Deep to water	1.00
		Depth to bedrock	0.33	Content of large stones	0.85		
		Seepage	0.04	Thin layer	0.34		
Henefer-------------	30	Somewhat limited		Not limited		Very limited	
		Slope	0.97			Deep to water	1.00
		Seepage	0.04				
183:							
Water---------------	100	Not rated		Not rated		Not rated	
184:							
Dams----------------	100	Not rated		Not rated		Not rated	

Table 15.--Engineering index properties

(Absence of an entry indicates that the data were not estimated.)

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.	
101:												
Agassiz---------	0-6	Very cobbly loam	GC, SC	A-2, A-6	5-15	25-50	60-80	55-70	45-65	30-50	30-35	10-15
	6-14	Very cobbly loam, extremely cobbly loam	GC, SC	A-2, A-6	10-20	25-50	45-80	40-75	35-65	25-50	30-35	10-15
	14-24	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
102:												
Ant Flat--------	0-13	Loam	CL	A-6	0	0	85-100	80-100	70-90	55-75	30-35	10-15
	13-19	Clay loam	CL	A-6	0	0	90-100	85-100	75-90	60-80	35-40	15-20
	19-30	Clay	CH	A-7	0	0	95-100	90-100	80-100	70-90	55-65	35-40
	30-45	Clay loam	CL	A-6	0	0	90-100	85-100	75-95	60-80	35-40	15-20
	45-60	Clay loam	CL	A-6	0	0	90-100	80-100	70-95	55-80	35-40	15-20
103:												
Ant Flat--------	0-13	Loam	CL	A-6	0	0	85-100	80-100	70-90	55-75	30-35	10-15
	13-19	Clay loam	CL	A-6	0	0	90-100	85-100	75-90	60-80	35-40	15-20
	19-30	Clay	CH	A-7	0	0	95-100	90-100	80-100	70-90	55-65	35-40
	30-45	Clay loam	CL	A-6	0	0	90-100	85-100	75-95	60-80	35-40	15-20
	45-60	Clay loam	CL	A-6	0	0	90-100	80-100	70-95	55-80	35-40	15-20
104:												
Ant Flat--------	0-13	Loam	CL	A-6	0	0	85-100	80-100	70-90	55-75	30-35	10-15
	13-19	Clay loam	CL	A-6	0	0	90-100	85-100	75-90	60-80	35-40	15-20
	19-30	Clay	CH	A-7	0	0	95-100	90-100	80-100	70-90	55-65	35-40
	30-45	Clay loam	CL	A-6	0	0	90-100	85-100	75-95	60-80	35-40	15-20
	45-60	Clay loam	CL	A-6	0	0	90-100	80-100	70-95	55-80	35-40	15-20
105:												
Ant Flat--------	0-13	Loam	CL	A-6	0	0	85-100	80-100	70-90	55-75	30-35	10-15
	13-19	Clay loam	CL	A-6	0	0	90-100	85-100	75-90	60-80	35-40	15-20
	19-30	Clay	CH	A-7	0	0	95-100	90-100	80-100	70-90	55-65	35-40
	30-45	Clay loam	CL	A-6	0	0	90-100	85-100	75-95	60-80	35-40	15-20
	45-60	Clay loam	CL	A-6	0	0	90-100	80-100	70-95	55-80	35-40	15-20

Table 15.--Engineering index 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.	
105:												
Henefer----------	0-7	Gravelly loam	CL, GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	7-12	Gravelly loam	GC, SC	A-6	0	0-10	60-80	55-75	45-65	35-50	30-35	10-15
	12-21	Cobbly clay, gravelly clay loam, gravelly silty clay loam	CH, GC, SC	A-7	0-5	0-30	60-95	55-90	45-85	35-80	50-65	30-40
	21-30	Cobbly clay, gravelly clay loam, gravelly silty clay loam	CL, SC, CH	A-2, A-7	0-5	0-30	60-95	55-90	45-85	20-80	45-65	25-40
	30-37	Very gravelly clay loam, very cobbly clay loam, very cobbly sandy clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	37-43	Very gravelly clay loam, very cobbly clay loam, very cobbly sandy clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	43-50	Very cobbly sandy clay loam, very cobbly clay loam, very gravelly clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	50-60	Very cobbly sandy clay loam, very cobbly clay loam, very gravelly clay loam	SC, GC, CL	A-2	0-10	0-40	40-80	35-75	30-65	20-55	35-40	15-20
Skutum----------	0-5	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	5-17	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	17-32	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	32-44	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	44-48	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	48-56	Gravelly sandy loam	SC-SM, GC-GM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	56-60	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
106:												
Ayoub----------	0-6	Cobbly loam	SC, GC, CL	A-6	0-10	15-30	75-95	70-90	60-80	45-65	30-35	10-15
	6-12	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	12-18	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	18-23	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	23-35	Very cobbly loam, very gravelly loam	SC, GC	A-6, A-2	0-15	5-45	45-80	40-75	35-65	25-50	30-35	10-15
	35-45	Bedrock			---	---	---	---	---	---	---	---
107:												
Ayoub----------	0-6	Cobbly loam	SC, GC, CL	A-6	0-10	15-30	75-95	70-90	60-80	45-65	30-35	10-15
	6-12	Gravelly clay loam	GC, CL, SC	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	12-18	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	18-23	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	23-35	Very cobbly loam, very gravelly loam	SC, GC	A-6, A-2	0-15	5-45	45-80	40-75	35-65	25-50	30-35	10-15
	35-45	Bedrock			---	---	---	---	---	---	---	---
Dunford---------	0-10	Cobbly loam	SC, GC, CL	A-6	0-5	10-30	75-95	70-90	60-80	45-65	30-35	10-15
	10-21	Gravelly clay loam	CL, GC, SC	A-6	0-5	5-15	60-80	55-75	45-65	35-55	35-40	15-20
	21-36	Gravelly clay loam	CL, GC, SC	A-6	0-5	5-15	60-80	55-75	45-65	35-55	35-40	15-20
	36-46	Bedrock			---	---	---	---	---	---	---	---
Melling---------	0-6	Extremely stony loam	GC, SC	A-2, A-6	0-10	35-60	45-65	40-55	35-55	25-45	30-35	10-15
	6-19	Very cobbly clay loam, very gravelly clay loam	GC	A-2, A-6	0-10	10-45	55-75	50-65	40-60	25-50	35-40	15-20
	19-29	Bedrock			---	---	---	---	---	---	---	---
108:												
Ayoub----------	0-6	Cobbly loam	SC, GC, CL	A-6	0-10	15-30	75-95	70-90	60-80	45-65	30-35	10-15
	6-12	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	12-18	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	18-23	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	23-35	Very cobbly loam, very gravelly loam	SC, GC	A-6, A-2	0-15	5-45	45-80	40-75	35-65	25-50	30-35	10-15
	35-45	Bedrock			---	---	---	---	---	---	---	---
Dunford---------	0-10	Cobbly loam	SC, GC, CL	A-6	0-5	10-30	75-95	70-90	60-80	45-65	30-35	10-15
	10-21	Gravelly clay loam	CL, GC, SC	A-6	0-5	5-15	60-80	55-75	45-65	35-55	35-40	15-20
	21-36	Gravelly clay loam	CL, GC, SC	A-6	0-5	5-15	60-80	55-75	45-65	35-55	35-40	15-20
	36-46	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
108:												
Melling---------	0-6	Extremely stony loam	GC, SC	A-2, A-6	0-10	35-60	45-65	40-55	35-55	25-45	30-35	10-15
	6-19	Very cobbly clay loam, very gravelly clay loam	GC	A-2, A-6	0-10	10-45	55-75	50-65	40-60	25-50	35-40	15-20
	19-29	Bedrock			---	---	---	---	---	---	---	---
109:												
Cluff-----------	0-4	Loam	CL	A-6	0	0-6	85-100	80-100	70-90	55-75	30-35	10-15
	4-9	Gravelly loam	GC, SC	A-6	0	0-10	65-80	55-75	45-65	35-50	30-35	10-15
	9-16	Very gravelly loam	GC-GM, GC	A-2, A-6	0-5	0-20	45-65	40-60	35-55	25-45	30-35	10-15
	16-20	Very cobbly clay loam	GC, SC, CH	A-7	0-10	20-45	60-80	55-75	45-65	35-55	50-55	30-35
	20-33	Very cobbly clay	CH, GC, SC	A-7	0-10	20-45	60-80	55-75	45-65	45-65	50-55	30-35
	33-54	Very cobbly clay	CH, GC, SC	A-7	0-10	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	54-60	Bedrock			---	---	---	---	---	---	---	---
110:												
Cluff-----------	0-4	Loam	CL	A-6	0	0-6	85-100	80-100	70-90	55-75	30-35	10-15
	4-9	Gravelly loam	GC, SC	A-6	0	0-10	65-80	55-75	45-65	35-50	30-35	10-15
	9-16	Very gravelly loam	GC-GM, GC	A-2, A-6	0-5	0-20	45-65	40-60	35-55	25-45	30-35	10-15
	16-20	Very cobbly clay loam	GC, SC, CH	A-7	0-10	20-45	60-80	55-75	45-65	35-55	50-55	30-35
	20-33	Very cobbly clay	CH, GC, SC	A-7	0-10	20-45	60-80	55-75	45-65	45-65	50-55	30-35
	33-54	Very cobbly clay	CH, GC, SC	A-7	0-10	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	54-60	Bedrock			---	---	---	---	---	---	---	---
111:												
Crandall--------	0-5	Gravelly loam	CL, GC, SC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	5-14	Gravelly loam	CL, GC, SC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	14-45	Very cobbly clay loam, very gravelly clay loam	GC, CL, SC	A-2, A-6	0-10	10-40	40-80	35-75	30-65	20-55	35-40	15-20
	45-55	Very cobbly loam, very gravelly loam	SC, GC	A-2, A-6	0-10	10-40	40-80	35-75	30-65	20-50	30-35	10-15
	55-60	Bedrock			---	---	---	---	---	---	---	---
112:												
Crandall--------	0-5	Gravelly loam	CL, GC, SC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	5-14	Gravelly loam	CL, GC, SC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	14-45	Very cobbly clay loam, very gravelly clay loam	GC, CL, SC	A-2, A-6	0-10	10-40	40-80	35-75	30-65	20-55	35-40	15-20
	45-55	Very cobbly loam, very gravelly loam	SC, GC	A-2, A-6	0-10	10-40	40-80	35-75	30-65	20-50	30-35	10-15
	55-60	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
112:												
Lucky Star------	0-6	Gravelly loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	6-12	Gravelly loam	SC, CL, GC	A-6	0-15	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	12-25	Very gravelly fine sandy loam, very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	25-47	Very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	47-62	Very cobbly sandy clay loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
	62-80	Very gravelly sandy clay loam, very cobbly sandy clay loam	GC, SC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
113:												
Crandall--------	0-5	Gravelly loam	CL, GC, SC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	5-14	Gravelly loam	CL, GC, SC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	14-45	Very cobbly clay loam, very gravelly clay loam	GC, CL, SC	A-2, A-6	0-10	10-40	40-80	35-75	30-65	20-55	35-40	15-20
	45-55	Very cobbly loam, very gravelly loam	SC, GC	A-2, A-6	0-10	10-40	40-80	35-75	30-65	20-50	30-35	10-15
	55-60	Bedrock			---	---	---	---	---	---	---	---
Lucky Star------	0-6	Gravelly loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	6-12	Gravelly loam	SC, CL, GC	A-6	0-15	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	12-25	Very gravelly fine sandy loam, very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	25-47	Very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	47-62	Very cobbly sandy clay loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
	62-80	Very gravelly sandy clay loam, very cobbly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20

Table 15.--Engineering index 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.	
113:												
Starley Family--	0-6	Very cobbly loam	SC, GC	A-6, A-2	0-15	20-45	60-80	55-75	45-65	30-50	30-35	10-15
	6-15	Extremely cobbly loam	SC, GC	A-6, A-2	0-20	30-55	45-65	40-60	35-55	25-45	30-35	10-15
	15-19	Extremely cobbly loam	SC, GC	A-2, A-6	0-20	30-55	45-65	40-60	35-55	25-45	30-35	10-15
	19-29	Bedrock			---	---	---	---	---	---	---	---
114:												
Crandall--------	0-5	Gravelly loam	CL, GC, SC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	5-14	Gravelly loam	CL, GC, SC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	14-45	Very cobbly clay loam, very gravelly clay loam	GC, CL, SC	A-2, A-6	0-10	10-40	40-80	35-75	30-65	20-55	35-40	15-20
	45-55	Very cobbly loam, very gravelly loam	SC, GC	A-2, A-6	0-10	10-40	40-80	35-75	30-65	20-50	30-35	10-15
	55-60	Bedrock			---	---	---	---	---	---	---	---
Starley Family--	0-6	Very cobbly loam	SC, GC	A-6, A-2	0-15	20-45	60-80	55-75	45-65	30-50	30-35	10-15
	6-15	Extremely cobbly loam	SC, GC	A-6, A-2	0-20	30-55	45-65	40-60	35-55	25-45	30-35	10-15
	15-19	Extremely cobbly loam	SC, GC	A-6, A-2	0-20	30-55	45-65	40-60	35-55	25-45	30-35	10-15
	19-29	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
115:												
Dastrup---------	0-12	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	12-16	Clay loam, loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	16-36	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	36-48	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	48-60	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
116:												
Dastrup---------	0-12	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	12-16	Clay loam, loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	16-36	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	36-48	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	48-60	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20

Table 15.--Engineering index 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.	
117:												
Dastrup---------	0-12	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	12-16	Clay loam, loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	16-36	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	36-48	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
	48-60	Loam, clay loam, gravelly loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	30-40	10-20
118:												
Dromedary-------	0-6	Gravelly loam	SC-SM, GC-GM	A-4	0-5	0-10	65-85	60-80	50-70	40-60	25-30	5-10
	6-22	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	30-40	60-80	55-75	30-50	15-30	20-25	5-10
	22-44	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
	44-51	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
	51-60	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
Rock outcrop----	---	---	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
119:												
Duchesne--------	0-4	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	20-49	60-80	55-75	30-50	15-30	20-30	5-10
	4-11	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	11-18	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	18-30	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	30-42	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	42-60	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	GC, SC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20

Table 15.--Engineering index 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.	
120:												
Duchesne--------	0-4	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	20-49	60-80	55-75	30-50	15-30	20-30	5-10
	4-11	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	11-18	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	18-30	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	30-42	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	42-60	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	GC, SC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20

Table 15.--Engineering index 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.	
121:												
Duchesne--------	0-4	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	20-49	60-80	55-75	30-50	15-30	20-30	5-10
	4-11	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	11-18	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	18-30	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	30-42	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	42-60	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	GC, SC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20

Table 15.--Engineering index 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.	
122:												
Duchesne--------	0-4	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	20-49	60-80	55-75	30-50	15-30	20-30	5-10
	4-11	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	11-18	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	18-30	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	30-42	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	42-60	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
Haydenfork------	0-3	Slightly decomposed plant material			0	0	---	---	---	---	---	---
	3-9	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	9-17	Clay loam	CL	A-6	0	0-5	85-100	80-100	70-95	60-80	35-40	15-20
	17-21	Clay loam	CL	A-6	0	0-5	85-100	80-100	70-95	60-80	35-40	15-20
	21-25	Clay loam	CL	A-6	0	0-5	85-100	80-100	70-95	60-80	35-40	15-20
	25-36	Loam, sandy clay loam	SC, CL	A-6	0	0-5	85-100	80-100	70-90	35-75	30-35	10-15
	36-55	Loam, sandy clay loam	SC, CL	A-6	0	0-5	85-100	80-100	70-90	35-75	30-35	10-15
	55-63	Gravelly loam, gravelly sandy clay loam	CL, SC, GC	A-6, A-2	0	0-10	60-80	55-75	45-65	20-55	30-35	10-15
123:												
Dumps, Mines----	---	---	---	---	---	---	---	---	---	---	---	---
124:												
Dunford---------	0-10	Cobbly loam	SC, GC, CL	A-6	0-5	10-30	75-95	70-90	60-80	45-65	30-35	10-15
	10-21	Gravelly clay loam	CL, GC, SC	A-6	0-5	5-15	60-80	55-75	45-65	35-55	35-40	15-20
	21-36	Gravelly clay loam	CL, GC, SC	A-6	0-5	5-15	60-80	55-75	45-65	35-55	35-40	15-20
	36-46	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
124:												
Ayoub----------	0-6	Cobbly loam	SC, GC, CL	A-6	0-10	15-30	75-95	70-90	60-80	45-65	30-35	10-15
	6-12	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	12-18	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	18-23	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	23-35	Very cobbly loam, very gravelly loam	SC, GC	A-6, A-2	0-15	5-45	45-80	40-75	35-65	25-50	30-35	10-15
	35-45	Bedrock			---	---	---	---	---	---	---	---
Melling---------	0-6	Extremely stony loam	GC, SC	A-2, A-6	0-10	35-60	45-65	40-55	35-55	25-45	30-35	10-15
	6-19	Very cobbly clay loam, very gravelly clay loam	GC	A-2, A-6	0-10	10-45	55-75	50-65	40-60	25-50	35-40	15-20
	19-29	Bedrock			---	---	---	---	---	---	---	---
125:												
Dunford---------	0-10	Cobbly loam	SC, GC, CL	A-6	0-5	10-30	75-95	70-90	60-80	45-65	30-35	10-15
	10-21	Gravelly clay loam	CL, GC, SC	A-6	0-5	5-15	60-80	55-75	45-65	35-55	35-40	15-20
	21-36	Gravelly clay loam	CL, GC, SC	A-6	0-5	5-15	60-80	55-75	45-65	35-55	35-40	15-20
	36-46	Bedrock			---	---	---	---	---	---	---	---
Ayoub----------	0-6	Cobbly loam	SC, GC, CL	A-6	0-10	15-30	75-95	70-90	60-80	45-65	30-35	10-15
	6-12	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	12-18	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	18-23	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	23-35	Very cobbly loam, very gravelly loam	SC, GC	A-6, A-2	0-15	5-45	45-80	40-75	35-65	25-50	30-35	10-15
	35-45	Bedrock			---	---	---	---	---	---	---	---
Melling---------	0-6	Extremely stony loam	GC, SC	A-2, A-6	0-10	35-60	45-65	40-55	35-55	25-45	30-35	10-15
	6-19	Very cobbly clay loam, very gravelly clay loam	GC	A-2, A-6	0-10	10-45	55-75	50-65	40-60	25-50	35-40	15-20
	19-29	Bedrock			---	---	---	---	---	---	---	---
126:												
Echocreek-------	0-7	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	7-18	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	18-26	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	26-38	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	38-45	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	45-60	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
127:												
Echocreek-------	0-7	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	7-18	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	18-26	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	26-38	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	38-45	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10
	45-60	Loam	CL	A-4	0	0	85-100	80-100	70-90	55-75	20-30	5-10

Table 15.--Engineering index 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.	
127:												
Kovich----------	0-9	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-80	30-35	10-15
	9-22	Loam, clay loam	CL	A-6	0	0-10	85-100	80-100	70-95	55-80	30-40	10-20
	22-29	Clay loam, loam	CL	A-6	0	0-10	85-100	80-100	70-95	55-80	30-40	10-20
	29-44	Fine sandy loam, very gravelly sandy clay loam	GC, SC, SC-SM	A-2, A-4	0	0-20	40-100	35-100	25-80	15-50	20-35	5-15
	44-60	Very gravelly loamy fine sand, very gravelly sand, very gravelly loamy sand	SM, GM	A-1	0-10	0-20	40-60	35-55	15-35	0-15	---	---
128:												
Fewkes----------	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
129:												
Fewkes----------	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20

Table 15.--Engineering index 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.	
130:												
Fewkes----------	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
131:												
Fewkes----------	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
Heiners----------	0-3	Gravelly loam	CL-ML, GC-GM, SC-SM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	3-8	Gravelly loam	GC-GM, SC-SM	A-4	0	0-40	60-80	55-75	45-65	35-55	20-30	5-10
	8-12	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	12-19	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	19-29	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
132:												
Fewkes	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
Hades	0-3	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	3-18	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	18-33	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	33-44	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	44-60	Clay loam, gravelly clay loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
133:												
Fewkes	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
Hades	0-3	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	3-18	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	18-33	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	33-44	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	44-60	Clay loam, gravelly clay loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20

Table 15.--Engineering index 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.	
134:												
Fewkes----------	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
Yeates Hollow---	0-12	Very stony loam	SC, GC	A-6, A-2	15-30	15-30	60-80	55-75	45-65	30-50	30-35	10-15
	12-25	Very cobbly clay	CH, SC, GC	A-7	0-15	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	25-37	Very cobbly clay	SC, GC	A-7	0-15	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	37-43	Extremely cobbly clay loam	GC	A-7, A-2	0-25	30-50	45-65	40-60	35-55	30-50	50-55	30-35
	43-53	Bedrock			---	---	---	---	---	---	---	---
135:												
Fewkes----------	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
Yeates Hollow---	0-12	Very stony loam	SC, GC	A-6, A-2	15-30	15-30	60-80	55-75	45-65	30-50	30-35	10-15
	12-25	Very cobbly clay	CH, SC, GC	A-7	0-15	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	25-37	Very cobbly clay	SC, GC	A-7	0-15	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	37-43	Extremely cobbly clay loam	GC	A-7, A-2	0-25	30-50	45-65	40-60	35-55	30-50	50-55	30-35
	43-53	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
136:												
Hades	0-3	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	3-18	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	18-33	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	33-44	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	44-60	Clay loam, gravelly clay loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
Agassiz	0-6	Very cobbly loam	GC, SC	A-2, A-6	5-15	25-50	60-80	55-70	45-65	30-50	30-35	10-15
	6-14	Very cobbly loam, extremely cobbly loam	GC, SC	A-2, A-6	10-20	25-50	45-80	40-75	35-65	25-50	30-35	10-15
	14-24	Bedrock	---	---	---	---	---	---	---	---	---	---
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	---
137:												
Hades	0-3	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	3-18	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	18-33	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	33-44	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	44-60	Clay loam, gravelly clay loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
Fewkes	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
138:												
Hades	0-3	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	3-18	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	18-33	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	33-44	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	44-60	Clay loam, gravelly clay loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20

Table 15.--Engineering index 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.	
138:												
Fewkes	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
139:												
Harter	0-5	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	5-12	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	12-19	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	19-24	Gravelly clay loam	GC, SC, CH	A-7	0	0-5	60-80	55-75	45-65	35-55	50-55	30-35
	24-33	Gravelly clay	CH, GC, SC	A-7	0	0-10	60-80	55-75	50-70	45-65	50-65	35-40
	33-60	Gravelly clay	CH, GC, SC	A-7	0	0-10	60-80	55-75	50-70	45-65	55-65	35-40
140:												
Heiners	0-3	Gravelly loam	CL-ML, GC-GM, SC-SM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	3-8	Gravelly loam	GC-GM, SC-SM	A-4	0	0-40	60-80	55-75	45-65	35-55	20-30	5-10
	8-12	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	12-19	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	19-29	Bedrock			---	---	---	---	---	---	---	---
Fewkes	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20

Table 15.--Engineering index 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.	
141:												
Heiners---	0-3	Gravelly loam	CL-ML, GC-GM, SC-SM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	3-8	Gravelly loam	GC-GM, SC-SM	A-4	0	0-40	60-80	55-75	45-65	35-55	20-30	5-10
	8-12	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	12-19	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	19-29	Bedrock			---	---	---	---	---	---	---	---
Fewkes---	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
Hades---	0-3	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	3-18	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	18-33	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	33-44	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	44-60	Clay loam, gravelly clay loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20

Table 15.--Engineering index 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.	
142:												
Henefer---	0-7	Gravelly loam	CL, GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	7-12	Gravelly loam	GC, SC	A-6	0	0-10	60-80	55-75	45-65	35-50	30-35	10-15
	12-21	Cobbly clay, gravelly clay loam, gravelly silty clay loam	CH, GC, SC	A-7	0-5	0-30	60-95	55-90	45-85	35-80	50-65	30-40
	21-30	Cobbly clay, gravelly clay loam, gravelly silty clay loam	CL, SC, CH	A-2, A-7	0-5	0-30	60-95	55-90	45-85	20-80	45-65	25-40
	30-37	Very gravelly clay loam, very cobbly clay loam, very cobbly sandy clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	37-43	Very gravelly clay loam, very cobbly clay loam, very cobbly sandy clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	43-50	Very cobbly sandy clay loam, very cobbly clay loam, very gravelly clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	50-60	Very cobbly sandy clay loam, very cobbly clay loam, very gravelly clay loam	SC, GC, CL	A-2	0-10	0-40	40-80	35-75	30-65	20-55	35-40	15-20
Harter---	0-5	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	5-12	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	12-19	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	19-24	Gravelly clay loam	GC, SC, CH	A-7	0	0-5	60-80	55-75	45-65	35-55	50-55	30-35
	24-33	Gravelly clay	CH, GC, SC	A-7	0	0-10	60-80	55-75	50-70	45-65	50-65	35-40
	33-60	Gravelly clay	CH, GC, SC	A-7	0	0-10	60-80	55-75	50-70	45-65	55-65	35-40

Table 15.--Engineering index 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.	
143:												
Horrocks--------	0-10	Very cobbly loam	GC, SC	A-2, A-6	0-10	20-45	55-80	45-75	45-65	30-50	30-35	10-15
	10-19	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	19-32	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	32-40	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	40-59	Very gravelly loam, very cobbly sandy clay loam	GC, SC	A-2, A-6	0-10	0-45	35-80	30-75	30-65	20-40	30-35	10-15
	59-60	Bedrock			---	---	---	---	---	---	---	---
Agassiz---------	0-6	Very cobbly loam	GC, SC	A-2, A-6	5-15	25-50	60-80	55-70	45-65	30-50	30-35	10-15
	6-14	Very cobbly loam, extremely cobbly loam	GC, SC	A-2, A-6	10-20	25-50	45-80	40-75	35-65	25-50	30-35	10-15
	14-24	Bedrock			---	---	---	---	---	---	---	---
144:												
Horrocks--------	0-10	Very cobbly loam	GC, SC	A-2, A-6	0-10	20-45	55-80	45-75	45-65	30-50	30-35	10-15
	10-19	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	19-32	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	32-40	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	40-59	Very gravelly loam, very cobbly sandy clay loam	GC, SC	A-2, A-6	0-10	0-45	35-80	30-75	30-65	20-40	30-35	10-15
	59-60	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
144:												
Cutoff----------	0-1	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	1-9	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	9-16	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	16-29	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	29-38	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	38-48	Bedrock			---	---	---	---	---	---	---	---
145:												
Horrocks--------	0-10	Very cobbly loam	GC, SC	A-2, A-6	0-10	20-45	55-80	45-75	45-65	30-50	30-35	10-15
	10-19	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	19-32	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	32-40	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	40-59	Very gravelly loam, very cobbly sandy clay loam	GC, SC	A-2, A-6	0-10	0-45	35-80	30-75	30-65	20-40	30-35	10-15
	59-60	Bedrock			---	---	---	---	---	---	---	---
Cutoff----------	0-1	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	1-9	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	9-16	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	16-29	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	29-38	Very gravelly loam	GC	A-6, A-2	0-5	5-15	40-60	35-55	30-50	20-40	20-35	10-15
	38-48	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
146:												
Horrocks--------	0-10	Very cobbly loam	GC, SC	A-2, A-6	0-10	20-45	55-80	45-75	45-65	30-50	30-35	10-15
	10-19	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	19-32	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	32-40	Very cobbly clay loam, very gravelly sandy clay loam	GC, SC	A-2, A-6	0-10	10-45	35-80	25-75	25-65	15-50	35-40	15-20
	40-59	Very gravelly loam, very cobbly sandy clay loam	GC, SC	A-2, A-6	0-10	0-45	35-80	30-75	30-65	20-40	30-35	10-15
	59-60	Bedrock			---	---	---	---	---	---	---	---
Hades-----------	0-3	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	3-18	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	18-33	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	33-44	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	44-60	Clay loam, gravelly clay loam	CL, GC, SC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
147:												
Hovarka---------	0-4	Slightly decomposed plant material			0	0	---	---	---	---	---	---
	4-12	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	12-32	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	32-36	Very gravelly loamy sand, very cobbly loamy sand	GM, SM	A-1	0-10	10-40	40-80	35-75	15-50	5-20	10-20	NP
	36-64	Very cobbly sand, very gravelly sand	SP, GP	A-1	0-15	10-40	40-80	35-75	15-50	0-10	0-0	NP
Millcreek-------	0-14	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	14-24	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	24-60	Very cobbly sand, very gravelly loamy sand	SP, GM, SM	A-1	0-10	10-40	40-80	35-75	15-50	0-15	5-20	NP

Table 15.--Engineering index 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.	
148:												
Jana	0-1	Very gravelly loam	GC-GM	A-2, A-4	0-10	0-20	40-60	35-55	30-50	20-40	20-30	5-10
	1-6	Very gravelly loam	GC-GM	A-2, A-4	0-10	0-20	40-60	35-55	30-50	20-40	20-30	5-10
	6-12	Extremely cobbly loam, very gravelly loam, very gravelly fine sandy loam	SC-SM, GC-GM	A-4, A-2	0-20	10-50	40-65	35-60	25-55	15-45	20-30	5-10
	12-22	Bedrock			---	---	---	---	---	---	---	---
Richsum	0-2	Silt loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	30-35	10-15
	2-14	Loam, silt loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	14-23	Silt loam, loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	23-32	Silt loam, loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	32-52	Silt loam, gravelly silt loam, loam	SC, GC, CL	A-6	0	0	60-100	55-100	50-95	45-80	30-35	10-15
	52-60	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	---
149:												
Kovich	0-9	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-80	30-35	10-15
	9-22	Loam, clay loam	CL	A-6	0	0-10	85-100	80-100	70-95	55-80	30-40	10-20
	22-29	Clay loam, loam	CL	A-6	0	0-10	85-100	80-100	70-95	55-80	30-40	10-20
	29-44	Fine sandy loam, very gravelly sandy clay loam	GC, SC, SC-SM	A-2, A-4	0	0-20	40-100	35-100	25-80	15-50	20-35	5-15
	44-60	Very gravelly loamy fine sand, very gravelly sand, very gravelly loamy sand	SM, GM	A-1	0-10	0-20	40-60	35-55	15-35	0-15	---	---

Table 15.--Engineering index 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.	
149:												
Toddspan--------	0-4	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	4-14	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	14-19	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	19-24	Very cobbly clay loam, very cobbly loam	SC, GC, CL	A-6, A-2	0-10	20-45	60-80	55-75	45-65	30-55	30-40	10-20
	24-32	Very cobbly clay loam, very cobbly loam	SC, GC, CL	A-6, A-2	0-10	20-45	60-80	55-75	45-65	30-55	30-40	10-20
	32-37	Extremely cobbly sandy clay loam, extremely gravelly sandy clay loam, very gravelly loam	SC, GC	A-6, A-2	0-20	10-50	20-65	15-60	10-50	5-40	30-35	10-15
	37-44	Extremely gravelly sandy clay loam, very gravelly loam, extremely cobbly sandy clay loam	SC, GC	A-6, A-2	0-20	10-50	20-65	15-60	10-50	5-40	30-35	10-15
	44-60	Very cobbly sand, extremely gravelly loamy sand	SP, GP, SP-SM, GP-GM	A-1	0-20	10-45	20-80	15-75	5-50	0-10	5-20	NP
150:												
Lucky Star------	0-6	Gravelly loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	6-12	Gravelly loam	SC, CL, GC	A-6	0-15	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	12-25	Very gravelly fine sandy loam, very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	25-47	Very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	47-62	Very cobbly sandy clay loam, very gravelly sandy clay loam	GC, SC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
	62-80	Very gravelly sandy clay loam, very cobbly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20

Table 15.--Engineering index 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.	
151:												
Lucky Star------	0-6	Gravelly loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	6-12	Gravelly loam	SC, CL, GC	A-6	0-15	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	12-25	Very gravelly fine sandy loam, very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	25-47	Very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	47-62	Very cobbly sandy clay loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
	62-80	Very gravelly sandy clay loam, very cobbly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
152:												
Lucky Star------	0-6	Gravelly loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	6-12	Gravelly loam	SC, CL, GC	A-6	0-15	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	12-25	Very gravelly fine sandy loam, very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	25-47	Very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	47-62	Very cobbly sandy clay loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
	62-80	Very gravelly sandy clay loam, very cobbly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
Dromedary-------	0-6	Gravelly loam	SC-SM, GC-GM	A-4	0-5	0-10	65-85	60-80	50-70	40-60	25-30	5-10
	6-22	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	30-40	60-80	55-75	30-50	15-30	20-25	5-10
	22-44	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
	44-51	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
	51-60	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20

Table 15.--Engineering index 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.	
153:												
Lucky Star------	0-6	Gravelly loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	6-12	Gravelly loam	SC, CL, GC	A-6	0-15	0-10	60-80	55-75	45-65	35-55	30-35	10-15
	12-25	Very gravelly fine sandy loam, very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	25-47	Very cobbly sandy loam, very cobbly fine sandy loam	GC-GM, SC-SM	A-2	0-15	10-45	40-80	35-75	25-50	15-30	20-30	5-10
	47-62	Very cobbly sandy clay loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
	62-80	Very gravelly sandy clay loam, very cobbly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-40	30-40	10-20
Fewkes----------	0-12	Gravelly loam	CL, SC, GC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	12-17	Clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	17-22	Clay loam, gravelly clay loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	35-40	15-20
	22-28	Clay loam, gravelly clay loam	CL, GC	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	28-40	Clay loam, gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-100	55-100	45-95	35-80	35-40	15-20
	40-50	Clay loam, gravelly clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
	50-60	Gravelly clay loam, clay loam, gravelly loam, loam	CL, GC, SC	A-6	0	0-15	60-100	55-100	45-90	35-75	30-40	10-20
154:												
Manila----------	0-4	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	4-15	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	15-22	Clay loam, clay	CH	A-7	0	0-5	85-100	80-100	75-100	60-90	50-65	30-40
	22-40	Clay, clay loam	CH	A-7	0	0-5	85-100	80-100	75-100	60-90	50-65	30-40
	40-46	Gravelly clay, clay loam, clay	GC, CH, SC	A-7	0	0-10	60-100	55-100	45-100	35-90	50-65	30-40
	46-60	Clay, clay loam, gravelly clay loam	SC, GC, CH	A-7	0	0-10	60-100	55-100	45-100	35-90	50-65	30-40
Ant Flat--------	0-13	Loam	CL	A-6	0	0	85-100	80-100	70-90	55-75	30-35	10-15
	13-19	Clay loam	CL	A-6	0	0	90-100	85-100	75-90	60-80	35-40	15-20
	19-30	Clay	CH	A-7	0	0	95-100	90-100	80-100	70-90	55-65	35-40
	30-45	Clay loam	CL	A-6	0	0	90-100	85-100	75-95	60-80	35-40	15-20
	45-60	Clay loam	CL	A-6	0	0	90-100	80-100	70-95	55-80	35-40	15-20

Table 15.--Engineering index 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.	
155:												
Manila----------	0-4	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	4-15	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	15-22	Clay loam, clay	CH	A-7	0	0-5	85-100	80-100	75-100	60-90	50-65	30-40
	22-40	Clay, clay loam	CH	A-7	0	0-5	85-100	80-100	75-100	60-90	50-65	30-40
	40-46	Gravelly clay, clay loam, clay	GC, CH, SC	A-7	0	0-10	60-100	55-100	45-100	35-90	50-65	30-40
	46-60	Clay, clay loam, gravelly clay loam	SC, GC, CH	A-7	0	0-10	60-100	55-100	45-100	35-90	50-65	30-40
Ant Flat--------	0-13	Loam	CL	A-6	0	0	85-100	80-100	70-90	55-75	30-35	10-15
	13-19	Clay loam	CL	A-6	0	0	90-100	85-100	75-90	60-80	35-40	15-20
	19-30	Clay	CH	A-7	0	0	95-100	90-100	80-100	70-90	55-65	35-40
	30-45	Clay loam	CL	A-6	0	0	90-100	85-100	75-95	60-80	35-40	15-20
	45-60	Clay loam	CL	A-6	0	0	90-100	80-100	70-95	55-80	35-40	15-20
156:												
Manila----------	0-4	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	4-15	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	15-22	Clay loam, clay	CH	A-7	0	0-5	85-100	80-100	75-100	60-90	50-65	30-40
	22-40	Clay, clay loam	CH	A-7	0	0-5	85-100	80-100	75-100	60-90	50-65	30-40
	40-46	Gravelly clay, clay loam, clay	GC, CH, SC	A-7	0	0-10	60-100	55-100	45-100	35-90	50-65	30-40
	46-60	Clay, clay loam, gravelly clay loam	SC, GC, CH	A-7	0	0-10	60-100	55-100	45-100	35-90	50-65	30-40
Harter----------	0-5	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	5-12	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	12-19	Gravelly loam	GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-50	30-35	10-15
	19-24	Gravelly clay loam	GC, SC, CH	A-7	0	0-5	60-80	55-75	45-65	35-55	50-55	30-35
	24-33	Gravelly clay	CH, GC, SC	A-7	0	0-10	60-80	55-75	50-70	45-65	50-65	35-40
	33-60	Gravelly clay	CH, GC, SC	A-7	0	0-10	60-80	55-75	50-70	45-65	55-65	35-40
157:												
Manila----------	0-4	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	4-15	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	15-22	Clay loam, clay	CH	A-7	0	0-5	85-100	80-100	75-100	60-90	50-65	30-40
	22-40	Clay, clay loam	CH	A-7	0	0-5	85-100	80-100	75-100	60-90	50-65	30-40
	40-46	Gravelly clay, clay loam, clay	GC, CH, SC	A-7	0	0-10	60-100	55-100	45-100	35-90	50-65	30-40
	46-60	Clay, clay loam, gravelly clay loam	SC, GC, CH	A-7	0	0-10	60-100	55-100	45-100	35-90	50-65	30-40

Table 15.--Engineering index 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.	
157:												
Henefer---	0-7	Gravelly loam	CL, GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	7-12	Gravelly loam	GC, SC	A-6	0	0-10	60-80	55-75	45-65	35-50	30-35	10-15
	12-21	Cobbly clay, gravelly clay loam, gravelly silty clay loam	CH, GC, SC	A-7	0-5	0-30	60-95	55-90	45-85	35-80	50-65	30-40
	21-30	Cobbly clay, gravelly clay loam, gravelly silty clay loam	CL, SC, CH	A-2, A-7	0-5	0-30	60-95	55-90	45-85	20-80	45-65	25-40
	30-37	Very gravelly clay loam, very cobbly clay loam, very cobbly sandy clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	37-43	Very gravelly clay loam, very cobbly clay loam, very cobbly sandy clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	43-50	Very cobbly sandy clay loam, very cobbly clay loam, very gravelly clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	50-60	Very cobbly sandy clay loam, very cobbly clay loam, very gravelly clay loam	SC, GC, CL	A-2	0-10	0-40	40-80	35-75	30-65	20-55	35-40	15-20
158:												
Melling---	0-6	Extremely stony loam	GC, SC	A-2, A-6	0-10	35-60	45-65	40-55	35-55	25-45	30-35	10-15
	6-19	Very cobbly clay loam, very gravelly clay loam	GC	A-2, A-6	0-10	10-45	55-75	50-65	40-60	25-50	35-40	15-20
	19-29	Bedrock			---	---	---	---	---	---	---	---
Ayoub---	0-6	Cobbly loam	SC, GC, CL	A-6	0-10	15-30	75-95	70-90	60-80	45-65	30-35	10-15
	6-12	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	12-18	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	18-23	Gravelly clay loam	SC, GC, CL	A-6	0-10	0-15	60-80	55-75	45-65	35-55	35-40	15-20
	23-35	Very cobbly loam, very gravelly loam	SC, GC	A-6, A-2	0-15	5-45	45-80	40-75	35-65	25-50	30-35	10-15
	35-45	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop---	---	---	---	---	---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
159:												
Parkcity--------	0-5	Gravelly loam	CL-ML, SC-SM, GC-GM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	5-19	Gravelly loam	CL-ML, SC-SM, GC-GM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	19-36	Very cobbly loam	SC-SM, GC-GM	A-4, A-2	0-10	20-45	60-80	55-75	45-65	30-50	20-30	5-10
	36-60	Very cobbly loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	20-45	60-80	55-75	30-65	15-50	20-30	5-10
Dromedary-------	0-6	Gravelly loam	SC-SM, GC-GM	A-4	0-5	0-10	65-85	60-80	50-70	40-60	25-30	5-10
	6-22	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	30-40	60-80	55-75	30-50	15-30	20-25	5-10
	22-44	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
	44-51	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
	51-60	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
160:												
Parkcity--------	0-5	Gravelly loam	CL-ML, SC-SM, GC-GM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	5-19	Gravelly loam	CL-ML, SC-SM, GC-GM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	19-36	Very cobbly loam	SC-SM, GC-GM	A-4, A-2	0-10	20-45	60-80	55-75	45-65	30-50	20-30	5-10
	36-60	Very cobbly loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	20-45	60-80	55-75	30-65	15-50	20-30	5-10
Dromedary-------	0-6	Gravelly loam	SC-SM, GC-GM	A-4	0-5	0-10	65-85	60-80	50-70	40-60	25-30	5-10
	6-22	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	30-40	60-80	55-75	30-50	15-30	20-25	5-10
	22-44	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
	44-51	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
	51-60	Very cobbly sandy clay loam	SC, GC	A-6, A-2	0-10	30-40	60-80	55-75	45-65	20-40	35-40	15-20
161:												
Pits, Gravel----	---	---	---	---	---	---	---	---	---	---	---	---
162:												
Richsum---------	0-2	Silt loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	30-35	10-15
	2-14	Loam, silt loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	14-23	Silt loam, loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	23-32	Silt loam, loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	32-52	Silt loam, gravelly silt loam, loam	SC, GC, CL	A-6	0	0	60-100	55-100	50-95	45-80	30-35	10-15
	52-60	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
162:												
Heiners---------	0-3	Gravelly loam	CL-ML, GC-GM, SC-SM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	3-8	Gravelly loam	GC-GM, SC-SM	A-4	0	0-40	60-80	55-75	45-65	35-55	20-30	5-10
	8-12	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	12-19	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	19-29	Bedrock			---	---	---	---	---	---	---	---
163:												
Richsum---------	0-2	Silt loam	CL	A-6	0	0	85-100	80-100	75-95	60-80	30-35	10-15
	2-14	Loam, silt loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	14-23	Silt loam, loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	23-32	Silt loam, loam	CL	A-6	0	0	85-100	80-100	70-95	55-80	30-35	10-15
	32-52	Silt loam, gravelly silt loam, loam	SC, GC, CL	A-6	0	0	60-100	55-100	50-95	45-80	30-35	10-15
	52-60	Bedrock			---	---	---	---	---	---	---	---
Heiners---------	0-3	Gravelly loam	CL-ML, GC-GM, SC-SM	A-4	0	0-10	60-80	55-75	45-65	35-55	20-30	5-10
	3-8	Gravelly loam	GC-GM, SC-SM	A-4	0	0-40	60-80	55-75	45-65	35-55	20-30	5-10
	8-12	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	12-19	Very gravelly loam, very cobbly loam	GC-GM, SC-SM	A-2, A-4	0-15	5-45	40-80	35-75	30-65	20-50	20-30	5-10
	19-29	Bedrock			---	---	---	---	---	---	---	---
164:												
Rock outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
165:												
Rock outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
Starley Family--	0-6	Very cobbly loam	SC, GC	A-6, A-2	0-15	20-45	60-80	55-75	45-65	30-50	30-35	10-15
	6-15	Extremely cobbly loam	SC, GC	A-6, A-2	0-20	30-55	45-65	40-60	35-55	25-45	30-35	10-15
	15-19	Extremely cobbly loam	SC, GC	A-6, A-2	0-20	30-55	45-65	40-60	35-55	25-45	30-35	10-15
	19-29	Bedrock			---	---	---	---	---	---	---	---
166:												
Sessions--------	0-8	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	8-15	Clay loam	CL	A-6	0	0-10	85-100	80-100	75-95	60-80	35-40	15-20
	15-48	Clay	CH	A-7	0	0-10	85-100	80-100	75-95	65-85	55-60	30-35
	48-52	Gravelly clay loam	CH, GC, SC, CL	A-7	0	0-10	60-80	55-75	45-65	35-55	45-55	25-35
	52-60	Gravelly clay loam	CH, GC, SC, CL	A-7	0	0-10	60-80	55-75	45-65	35-55	45-55	25-35

Table 15.--Engineering index 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.	
166:												
Haydenfork------	0-3	Slightly decomposed plant material			0	0	---	---	---	---	---	---
	3-9	Clay loam	CL	A-6	0	0-5	85-100	80-100	75-95	60-80	35-40	15-20
	9-17	Clay loam	CL	A-6	0	0-5	85-100	80-100	70-95	60-80	35-40	15-20
	17-21	Clay loam	CL	A-6	0	0-5	85-100	80-100	70-95	60-80	35-40	15-20
	21-25	Clay loam	CL	A-6	0	0-5	85-100	80-100	70-95	60-80	35-40	15-20
	25-36	Loam, sandy clay loam	CL, SC	A-6	0	0-5	85-100	80-100	70-90	35-75	30-35	10-15
	36-55	Loam, sandy clay loam	SC, CL	A-6	0	0-5	85-100	80-100	70-90	35-75	30-35	10-15
	55-63	Gravelly loam, gravelly sandy clay loam	CL, SC, GC	A-6, A-2	0	0-10	60-80	55-75	45-65	20-55	30-35	10-15
167:												
Sessions--------	0-8	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	8-15	Clay loam	CL	A-6	0	0-10	85-100	80-100	75-95	60-80	35-40	15-20
	15-48	Clay	CH	A-7	0	0-10	85-100	80-100	75-95	65-85	55-60	30-35
	48-52	Gravelly clay loam	CH, GC, SC, CL	A-7	0	0-10	60-80	55-75	45-65	35-55	45-55	25-35
	52-60	Gravelly clay loam	CH, GC, SC, CL	A-7	0	0-10	60-80	55-75	45-65	35-55	45-55	25-35
Skutum----------	0-5	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	5-17	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	17-32	Gravelly clay, gravelly clay loam	SC, GC, CH	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	32-44	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	44-48	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	48-56	Gravelly sandy loam	SC-SM, GC-GM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	56-60	Bedrock			---	---	---	---	---	---	---	---
168:												
Sessions--------	0-8	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	8-15	Clay loam	CL	A-6	0	0-10	85-100	80-100	75-95	60-80	35-40	15-20
	15-48	Clay	CH	A-7	0	0-10	85-100	80-100	75-95	65-85	55-60	30-35
	48-52	Gravelly clay loam	CH, GC, SC, CL	A-7	0	0-10	60-80	55-75	45-65	35-55	45-55	25-35
	52-60	Gravelly clay loam	CH, GC, SC, CL	A-7	0	0-10	60-80	55-75	45-65	35-55	45-55	25-35
Uinta----------	0-13	Cobbly sandy loam	SC-SM	A-2	0-5	10-30	75-95	70-90	45-65	20-35	20-30	5-10
	13-23	Gravelly sandy loam	GC-GM, SC-SM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	23-35	Gravelly sandy clay loam	GC, SC	A-6, A-2	0	0-10	60-80	55-75	45-65	20-40	35-40	15-20
	35-50	Gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	35-40	15-20
	50-60	Gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	35-40	15-20

Table 15.--Engineering index 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.	
169:												
Skutum----------	0-5	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	5-17	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	17-32	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	32-44	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	44-48	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	48-56	Gravelly sandy loam	SC-SM, GC-GM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	56-60	Bedrock			---	---	---	---	---	---	---	---
170:												
Skutum----------	0-5	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	5-17	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	17-32	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	32-44	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	44-48	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	48-56	Gravelly sandy loam	SC-SM, GC-GM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	56-60	Bedrock			---	---	---	---	---	---	---	---
171:												
Skutum----------	0-5	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	5-17	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	17-32	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	32-44	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	44-48	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	48-56	Gravelly sandy loam	SC-SM, GC-GM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	56-60	Bedrock			---	---	---	---	---	---	---	---
172:												
Skutum----------	0-5	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	5-17	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	17-32	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	32-44	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	44-48	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	48-56	Gravelly sandy loam	SC-SM, GC-GM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	56-60	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
172:												
Uinta	0-13	Cobbly sandy loam	SC-SM	A-2	0-5	10-30	75-95	70-90	45-65	20-35	20-30	5-10
	13-23	Gravelly sandy loam	GC-GM, SC-SM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	23-35	Gravelly sandy clay loam	GC, SC	A-6, A-2	0	0-10	60-80	55-75	45-65	20-40	35-40	15-20
	35-50	Gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	35-40	15-20
	50-60	Gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	35-40	15-20
173:												
Skutum	0-5	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	5-17	Loam	CL	A-6	0	0-5	85-100	80-100	70-90	55-75	30-35	10-15
	17-32	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	32-44	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	44-48	Gravelly clay, gravelly clay loam	CH, SC, GC	A-7	0	0-5	60-80	55-75	45-70	35-65	50-60	30-35
	48-56	Gravelly sandy loam	SC-SM, GC-GM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	56-60	Bedrock			---	---	---	---	---	---	---	---
Uinta	0-13	Cobbly sandy loam	SC-SM	A-2	0-5	10-30	75-95	70-90	45-65	20-35	20-30	5-10
	13-23	Gravelly sandy loam	GC-GM, SC-SM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	23-35	Gravelly sandy clay loam	GC, SC	A-6, A-2	0	0-10	60-80	55-75	45-65	20-40	35-40	15-20
	35-50	Gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	35-40	15-20
	50-60	Gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	35-40	15-20
174:												
Snyderville	0-10	Cobbly loam	CL, SC, GC	A-6	0-10	10-30	75-95	70-90	60-80	45-65	30-35	10-15
	10-16	Cobbly loam	SC, GC, CL	A-6	0-10	10-30	75-95	70-90	60-80	45-65	30-35	10-15
	16-28	Very cobbly loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-50	30-35	10-15
	28-35	Very cobbly loamy sand, very gravelly loamy sand	GM, SM	A-1	0-15	10-45	40-80	35-75	15-50	5-20	10-20	NP-5
	35-60	Extremely cobbly sand, extremely gravelly sand	GP-GM, SP-SM, SP, GP	A-1	0-25	10-55	20-65	15-60	5-40	0-10	5-15	NP

Table 15.--Engineering index 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.	
175:												
Snyderville-----	0-10	Cobbly loam	CL, SC, GC	A-6	0-10	10-30	75-95	70-90	60-80	45-65	30-35	10-15
	10-16	Cobbly loam	SC, GC, CL	A-6	0-10	10-30	75-95	70-90	60-80	45-65	30-35	10-15
	16-28	Very cobbly loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-50	30-35	10-15
	28-35	Very cobbly loamy sand, very gravelly loamy sand	GM, SM	A-1	0-15	10-45	40-80	35-75	15-50	5-20	10-20	NP-5
	35-60	Extremely cobbly sand, extremely gravelly sand	GP-GM, SP-SM, SP, GP	A-1	0-25	10-55	20-65	15-60	5-40	0-10	5-15	NP
176:												
Snyderville-----	0-10	Gravelly loam	CL, SC, GC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-14
	10-16	Gravelly loam	CL, SC, GC	A-6	0-5	0-10	60-80	55-75	45-65	35-55	30-35	10-14
	16-28	Very cobbly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-15	10-45	40-80	35-75	25-65	15-50	30-35	10-14
	28-35	Very cobbly loamy sand, very gravelly loamy sand	GM, SM	A-1	0-15	10-45	40-80	35-75	15-50	5-20	10-20	NP-5
	35-60	Extremely cobbly sand, extremely gravelly sand	GP-GM, SP-SM, SP, GP	A-1	0-25	15-55	20-65	15-60	5-40	0-10	5-15	NP
177:												
Uinta-----------	0-13	Cobbly sandy loam	SC-SM	A-2	0-5	10-30	75-95	70-90	45-65	20-35	20-30	5-10
	13-23	Gravelly sandy loam	GC-GM, SC-SM	A-2	0	0-10	60-80	55-75	30-50	15-30	20-30	5-10
	23-35	Gravelly sandy clay loam	GC, SC	A-6, A-2	0	0-10	60-80	55-75	45-65	20-40	35-40	15-20
	35-50	Gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	35-40	15-20
	50-60	Gravelly clay loam	SC, GC, CL	A-6	0	0-10	60-80	55-75	45-65	35-55	35-40	15-20

Table 15.--Engineering index 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.	
177:												
Duchesne--------	0-4	Very cobbly sandy loam	SC-SM, GC-GM	A-2	0-10	20-49	60-80	55-75	30-50	15-30	20-30	5-10
	4-11	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	11-18	Gravelly fine sandy loam, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GC-GM	A-4, A-2	0-10	5-35	40-80	35-75	15-60	10-40	20-30	5-10
	18-30	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	30-42	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	SC, GC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
	42-60	Very cobbly sandy clay loam, very gravelly loam, very gravelly sandy clay loam	GC, SC	A-6, A-2	0-10	25-45	40-80	35-75	25-65	15-40	30-40	10-20
178:												
Wanship---------	0-8	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	8-14	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	14-24	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	24-26	Very gravelly sand, extremely cobbly loamy sand	SM, SW, GM, GW	A-1	0	10-50	40-60	35-60	15-40	0-20	5-20	NP
	26-60	Very gravelly sand, extremely cobbly loamy sand	SM, SW, GM, GW	A-1	0-20	10-50	40-60	35-60	15-40	0-20	5-20	NP

Table 15.--Engineering index 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.	
179:												
Wanship---------	0-8	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	8-14	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	14-24	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-75	30-35	10-15
	24-26	Very gravelly sand, extremely cobbly loamy sand	SM, SW, GM, GW	A-1	0	10-50	40-60	35-60	15-40	0-20	5-20	NP
	26-60	Very gravelly sand, extremely cobbly loamy sand	GW, SM, SW, GM	A-1	0-20	10-50	40-60	35-60	15-40	0-20	5-20	NP
Kovich----------	0-9	Loam	CL	A-6	0	0-10	85-100	80-100	70-90	55-80	30-35	10-15
	9-22	Loam, clay loam	CL	A-6	0	0-10	85-100	80-100	70-95	55-80	30-40	10-20
	22-29	Clay loam, loam	CL	A-6	0	0-10	85-100	80-100	70-95	55-80	30-40	10-20
	29-44	Fine sandy loam, very gravelly sandy clay loam	GC, SC, SC-SM	A-2, A-4	0	0-20	40-100	35-100	25-80	15-50	20-35	5-15
	44-60	Very gravelly loamy fine sand, very gravelly sand, very gravelly loamy sand	SM, GM	A-1	0-10	0-20	40-60	35-55	15-35	0-15	---	---
180:												
Yeates Hollow---	0-12	Very stony loam	SC, GC	A-6, A-2	15-30	15-30	60-80	55-75	45-65	30-50	30-35	10-15
	12-25	Very cobbly clay	CH, SC, GC	A-7	0-15	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	25-37	Very cobbly clay	SC, GC	A-7	0-15	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	37-43	Extremely cobbly clay loam	GC	A-7, A-2	0-25	30-50	45-65	40-60	35-55	30-50	50-55	30-35
	43-53	Bedrock			---	---	---	---	---	---	---	---

Table 15.--Engineering index 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.	
180:												
Henefer---	0-7	Gravelly loam	CL, GC, SC	A-6	0	0-5	60-80	55-75	45-65	35-55	30-35	10-15
	7-12	Gravelly loam	GC, SC	A-6	0	0-10	60-80	55-75	45-65	35-50	30-35	10-15
	12-21	Cobbly clay, gravelly clay loam, gravelly silty clay loam	CH, GC, SC	A-7	0-5	0-30	60-95	55-90	45-85	35-80	50-65	30-40
	21-30	Cobbly clay, gravelly clay loam, gravelly silty clay loam	CL, SC, CH	A-2, A-7	0-5	0-30	60-95	55-90	45-85	20-80	45-65	25-40
	30-37	Very gravelly clay loam, very cobbly clay loam, very cobbly sandy clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	37-43	Very gravelly clay loam, very cobbly clay loam, very cobbly sandy clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	43-50	Very cobbly sandy clay loam, very cobbly clay loam, very gravelly clay loam	CH, SC, GC, CL	A-2, A-7	0-10	0-40	40-80	35-75	30-65	20-55	45-55	25-35
	50-60	Very cobbly sandy clay loam, very cobbly clay loam, very gravelly clay loam	SC, GC, CL	A-2	0-10	0-40	40-80	35-75	30-65	20-55	35-40	15-20
181:												
Yeates Hollow---	0-12	Very stony loam	SC, GC	A-6, A-2	15-30	15-30	60-80	55-75	45-65	30-50	30-35	10-15
	12-25	Very cobbly clay	CH, SC, GC	A-7	0-15	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	25-37	Very cobbly clay	SC, GC	A-7	0-15	20-45	60-80	55-75	50-70	45-65	55-65	35-40
	37-43	Extremely cobbly clay loam	GC	A-7, A-2	0-25	30-50	45-65	40-60	35-55	30-50	50-55	30-35
	43-53	Bedrock			---	---	---	---	---	---	---	---

Table 16.--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 surface layer. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
101:														
Agassiz	0-6	---	---	18-27	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	2.0-4.0	.10	.28	1	8	0
	6-14	---	---	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32			
	14-24	---	---	---	---	0.000-0.002	---	---	---	---	---			
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	-	---	---
102:														
Ant Flat	0-13	---	---	18-24	1.10-1.15	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.37	.43	5	6	48
	13-19	---	---	27-35	1.10-1.15	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.37	.43			
	19-30	---	---	40-55	1.15-1.25	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.32	.37			
	30-45	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
	45-60	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
103:														
Ant Flat	0-13	---	---	18-24	1.10-1.15	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.37	.43	5	6	48
	13-19	---	---	27-35	1.10-1.15	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.37	.43			
	19-30	---	---	40-55	1.15-1.25	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.32	.37			
	30-45	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
	45-60	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
104:														
Ant Flat	0-13	---	---	18-24	1.10-1.15	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.37	.43	5	6	48
	13-19	---	---	27-35	1.10-1.15	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.37	.43			
	19-30	---	---	40-55	1.15-1.25	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.32	.37			
	30-45	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
	45-60	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
105:														
Ant Flat	0-13	---	---	18-24	1.10-1.15	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.37	.43	5	6	48
	13-19	---	---	27-35	1.10-1.15	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.37	.43			
	19-30	---	---	40-55	1.15-1.25	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.32	.37			
	30-45	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
	45-60	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
Henefer	0-7	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.24	5	7	38
	7-12	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	2.0-4.0	.24	.28			
	12-21	---	---	35-50	1.40-1.50	0.06-0.2	0.12-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-30	---	---	27-50	1.40-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	.17	.32			
	30-37	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	.10	.32			
	37-43	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	43-50	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	50-60	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
Skutum	0-5	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.20	.24	4	6	48
	5-17	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32			
	17-32	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	32-44	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	44-48	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	48-56	---	---	15-20	1.35-1.50	0.6-2	0.08-0.09	0.0-2.9	0.0-1.0	.15	.24			
	56-60	---	---	---	---	0.2-0.6	---	---	---	---	---			
106:														
Ayoub	0-6	---	---	18-27	1.30-1.40	0.6-2	0.11-0.17	0.0-2.9	3.0-5.0	.15	.37	2	8	0
	6-12	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	12-18	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	18-23	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	23-35	---	---	18-27	1.30-1.40	0.2-0.6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	---	---	0.000-0.01	---	---	---	---	---			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
107:														
Ayoub	0-6	---	---	18-27	1.30-1.40	0.6-2	0.11-0.17	0.0-2.9	3.0-5.0	.15	.37	2	8	0
	6-12	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	12-18	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	18-23	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	23-35	---	---	18-27	1.30-1.40	0.2-0.6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	---	---	0.000-0.01	---	---	---	---	---			
Dunford	0-10	---	---	18-27	1.15-1.25	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	2	7	38
	10-21	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-36	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
	36-46	---	---	---	---	0.000-0.01	---	---	---	---	---			
Melling	0-6	---	---	18-24	1.25-1.40	0.6-2	0.06-0.08	0.0-2.9	2.0-5.0	.05	.24	1	8	0
	6-19	---	---	27-35	1.25-1.40	0.2-0.6	0.09-0.12	3.0-5.9	1.0-3.0	.10	.28			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
108:														
Ayoub	0-6	---	---	18-27	1.30-1.40	0.6-2	0.11-0.17	0.0-2.9	3.0-5.0	.15	.37	2	8	0
	6-12	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	12-18	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	18-23	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	23-35	---	---	18-27	1.30-1.40	0.2-0.6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	---	---	0.000-0.01	---	---	---	---	---			
Dunford	0-10	---	---	18-27	1.15-1.25	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	2	7	38
	10-21	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-36	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
	36-46	---	---	---	---	0.000-0.01	---	---	---	---	---			
Melling	0-6	---	---	18-24	1.25-1.40	0.6-2	0.06-0.08	0.0-2.9	2.0-5.0	.05	.24	1	8	0
	6-19	---	---	27-35	1.25-1.40	0.2-0.6	0.09-0.12	3.0-5.9	1.0-3.0	.10	.28			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
109:														
Cluff	0-4	---	---	18-24	1.15-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.20	.28	3	5	56
	4-9	---	---	18-24	1.15-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.28			
	9-16	---	---	18-27	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	16-20	---	---	35-40	1.20-1.35	0.2-0.6	0.09-0.12	3.0-5.9	0.5-1.0	.10	.32			
	20-33	---	---	35-40	1.20-1.35	0.2-0.6	0.09-0.12	3.0-5.9	0.5-1.0	.10	.32			
	33-54	---	---	40-50	1.20-1.35	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	54-60	---	---	---	---	0.000-0.001	---	---	---	---	---			
110:														
Cluff	0-4	---	---	18-24	1.15-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.20	.28	3	5	56
	4-9	---	---	18-24	1.15-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.28			
	9-16	---	---	18-27	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	16-20	---	---	35-40	1.20-1.35	0.2-0.6	0.09-0.12	3.0-5.9	0.5-1.0	.10	.32			
	20-33	---	---	35-40	1.20-1.35	0.2-0.6	0.09-0.12	3.0-5.9	0.5-1.0	.10	.32			
	33-54	---	---	40-50	1.20-1.35	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	54-60	---	---	---	---	0.000-0.001	---	---	---	---	---			
111:														
Crandall	0-5	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24	3	6	48
	5-14	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.17	.32			
	14-45	---	---	27-35	1.20-1.40	0.2-0.6	0.09-0.12	0.0-2.9	0.5-1.0	.10	.37			
	45-55	---	---	18-27	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	55-60	---	---	---	---	0.000-0.001	---	---	---	---	---			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
112:														
Crandall	0-5	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24	3	6	48
	5-14	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.17	.32			
	14-45	---	---	27-35	1.20-1.40	0.2-0.6	0.09-0.12	0.0-2.9	0.5-1.0	.10	.37			
	45-55	---	---	18-27	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	55-60	---	---	---	---	0.000-0.001	---	---	---	---	---			
Lucky Star	0-6	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	5.0-10	.15	.24	5	7	38
	6-12	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-5.0	.15	.28			
	12-25	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	25-47	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	47-62	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
	62-80	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
113:														
Crandall	0-5	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24	3	6	48
	5-14	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.17	.32			
	14-45	---	---	27-35	1.20-1.40	0.2-0.6	0.09-0.12	0.0-2.9	0.5-1.0	.10	.37			
	45-55	---	---	18-27	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	55-60	---	---	---	---	0.000-0.001	---	---	---	---	---			
Lucky Star	0-6	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	5.0-10	.15	.24	5	7	38
	6-12	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-5.0	.15	.28			
	12-25	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	25-47	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	47-62	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
	62-80	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
Starley Family	0-6	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	1.0-4.0	.05	.20	1	8	0
	6-15	---	---	18-27	1.20-1.30	0.6-2	0.06-0.08	0.0-2.9	1.0-2.0	.05	.32			
	15-19	---	---	18-27	1.20-1.30	0.6-2	0.06-0.08	0.0-2.9	0.5-1.0	.05	.37			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
114:														
Crandall	0-5	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24	3	6	48
	5-14	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.17	.32			
	14-45	---	---	27-35	1.20-1.40	0.2-0.6	0.09-0.12	0.0-2.9	0.5-1.0	.10	.37			
	45-55	---	---	18-27	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	55-60	---	---	---	---	0.000-0.001	---	---	---	---	---			
Starley Family	0-6	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	1.0-4.0	.05	.20	1	8	0
	6-15	---	---	18-27	1.20-1.30	0.6-2	0.06-0.08	0.0-2.9	1.0-2.0	.05	.32			
	15-19	---	---	18-27	1.20-1.30	0.6-2	0.06-0.08	0.0-2.9	0.5-1.0	.05	.37			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	-	---	---
115:														
Dastrup	0-12	---	---	18-27	1.20-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32	5	4L	86
	12-16	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.5-1.0	.28	.37			
	16-36	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			
	36-48	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			
	48-60	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			
116:														
Dastrup	0-12	---	---	18-27	1.20-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32	5	4L	86
	12-16	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.5-1.0	.28	.37			
	16-36	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			
	36-48	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			
	48-60	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
117:														
Dastrup	0-12	---	---	18-27	1.20-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32	5	4L	86
	12-16	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.5-1.0	.28	.37			
	16-36	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			
	36-48	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			
	48-60	---	---	18-35	1.25-1.40	0.2-0.6	0.11-0.18	0.0-2.9	0.0-0.5	.28	.37			
118:														
Dromedary	0-6	---	---	18-27	1.25-1.40	0.6-2	0.12-0.14	0.0-2.9	3.0-5.0	.17	.24	5	7	38
	6-22	---	---	15-20	1.35-1.50	2-6	0.06-0.07	0.0-2.9	0.5-1.0	.15	.24			
	22-44	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	44-51	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	51-60	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	-	---	---
119:														
Duchesne	0-4	---	---	10-20	1.40-1.50	2-6	0.06-0.07	0.0-2.9	4.0-6.0	.20	.43	5	6	48
	4-11	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	11-18	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	18-30	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	30-42	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	42-60	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.24			
120:														
Duchesne	0-4	---	---	10-20	1.40-1.50	2-6	0.06-0.07	0.0-2.9	4.0-6.0	.20	.43	5	6	48
	4-11	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	11-18	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	18-30	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	30-42	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	42-60	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.24			
121:														
Duchesne	0-4	---	---	10-20	1.40-1.50	2-6	0.06-0.07	0.0-2.9	4.0-6.0	.20	.43	5	8	0
	4-11	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	11-18	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	18-30	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	30-42	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	42-60	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.24			
122:														
Duchesne	0-4	---	---	10-20	1.40-1.50	2-6	0.06-0.07	0.0-2.9	4.0-6.0	.20	.43	5	6	48
	4-11	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	11-18	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	18-30	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	30-42	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	42-60	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.24			
Haydenfork	0-3	---	---	---	0.15-0.50	2-6	0.20-0.25	0.0-2.9	25-75	.10	.10	5	6	48
	3-9	---	---	27-35	1.20-1.30	0.2-0.6	0.16-0.18	3.0-5.9	4.0-7.0	.15	.17			
	9-17	---	---	27-35	1.20-1.30	0.2-0.6	0.16-0.18	3.0-5.9	2.0-5.0	.24	.28			
	17-21	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	21-25	---	---	27-35	1.30-1.40	0.2-0.6	0.16-0.18	3.0-5.9	0.0-1.0	.32	.37			
	25-36	---	---	18-27	1.30-1.40	0.6-2	0.14-0.18	3.0-5.9	0.0-1.0	.28	.32			
	36-55	---	---	18-27	1.30-1.40	0.6-2	0.14-0.18	3.0-5.9	0.0-1.0	.28	.32			
	55-63	---	---	18-27	1.30-1.40	0.6-2	0.11-0.15	0.0-2.9	0.0-1.0	.17	.32			
123:														
Dumps, mines	---	---	---	---	---	---	---	---	---	---	---	-	---	---

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
124:														
Dunford	0-10	---	---	18-27	1.15-1.25	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	2	7	38
	10-21	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-36	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
	36-46	---	---	---	---	0.000-0.01	---	---	---	---	---			
Ayoub	0-6	---	---	18-27	1.30-1.40	0.6-2	0.11-0.17	0.0-2.9	3.0-5.0	.15	.37	2	8	0
	6-12	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	12-18	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	18-23	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	23-35	---	---	18-27	1.30-1.40	0.2-0.6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	---	---	0.000-0.01	---	---	---	---	---			
Melling	0-6	---	---	18-24	1.25-1.40	0.6-2	0.06-0.08	0.0-2.9	2.0-5.0	.05	.24	1	8	0
	6-19	---	---	27-35	1.25-1.40	0.2-0.6	0.09-0.12	3.0-5.9	1.0-3.0	.10	.28			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
125:														
Dunford	0-10	---	---	18-27	1.15-1.25	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	2	7	38
	10-21	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-36	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
	36-46	---	---	---	---	0.000-0.01	---	---	---	---	---			
Ayoub	0-6	---	---	18-27	1.30-1.40	0.6-2	0.11-0.17	0.0-2.9	3.0-5.0	.15	.37	2	8	0
	6-12	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	12-18	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	18-23	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	23-35	---	---	18-27	1.30-1.40	0.2-0.6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	---	---	0.000-0.01	---	---	---	---	---			
Melling	0-6	---	---	18-24	1.25-1.40	0.6-2	0.06-0.08	0.0-2.9	2.0-5.0	.05	.24	1	8	0
	6-19	---	---	27-35	1.25-1.40	0.2-0.6	0.09-0.12	3.0-5.9	1.0-3.0	.10	.28			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
126:														
Echocreek	0-7	---	---	18-27	1.15-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.28	.28	5	5	56
	7-18	---	---	18-27	1.15-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.28	.28			
	18-26	---	---	18-27	1.20-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-3.0	.37	.37			
	26-38	---	---	18-27	1.25-1.40	0.6-2	0.14-0.17	0.0-2.9	0.0-1.0	.43	.43			
	38-45	---	---	18-27	1.25-1.40	0.6-2	0.14-0.17	0.0-2.9	0.0-1.0	.43	.43			
	45-60	---	---	18-27	1.25-1.40	0.6-2	0.14-0.17	0.0-2.9	0.0-1.0	.43	.43			
127:														
Echocreek	0-7	---	---	18-27	1.15-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.28	.28	5	5	56
	7-18	---	---	18-27	1.15-1.30	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.28	.28			
	18-26	---	---	18-27	1.20-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-3.0	.37	.37			
	26-38	---	---	18-27	1.25-1.40	0.6-2	0.14-0.17	0.0-2.9	0.0-1.0	.43	.43			
	38-45	---	---	18-27	1.25-1.40	0.6-2	0.14-0.17	0.0-2.9	0.0-1.0	.43	.43			
	45-60	---	---	18-27	1.25-1.40	0.6-2	0.14-0.17	0.0-2.9	0.0-1.0	.43	.43			
Kovich	0-9	---	---	20-27	1.30-1.40	0.6-2	0.14-0.17	0.0-2.9	5.0-10	.24	.24	4	6	48
	9-22	---	---	20-35	1.30-1.40	0.2-0.6	0.14-0.18	3.0-5.9	1.0-5.0	.28	.28			
	22-29	---	---	20-35	1.30-1.50	0.2-0.6	0.14-0.18	3.0-5.9	1.0-5.0	.28	.20			
	29-44	---	---	15-25	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.20			
	44-60	---	---	0-10	1.50-1.60	0.6-2	0.05-0.06	0.0-0.0	0.0-1.0	.05	.15			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
128:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	6	48
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
129:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
130:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
131:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
Heiners	0-3	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.15	.28	2	5	56
	3-8	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-2.0	.17	.32			
	8-12	---	---	15-22	1.25-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	12-19	---	---	15-22	1.25-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	19-29	---	---	---	---	0.2-0.6	---	---	---	---	---			
132:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
Hades	0-3	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32	5	6	48
	3-18	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32			
	18-33	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	33-44	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	44-60	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.24	.37			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
133:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
Hades	0-3	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32	5	6	48
	3-18	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32			
	18-33	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	33-44	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	44-60	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.24	.37			
134:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
Yeates Hollow	0-12	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	8	0
	12-25	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	25-37	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	37-43	---	---	35-40	1.20-1.45	0.2-0.6	0.07-0.09	0.0-2.9	0.0-1.0	.05	.28			
	43-53	---	---	---	---	0.2-0.6	---	---	---	---	---			
135:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
Yeates Hollow	0-12	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	8	0
	12-25	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	25-37	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	37-43	---	---	35-40	1.20-1.45	0.2-0.6	0.07-0.09	0.0-2.9	0.0-1.0	.05	.28			
	43-53	---	---	---	---	0.2-0.6	---	---	---	---	---			
136:														
Hades	0-3	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32	5	6	48
	3-18	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32			
	18-33	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	33-44	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	44-60	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.24	.37			
Agassiz	0-6	---	---	18-27	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	2.0-4.0	.10	.28	1	8	0
	6-14	---	---	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32			
	14-24	---	---	---	---	0.000-0.002	---	---	---	---	---			
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	-	---	---
137:														
Hades	0-3	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32	5	6	48
	3-18	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32			
	18-33	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	33-44	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	44-60	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.24	.37			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
137:														
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
138:														
Hades	0-3	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32	5	6	48
	3-18	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32			
	18-33	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	33-44	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	44-60	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.24	.37			
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
139:														
Harter	0-5	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37	5	6	48
	5-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37			
	12-19	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37			
	19-24	---	---	35-40	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.24			
	24-33	---	---	35-40	1.45-1.55	0.06-0.2	0.12-0.15	3.0-5.9	0.0-1.0	.15	.24			
	33-60	---	---	45-50	1.45-1.55	0.06-0.2	0.12-0.15	3.0-5.9	0.0-1.0	.15	.24			
140:														
Heiners	0-3	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.15	.28	2	5	56
	3-8	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-2.0	.17	.32			
	8-12	---	---	15-22	1.25-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	12-19	---	---	15-22	1.25-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	19-29	---	---	---	---	0.2-0.6	---	---	---	---	---			
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
141:														
Heiners	0-3	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.15	.28	2	5	56
	3-8	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-2.0	.17	.32			
	8-12	---	---	15-22	1.25-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	12-19	---	---	15-22	1.25-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	19-29	---	---	---	---	0.2-0.6	---	---	---	---	---			
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
141:														
Hades	0-3	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32	5	6	48
	3-18	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32			
	18-33	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	33-44	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	44-60	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.24	.37			
142:														
Henefer	0-7	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.24	5	7	38
	7-12	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	2.0-4.0	.24	.28			
	12-21	---	---	35-50	1.40-1.50	0.06-0.2	0.12-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-30	---	---	27-50	1.40-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	.17	.32			
	30-37	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	.10	.32			
	37-43	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	43-50	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	50-60	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
Harter	0-5	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37	5	6	48
	5-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37			
	12-19	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37			
	19-24	---	---	35-40	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.24			
	24-33	---	---	35-40	1.45-1.55	0.06-0.2	0.12-0.15	3.0-5.9	0.0-1.0	.15	.24			
	33-60	---	---	45-50	1.45-1.55	0.06-0.2	0.12-0.15	3.0-5.9	0.0-1.0	.15	.24			
143:														
Horrocks	0-10	---	---	18-27	1.20-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	7	38
	10-19	---	---	27-35	1.25-1.35	0.2-0.6	0.08-0.12	0.0-2.9	1.0-5.0	.05	.20			
	19-32	---	---	27-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.0-3.0	.10	.28			
	32-40	---	---	27-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.28			
	40-59	---	---	18-27	1.30-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.28			
	59-60	---	---	---	---	0.000-0.001	---	---	---	---	---			
Agassiz	0-6	---	---	18-27	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	2.0-4.0	.10	.28	1	8	0
	6-14	---	---	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32			
	14-24	---	---	---	---	0.000-0.002	---	---	---	---	---			
144:														
Horrocks	0-10	---	---	18-27	1.20-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	7	38
	10-19	---	---	27-35	1.25-1.35	0.2-0.6	0.08-0.12	0.0-2.9	1.0-5.0	.05	.20			
	19-32	---	---	27-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.0-3.0	.10	.28			
	32-40	---	---	27-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.28			
	40-59	---	---	18-27	1.30-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.28			
	59-60	---	---	---	---	0.000-0.001	---	---	---	---	---			
Cutoff	0-1	---	---	18-27	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	1.0-2.0	.10	.37	3	6	48
	1-9	---	---	18-27	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	1.0-2.0	.10	.37			
	9-16	---	---	18-27	1.30-1.50	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	16-29	---	---	18-27	1.30-1.50	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	29-38	---	---	18-27	1.30-1.50	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	38-48	---	---	---	---	0.000-0.001	---	---	---	---	---			
145:														
Horrocks	0-10	---	---	18-27	1.20-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	7	38
	10-19	---	---	27-35	1.25-1.35	0.2-0.6	0.08-0.12	0.0-2.9	1.0-5.0	.05	.20			
	19-32	---	---	27-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.0-3.0	.10	.28			
	32-40	---	---	27-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.28			
	40-59	---	---	18-27	1.30-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.28			
	59-60	---	---	---	---	0.000-0.001	---	---	---	---	---			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
145:														
Cutoff	0-1	---	---	18-27	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	1.0-2.0	.10	.37	3	6	48
	1-9	---	---	18-27	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	1.0-2.0	.10	.37			
	9-16	---	---	18-27	1.30-1.50	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	16-29	---	---	18-27	1.30-1.50	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	29-38	---	---	18-27	1.30-1.50	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	38-48	---	---	---	---	0.000-0.001	---	---	---	---	---			
146:														
Horrocks	0-10	---	---	18-27	1.20-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	7	38
	10-19	---	---	27-35	1.25-1.35	0.2-0.6	0.08-0.12	0.0-2.9	1.0-5.0	.05	.20			
	19-32	---	---	27-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.0-3.0	.10	.28			
	32-40	---	---	27-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.28			
	40-59	---	---	18-27	1.30-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.28			
	59-60	---	---	---	---	0.000-0.001	---	---	---	---	---			
Hades	0-3	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32	5	6	48
	3-18	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32			
	18-33	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	33-44	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	44-60	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.24	.37			
147:														
Hovarka	0-4	---	---	---	0.15-0.50	2-6	0.20-0.25	0.0-2.9	25-75	.10	.10	4	6	48
	4-12	---	---	18-25	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	5.0-10	.10	.15			
	12-32	---	---	18-25	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	5.0-10	.17	.20			
	32-36	---	---	5-10	1.40-1.55	6-20	0.03-0.05	0.0-2.9	1.0-5.0	.05	.17			
	36-64	---	---	0-5	1.50-1.60	6-20	0.02-0.03	0.0-2.9	0.0-1.0	.05	.15			
Millcreek	0-14	---	---	18-27	1.20-1.35	0.6-2	0.14-0.17	0.0-2.9	4.0-7.0	.20	.24	4	6	48
	14-24	---	---	18-27	1.25-1.40	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28			
	24-60	---	---	2-10	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-1.0	.05	.17			
148:														
Jana	0-1	---	---	15-22	1.25-1.40	0.6-2	0.08-0.11	0.0-2.9	1.0-2.0	.10	.28	2	6	48
	1-6	---	---	15-22	1.25-1.40	0.6-2	0.08-0.11	0.0-2.9	0.5-1.0	.10	.37			
	6-12	---	---	15-22	1.25-1.50	0.6-2	0.06-0.11	0.0-2.9	0.0-1.0	.10	.37			
	12-22	---	---	---	---	0.2-0.6	---	---	---	---	---			
Richsum	0-2	---	---	18-27	1.20-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.37	.43	4	5	56
	2-14	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.5-1.0	.43	.49			
	14-23	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.0-1.0	.43	.49			
	23-32	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.0-1.0	.43	.49			
	32-52	---	---	18-27	1.20-1.30	0.6-2	0.13-0.18	0.0-2.9	0.0-1.0	.37	.49			
	52-60	---	---	---	---	0.000-0.6	---	---	---	---	---			
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	-	---	---
149:														
Kovich	0-9	---	---	20-27	1.30-1.40	0.6-2	0.14-0.17	0.0-2.9	5.0-10	.24	.24	4	6	48
	9-22	---	---	20-35	1.30-1.40	0.2-0.6	0.14-0.18	3.0-5.9	1.0-5.0	.28	.28			
	22-29	---	---	20-35	1.30-1.50	0.2-0.6	0.14-0.18	3.0-5.9	1.0-5.0	.28	.20			
	29-44	---	---	15-25	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.20			
	44-60	---	---	0-10	1.50-1.60	0.6-2	0.05-0.06	0.0-0.0	0.0-1.0	.05	.15			
Toddspan	0-4	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	5.0-10	.20	.24	4	6	48
	4-14	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	5.0-10	.24	.28			
	14-19	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	5.0-10	.24	.28			
	19-24	---	---	18-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.5-1.0	.20	.37			
	24-32	---	---	18-35	1.30-1.40	0.2-0.6	0.08-0.12	0.0-2.9	0.5-1.0	.20	.37			
	32-37	---	---	18-27	1.30-1.40	0.6-2	0.06-0.12	0.0-2.9	0.5-1.0	.10	.28			
	37-44	---	---	18-27	1.30-1.40	0.6-2	0.06-0.12	0.0-2.9	0.5-1.0	.10	.28			
	44-60	---	---	0-10	1.40-1.50	6-20	0.02-0.06	0.0-2.9	0.0-1.0	.05	.20			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
150:														
Lucky Star	0-6	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	5.0-10	.15	.24	5	7	38
	6-12	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-5.0	.15	.28			
	12-25	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	25-47	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	47-62	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
	62-80	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
151:														
Lucky Star	0-6	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	5.0-10	.15	.24	5	7	38
	6-12	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-5.0	.15	.28			
	12-25	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	25-47	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	47-62	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
	62-80	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
152:														
Lucky Star	0-6	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	5.0-10	.15	.24	5	7	38
	6-12	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-5.0	.15	.28			
	12-25	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	25-47	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	47-62	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
	62-80	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
Dromedary	0-6	---	---	18-27	1.25-1.40	0.6-2	0.12-0.14	0.0-2.9	3.0-5.0	.17	.24	5	7	38
	6-22	---	---	15-20	1.35-1.50	2-6	0.06-0.07	0.0-2.9	0.5-1.0	.15	.24			
	22-44	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	44-51	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	51-60	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
153:														
Lucky Star	0-6	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	5.0-10	.15	.24	5	7	38
	6-12	---	---	18-27	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-5.0	.15	.28			
	12-25	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	25-47	---	---	10-20	1.35-1.45	2-6	0.06-0.08	0.0-2.9	0.0-1.0	.10	.28			
	47-62	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
	62-80	---	---	20-35	1.40-1.50	0.6-2	0.08-0.11	0.0-2.9	0.0-1.0	.10	.24			
Fewkes	0-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.28	5	7	38
	12-17	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.32			
	17-22	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	0.5-1.0	.28	.37			
	22-28	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	28-40	---	---	27-35	1.30-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.28	.37			
	40-50	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
	50-60	---	---	20-35	1.40-1.50	0.2-2	0.11-0.18	3.0-5.9	0.0-1.0	.24	.37			
154:														
Manila	0-4	---	---	18-27	1.15-1.25	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28	5	6	48
	4-15	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	1.0-3.0	.32	.37			
	15-22	---	---	35-50	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.5-1.0	.24	.28			
	22-40	---	---	35-50	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.5-1.0	.24	.28			
	40-46	---	---	35-50	1.20-1.30	0.2-0.6	0.13-0.18	3.0-5.9	0.5-1.0	.20	.28			
	46-60	---	---	35-50	1.20-1.30	0.2-0.6	0.13-0.18	3.0-5.9	0.5-1.0	.20	.28			
Ant Flat	0-13	---	---	18-24	1.10-1.15	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.37	.43	5	6	48
	13-19	---	---	27-35	1.10-1.15	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.37	.43			
	19-30	---	---	40-55	1.15-1.25	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.32	.37			
	30-45	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
	45-60	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
155:														
Manila	0-4	---	---	18-27	1.15-1.25	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28	5	6	48
	4-15	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	1.0-3.0	.32	.37			
	15-22	---	---	35-50	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.5-1.0	.24	.28			
	22-40	---	---	35-50	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.5-1.0	.24	.28			
	40-46	---	---	35-50	1.20-1.30	0.2-0.6	0.13-0.18	3.0-5.9	0.5-1.0	.20	.28			
	46-60	---	---	35-50	1.20-1.30	0.2-0.6	0.13-0.18	3.0-5.9	0.5-1.0	.20	.28			
Ant Flat	0-13	---	---	18-24	1.10-1.15	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.37	.43	5	6	48
	13-19	---	---	27-35	1.10-1.15	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.37	.43			
	19-30	---	---	40-55	1.15-1.25	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.32	.37			
	30-45	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
	45-60	---	---	27-36	1.15-1.25	0.2-0.6	0.16-0.18	3.0-5.9	0.0-0.5	.43	.49			
156:														
Manila	0-4	---	---	18-27	1.15-1.25	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28	5	6	48
	4-15	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	1.0-3.0	.32	.37			
	15-22	---	---	35-50	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.5-1.0	.24	.28			
	22-40	---	---	35-50	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.5-1.0	.24	.28			
	40-46	---	---	35-50	1.20-1.30	0.2-0.6	0.13-0.18	3.0-5.9	0.5-1.0	.20	.28			
	46-60	---	---	35-50	1.20-1.30	0.2-0.6	0.13-0.18	3.0-5.9	0.5-1.0	.20	.28			
Harter	0-5	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37	5	6	48
	5-12	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37			
	12-19	---	---	18-27	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.28	.37			
	19-24	---	---	35-40	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.24			
	24-33	---	---	35-40	1.45-1.55	0.06-0.2	0.12-0.15	3.0-5.9	0.0-1.0	.15	.24			
	33-60	---	---	45-50	1.45-1.55	0.06-0.2	0.12-0.15	3.0-5.9	0.0-1.0	.15	.24			
157:														
Manila	0-4	---	---	18-27	1.15-1.25	0.6-2	0.14-0.17	0.0-2.9	2.0-5.0	.24	.28	5	6	48
	4-15	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	1.0-3.0	.32	.37			
	15-22	---	---	35-50	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.5-1.0	.24	.28			
	22-40	---	---	35-50	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.5-1.0	.24	.28			
	40-46	---	---	35-50	1.20-1.30	0.2-0.6	0.13-0.18	3.0-5.9	0.5-1.0	.20	.28			
	46-60	---	---	35-50	1.20-1.30	0.2-0.6	0.13-0.18	3.0-5.9	0.5-1.0	.20	.28			
Henefer	0-7	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.24	5	6	48
	7-12	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	2.0-4.0	.24	.28			
	12-21	---	---	35-50	1.40-1.50	0.06-0.2	0.12-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-30	---	---	27-50	1.40-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	.17	.32			
	30-37	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	.10	.32			
	37-43	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	43-50	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	50-60	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
158:														
Melling	0-6	---	---	18-24	1.25-1.40	0.6-2	0.06-0.08	0.0-2.9	2.0-5.0	.05	.24	1	8	0
	6-19	---	---	27-35	1.25-1.40	0.2-0.6	0.09-0.12	3.0-5.9	1.0-3.0	.10	.28			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
Ayoub	0-6	---	---	18-27	1.30-1.40	0.6-2	0.11-0.17	0.0-2.9	3.0-5.0	.15	.37	2	8	0
	6-12	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	12-18	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	18-23	---	---	27-35	1.35-1.45	0.2-0.6	0.13-0.16	3.0-5.9	1.0-2.0	.17	.24			
	23-35	---	---	18-27	1.30-1.40	0.2-0.6	0.07-0.11	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	---	---	0.000-0.01	---	---	---	---	---			
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	-	---	---

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
159:														
Parkcity	0-5	---	---	12-18	1.15-1.25	0.6-2	0.11-0.14	0.0-2.9	4.0-6.0	.10	.20	5	6	48
	5-19	---	---	12-18	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24			
	19-36	---	---	12-18	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	1.0-2.0	.10	.32			
	36-60	---	---	12-18	1.25-1.35	0.6-2	0.06-0.11	0.0-2.9	0.0-1.0	.10	.37			
Dromedary	0-6	---	---	18-27	1.25-1.40	0.6-2	0.12-0.14	0.0-2.9	3.0-5.0	.17	.24	5	7	38
	6-22	---	---	15-20	1.35-1.50	2-6	0.06-0.07	0.0-2.9	0.5-1.0	.15	.24			
	22-44	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	44-51	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	51-60	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
160:														
Parkcity	0-5	---	---	12-18	1.15-1.25	0.6-2	0.11-0.14	0.0-2.9	4.0-6.0	.10	.20	5	6	48
	5-19	---	---	12-18	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24			
	19-36	---	---	12-18	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	1.0-2.0	.10	.32			
	36-60	---	---	12-18	1.25-1.35	0.6-2	0.06-0.11	0.0-2.9	0.0-1.0	.10	.37			
Dromedary	0-6	---	---	18-27	1.25-1.40	0.6-2	0.12-0.14	0.0-2.9	3.0-5.0	.17	.24	5	7	38
	6-22	---	---	15-20	1.35-1.50	2-6	0.06-0.07	0.0-2.9	0.5-1.0	.15	.24			
	22-44	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	44-51	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
	51-60	---	---	27-35	1.35-1.50	0.6-2	0.08-0.12	3.0-5.9	0.0-1.0	.10	.24			
161:														
Pits	---	---	---	---	---	---	---	---	---	---	---	-	---	---
162:														
Richsum	0-2	---	---	18-27	1.20-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.37	.43	4	5	56
	2-14	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.5-1.0	.43	.49			
	14-23	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.0-1.0	.43	.49			
	23-32	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.0-1.0	.43	.49			
	32-52	---	---	18-27	1.20-1.30	0.6-2	0.13-0.18	0.0-2.9	0.0-1.0	.37	.49			
	52-60	---	---	---	---	0.000-0.6	---	---	---	---	---			
Heiners	0-3	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.15	.28	2	5	56
	3-8	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-2.0	.17	.32			
	8-12	---	---	15-22	1.25-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	12-19	---	---	15-22	1.25-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	19-29	---	---	---	---	0.2-0.6	---	---	---	---	---			
163:														
Richsum	0-2	---	---	18-27	1.20-1.30	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.37	.43	4	5	56
	2-14	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.5-1.0	.43	.49			
	14-23	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.0-1.0	.43	.49			
	23-32	---	---	18-27	1.20-1.30	0.6-2	0.14-0.18	0.0-2.9	0.0-1.0	.43	.49			
	32-52	---	---	18-27	1.20-1.30	0.6-2	0.13-0.18	0.0-2.9	0.0-1.0	.37	.49			
	52-60	---	---	---	---	0.000-0.6	---	---	---	---	---			
Heiners	0-3	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.15	.28	2	5	56
	3-8	---	---	15-22	1.25-1.40	0.6-2	0.11-0.14	0.0-2.9	1.0-2.0	.17	.32			
	8-12	---	---	15-22	1.25-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	12-19	---	---	15-22	1.25-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	19-29	---	---	---	---	0.2-0.6	---	---	---	---	---			
164:														
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	-	---	---
Agassiz	0-6	---	---	18-27	1.20-1.40	0.6-2	0.08-0.11	0.0-2.9	2.0-4.0	.10	.28	1	8	0
	6-14	---	---	18-27	1.20-1.40	0.6-2	0.06-0.11	0.0-2.9	1.0-3.0	.10	.32			
	14-24	---	---	---	---	0.000-0.002	---	---	---	---	---			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
164:														
Starley Family--------	0-6	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	1.0-4.0	.05	.20	1	8	0
	6-15	---	---	18-27	1.20-1.30	0.6-2	0.06-0.08	0.0-2.9	1.0-2.0	.05	.32			
	15-19	---	---	18-27	1.20-1.30	0.6-2	0.06-0.08	0.0-2.9	0.5-1.0	.05	.37			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
Hades-----------------	0-3	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32	5	6	48
	3-18	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-5.0	.28	.32			
	18-33	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	33-44	---	---	27-35	1.25-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	44-60	---	---	27-35	1.25-1.40	0.2-0.6	0.13-0.18	3.0-5.9	0.0-1.0	.24	.37			
Parkcity--------------	0-5	---	---	12-18	1.15-1.25	0.6-2	0.11-0.14	0.0-2.9	4.0-6.0	.10	.20	5	6	48
	5-19	---	---	12-18	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24			
	19-36	---	---	12-18	1.25-1.35	0.6-2	0.08-0.11	0.0-2.9	1.0-2.0	.10	.32			
	36-60	---	---	12-18	1.25-1.35	0.6-2	0.06-0.11	0.0-2.9	0.0-1.0	.10	.37			
165:														
Rock outcrop----------	---	---	---	---	---	---	---	---	---	---	---	-	---	---
Starley Family--------	0-6	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	1.0-4.0	.05	.20	1	8	0
	6-15	---	---	18-27	1.20-1.30	0.6-2	0.06-0.08	0.0-2.9	1.0-2.0	.05	.32			
	15-19	---	---	18-27	1.20-1.30	0.6-2	0.06-0.08	0.0-2.9	0.5-1.0	.05	.37			
	19-29	---	---	---	---	0.000-0.001	---	---	---	---	---			
166:														
Sessions--------------	0-8	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.17	.20	5	6	48
	8-15	---	---	27-35	1.30-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-5.0	.20	.24			
	15-48	---	---	40-45	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.24	.28			
	48-52	---	---	27-40	1.30-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
	52-60	---	---	27-40	1.30-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
Haydenfork------------	0-3	---	---	---	0.15-0.50	2-6	0.20-0.25	0.0-2.9	25-75	.10	.10	5	6	48
	3-9	---	---	27-35	1.20-1.30	0.2-0.6	0.16-0.18	3.0-5.9	4.0-7.0	.15	.17			
	9-17	---	---	27-35	1.20-1.30	0.2-0.6	0.16-0.18	3.0-5.9	2.0-5.0	.24	.28			
	17-21	---	---	27-35	1.25-1.35	0.2-0.6	0.16-0.18	3.0-5.9	1.0-3.0	.28	.32			
	21-25	---	---	27-35	1.30-1.40	0.2-0.6	0.16-0.18	3.0-5.9	0.0-1.0	.32	.37			
	25-36	---	---	18-27	1.30-1.40	0.6-2	0.14-0.18	3.0-5.9	0.0-1.0	.28	.32			
	36-55	---	---	18-27	1.30-1.40	0.6-2	0.14-0.18	3.0-5.9	0.0-1.0	.28	.32			
	55-63	---	---	18-27	1.30-1.40	0.6-2	0.11-0.15	0.0-2.9	0.0-1.0	.17	.32			
167:														
Sessions--------------	0-8	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.17	.20	5	6	48
	8-15	---	---	27-35	1.30-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-5.0	.20	.24			
	15-48	---	---	40-45	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.24	.28			
	48-52	---	---	27-40	1.30-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
	52-60	---	---	27-40	1.30-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
Skutum----------------	0-5	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.20	.24	4	6	48
	5-17	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32			
	17-32	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	32-44	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	44-48	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	48-56	---	---	15-20	1.35-1.50	0.6-2	0.08-0.09	0.0-2.9	0.0-1.0	.15	.24			
	56-60	---	---	---	---	0.2-0.6	---	---	---	---	---			
168:														
Sessions--------------	0-8	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.17	.20	5	6	48
	8-15	---	---	27-35	1.30-1.40	0.2-0.6	0.16-0.18	3.0-5.9	1.0-5.0	.20	.24			
	15-48	---	---	40-45	1.20-1.30	0.06-0.2	0.15-0.18	6.0-8.9	0.0-1.0	.24	.28			
	48-52	---	---	27-40	1.30-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
	52-60	---	---	27-40	1.30-1.40	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
168:														
Uinta	0-13	---	---	10-20	1.30-1.40	2-6	0.08-0.09	0.0-2.9	1.0-2.0	.15	.24	5	5	56
	13-23	---	---	10-20	1.35-1.45	2-6	0.08-0.09	0.0-2.9	0.5-1.0	.15	.28			
	23-35	---	---	27-35	1.30-1.40	0.6-2	0.12-0.16	3.0-5.9	0.5-1.0	.15	.28			
	35-50	---	---	27-35	1.30-1.35	0.2-0.6	0.12-0.16	3.0-5.9	0.5-1.0	.15	.28			
	50-60	---	---	27-35	1.25-1.35	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
169:														
Skutum	0-5	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.20	.24	4	6	48
	5-17	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32			
	17-32	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	32-44	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	44-48	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	48-56	---	---	15-20	1.35-1.50	0.6-2	0.08-0.09	0.0-2.9	0.0-1.0	.15	.24			
	56-60	---	---	---	---	0.2-0.6	---	---	---	---	---			
170:														
Skutum	0-5	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.20	.24	4	6	48
	5-17	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32			
	17-32	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	32-44	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	44-48	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	48-56	---	---	15-20	1.35-1.50	0.6-2	0.08-0.09	0.0-2.9	0.0-1.0	.15	.24			
	56-60	---	---	---	---	0.2-0.6	---	---	---	---	---			
171:														
Skutum	0-5	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.20	.24	4	6	48
	5-17	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32			
	17-32	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	32-44	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	44-48	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	48-56	---	---	15-20	1.35-1.50	0.6-2	0.08-0.09	0.0-2.9	0.0-1.0	.15	.24			
	56-60	---	---	---	---	0.2-0.6	---	---	---	---	---			
172:														
Skutum	0-5	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.20	.24	4	6	48
	5-17	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32			
	17-32	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	32-44	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	44-48	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	48-56	---	---	15-20	1.35-1.50	0.6-2	0.08-0.09	0.0-2.9	0.0-1.0	.15	.24			
	56-60	---	---	---	---	0.2-0.6	---	---	---	---	---			
Uinta	0-13	---	---	10-20	1.30-1.40	2-6	0.08-0.09	0.0-2.9	1.0-2.0	.15	.24	5	5	56
	13-23	---	---	10-20	1.35-1.45	2-6	0.08-0.09	0.0-2.9	0.5-1.0	.15	.28			
	23-35	---	---	27-35	1.30-1.40	0.6-2	0.12-0.16	3.0-5.9	0.5-1.0	.15	.28			
	35-50	---	---	27-35	1.30-1.35	0.2-0.6	0.12-0.16	3.0-5.9	0.5-1.0	.15	.28			
	50-60	---	---	27-35	1.25-1.35	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
173:														
Skutum	0-5	---	---	18-27	1.20-1.30	0.6-2	0.14-0.17	0.0-2.9	3.0-8.0	.20	.24	4	6	48
	5-17	---	---	18-27	1.25-1.35	0.6-2	0.14-0.17	0.0-2.9	1.0-4.0	.28	.32			
	17-32	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	32-44	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	44-48	---	---	35-45	1.20-1.35	0.06-0.2	0.12-0.16	3.0-5.9	0.0-1.0	.15	.28			
	48-56	---	---	15-20	1.35-1.50	0.6-2	0.08-0.09	0.0-2.9	0.0-1.0	.15	.24			
	56-60	---	---	---	---	0.2-0.6	---	---	---	---	---			
Uinta	0-13	---	---	10-20	1.30-1.40	2-6	0.08-0.09	0.0-2.9	1.0-2.0	.15	.24	5	5	56
	13-23	---	---	10-20	1.35-1.45	2-6	0.08-0.09	0.0-2.9	0.5-1.0	.15	.28			
	23-35	---	---	27-35	1.30-1.40	0.6-2	0.12-0.16	3.0-5.9	0.5-1.0	.15	.28			
	35-50	---	---	27-35	1.30-1.35	0.2-0.6	0.12-0.16	3.0-5.9	0.5-1.0	.15	.28			
	50-60	---	---	27-35	1.25-1.35	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
174:														
Snyderville	0-10	---	---	18-22	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24	3	7	38
	10-16	---	---	18-22	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.17	.32			
	16-28	---	---	22-27	1.30-1.40	0.6-2	0.08-0.12	0.0-2.9	0.5-1.0	.10	.28			
	28-35	---	---	5-10	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-1.0	.05	.20			
	35-60	---	---	0-5	1.40-1.60	20-101	0.02-0.03	0.0-2.9	0.0-0.5	.02	.20			
175:														
Snyderville	0-10	---	---	18-22	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24	3	7	38
	10-16	---	---	18-22	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.17	.32			
	16-28	---	---	22-27	1.30-1.40	0.6-2	0.08-0.12	0.0-2.9	0.5-1.0	.10	.28			
	28-35	---	---	5-10	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-1.0	.05	.20			
	35-60	---	---	0-5	1.40-1.60	20-101	0.02-0.03	0.0-2.9	0.0-0.5	.02	.20			
176:														
Snyderville	0-10	---	---	18-22	1.20-1.30	0.6-2	0.11-0.14	0.0-2.9	2.0-5.0	.15	.24	3	7	38
	10-16	---	---	18-22	1.25-1.35	0.6-2	0.11-0.14	0.0-2.9	1.0-3.0	.17	.32			
	16-28	---	---	22-27	1.30-1.40	0.6-2	0.08-0.12	0.0-2.9	0.5-1.0	.10	.28			
	28-35	---	---	5-10	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-1.0	.05	.20			
	35-60	---	---	0-5	1.40-1.60	20-101	0.02-0.03	0.0-2.9	0.0-0.5	.02	.20			
177:														
Uinta	0-13	---	---	10-20	1.30-1.40	2-6	0.08-0.09	0.0-2.9	1.0-2.0	.15	.24	5	5	56
	13-23	---	---	10-20	1.35-1.45	2-6	0.08-0.09	0.0-2.9	0.5-1.0	.15	.28			
	23-35	---	---	27-35	1.30-1.40	0.6-2	0.12-0.16	3.0-5.9	0.5-1.0	.15	.28			
	35-50	---	---	27-35	1.30-1.35	0.2-0.6	0.12-0.16	3.0-5.9	0.5-1.0	.15	.28			
	50-60	---	---	27-35	1.25-1.35	0.2-0.6	0.13-0.16	3.0-5.9	0.0-1.0	.17	.32			
Duchesne	0-4	---	---	10-20	1.40-1.50	2-6	0.06-0.07	0.0-2.9	4.0-6.0	.20	.43	5	6	48
	4-11	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	11-18	---	---	10-20	1.40-1.50	2-6	0.06-0.08	0.0-2.9	4.0-6.0	.05	.17			
	18-30	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	30-42	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.15	.24			
	42-60	---	---	25-35	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.24			
178:														
Wanship	0-8	---	---	18-27	1.20-1.30	2-6	0.14-0.17	0.0-2.9	5.0-10	.17	.20	3	6	48
	8-14	---	---	18-27	1.25-1.35	2-6	0.14-0.17	0.0-2.9	1.0-5.0	.28	.32			
	14-24	---	---	18-27	1.25-1.35	2-6	0.14-0.17	0.0-2.9	1.0-5.0	.28	.32			
	24-26	---	---	0-5	1.40-1.55	6-20	0.02-0.04	0.0-2.9	0.0-1.0	.05	.20			
	26-60	---	---	0-5	1.40-1.55	6-20	0.02-0.04	0.0-2.9	0.0-1.0	.05	.20			
179:														
Wanship	0-8	---	---	18-27	1.20-1.30	2-6	0.14-0.17	0.0-2.9	5.0-10	.17	.20	3	6	48
	8-14	---	---	18-27	1.25-1.35	2-6	0.14-0.17	0.0-2.9	1.0-5.0	.28	.32			
	14-24	---	---	18-27	1.25-1.35	2-6	0.14-0.17	0.0-2.9	1.0-5.0	.28	.32			
	24-26	---	---	0-5	1.40-1.55	6-20	0.02-0.04	0.0-2.9	0.0-1.0	.05	.20			
	26-60	---	---	0-5	1.40-1.55	6-20	0.02-0.04	0.0-2.9	0.0-1.0	.05	.20			
Kovich	0-9	---	---	20-27	1.30-1.40	0.6-2	0.14-0.17	0.0-2.9	5.0-10	.24	.24	4	6	48
	9-22	---	---	20-35	1.30-1.40	0.2-0.6	0.14-0.18	3.0-5.9	1.0-5.0	.28	.28			
	22-29	---	---	20-35	1.30-1.50	0.2-0.6	0.14-0.18	3.0-5.9	1.0-5.0	.28	.20			
	29-44	---	---	15-25	1.40-1.50	0.6-2	0.08-0.12	0.0-2.9	0.0-1.0	.10	.20			
	44-60	---	---	0-10	1.50-1.60	0.6-2	0.05-0.06	0.0-0.0	0.0-1.0	.05	.15			
180:														
Yeates Hollow	0-12	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	8	0
	12-25	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	25-37	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	37-43	---	---	35-40	1.20-1.45	0.2-0.6	0.07-0.09	0.0-2.9	0.0-1.0	.05	.28			
	43-53	---	---	---	---	0.2-0.6	---	---	---	---	---			

Table 16.--Physical properties of the soils--continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In.	Pct.	Pct.	Pct.	g/cc	In./hr.	In./in.	Pct.	Pct.					
180:														
Henefer	0-7	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.24	5	7	38
	7-12	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	2.0-4.0	.24	.28			
	12-21	---	---	35-50	1.40-1.50	0.06-0.2	0.12-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-30	---	---	27-50	1.40-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	.17	.32			
	30-37	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	.10	.32			
	37-43	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	43-50	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	50-60	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
181:														
Yeates Hollow	0-12	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	8	0
	12-25	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	25-37	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	37-43	---	---	35-40	1.20-1.45	0.2-0.6	0.07-0.09	0.0-2.9	0.0-1.0	.05	.28			
	43-53	---	---	---	---	0.2-0.6	---	---	---	---	---			
Henefer	0-7	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.24	5	7	38
	7-12	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	2.0-4.0	.24	.28			
	12-21	---	---	35-50	1.40-1.50	0.06-0.2	0.12-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-30	---	---	27-50	1.40-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	.17	.32			
	30-37	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	.10	.32			
	37-43	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	43-50	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	50-60	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
182:														
Yeates Hollow	0-12	---	---	18-27	1.15-1.30	0.6-2	0.08-0.11	0.0-2.9	2.0-5.0	.05	.20	3	8	0
	12-25	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	25-37	---	---	40-55	1.20-1.45	0.06-0.2	0.08-0.12	3.0-5.9	0.5-1.0	.10	.24			
	37-43	---	---	35-40	1.20-1.45	0.2-0.6	0.07-0.09	0.0-2.9	0.0-1.0	.05	.28			
	43-53	---	---	---	---	0.2-0.6	---	---	---	---	---			
Henefer	0-7	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	3.0-5.0	.15	.24	5	7	38
	7-12	---	---	18-27	1.30-1.40	0.6-2	0.11-0.14	0.0-2.9	2.0-4.0	.24	.28			
	12-21	---	---	35-50	1.40-1.50	0.06-0.2	0.12-0.16	3.0-5.9	1.0-3.0	.15	.28			
	21-30	---	---	27-50	1.40-1.50	0.2-0.6	0.12-0.16	3.0-5.9	0.0-1.0	.17	.32			
	30-37	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	3.0-5.9	0.0-1.0	.10	.32			
	37-43	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	43-50	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
	50-60	---	---	27-40	1.40-1.50	0.2-0.6	0.08-0.12	0.0-2.9	0.0-1.0	.10	.32			
183:														
Water	---	---	---	---	---	---	---	---	---	---	---	-	---	---
184:														
Dams	---	---	---	---	---	---	---	---	---	---	---	-	---	---

Table 17.--Chemical properties of the soils

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
101:								
Agassiz	0-6	15-25	---	7.4-8.4	0-3	0	0	0
	6-14	15-25	---	7.4-8.4	0-3	0	0	0
	14-24	---	---	---	---	---	---	---
Rock outcrop	---	---	---	---	---	---	---	---
102:								
Ant Flat	0-13	20-30	---	6.1-7.3	0	0	0	0
	13-19	20-32	---	6.1-7.3	0	0	0	0
	19-30	28-42	---	6.1-7.3	0	0	0	0
	30-45	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
	45-60	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
103:								
Ant Flat	0-13	20-30	---	6.1-7.3	0	0	0	0
	13-19	20-32	---	6.1-7.3	0	0	0	0
	19-30	28-42	---	6.1-7.3	0	0	0	0
	30-45	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
	45-60	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
104:								
Ant Flat	0-13	20-30	---	6.1-7.3	0	0	0	0
	13-19	20-32	---	6.1-7.3	0	0	0	0
	19-30	28-42	---	6.1-7.3	0	0	0	0
	30-45	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
	45-60	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
105:								
Ant Flat	0-13	20-30	---	6.1-7.3	0	0	0	0
	13-19	20-32	---	6.1-7.3	0	0	0	0
	19-30	28-42	---	6.1-7.3	0	0	0	0
	30-45	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
	45-60	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
Henefer	0-7	20-30	---	6.6-7.3	0	0	0	0
	7-12	18-28	---	6.6-7.3	0	0	0	0
	12-21	27-42	---	6.6-7.8	0	0	0	0
	21-30	20-40	---	6.6-7.8	0	0	0	0
	30-37	20-30	---	6.6-7.8	0	0	0	0
	37-43	20-30	---	6.6-7.8	0	0	0	0
	43-50	20-30	---	6.6-7.8	0	0	0	0
	50-60	20-30	---	6.6-7.8	0	0	0	0
Skutum	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-17	15-27	---	6.1-7.3	0	0	0	0
	17-32	25-35	---	6.1-7.3	0	0	0	0
	32-44	25-35	---	6.1-7.3	0	0	0	0
	44-48	25-35	---	6.1-7.3	0	0	0	0
	48-56	10-17	---	6.1-7.3	0	0	0	0
	56-60	---	---	---	---	---	---	---
106:								
Ayoub	0-6	17-28	---	6.1-7.3	0	0	0	0
	6-12	18-25	---	6.1-7.3	0	0	0	0
	12-18	18-25	---	6.1-7.3	0	0	0	0
	18-23	18-25	---	6.1-7.3	0	0	0	0
	23-35	12-20	---	6.1-7.3	0	0	0	0
	35-45	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
107:								
Ayoub	0-6	17-28	---	6.1-7.3	0	0	0	0
	6-12	18-25	---	6.1-7.3	0	0	0	0
	12-18	18-25	---	6.1-7.3	0	0	0	0
	18-23	18-25	---	6.1-7.3	0	0	0	0
	23-35	12-20	---	6.1-7.3	0	0	0	0
	35-45	---	---	---	---	---	---	---
Dunford	0-10	17-27	---	6.6-7.3	0	0	0	0
	10-21	18-30	---	6.6-7.3	0	0	0	0
	21-36	15-25	---	6.1-7.3	0	0	0	0
	36-46	---	---	---	---	---	---	---
Melling	0-6	15-25	---	6.6-7.3	0	0	0	0
	6-19	18-30	---	6.6-7.3	0	0	0	0
	19-29	---	---	---	---	---	---	---
108:								
Ayoub	0-6	17-28	---	6.1-7.3	0	0	0	0
	6-12	18-25	---	6.1-7.3	0	0	0	0
	12-18	18-25	---	6.1-7.3	0	0	0	0
	18-23	18-25	---	6.1-7.3	0	0	0	0
	23-35	12-20	---	6.1-7.3	0	0	0	0
	35-45	---	---	---	---	---	---	---
Dunford	0-10	17-27	---	6.6-7.3	0	0	0	0
	10-21	18-30	---	6.6-7.3	0	0	0	0
	21-36	15-25	---	6.1-7.3	0	0	0	0
	36-46	---	---	---	---	---	---	---
Melling	0-6	15-25	---	6.6-7.3	0	0	0	0
	6-19	18-30	---	6.6-7.3	0	0	0	0
	19-29	---	---	---	---	---	---	---
109:								
Cluff	0-4	17-27	---	5.6-6.5	0	0	0	0
	4-9	17-27	---	5.6-6.5	0	0	0	0
	9-16	15-22	---	5.6-6.5	0	0	0	0
	16-20	25-30	---	5.6-6.5	0	0	0	0
	20-33	25-30	---	5.6-6.5	0	0	0	0
	33-54	28-37	---	5.6-6.5	0	0	0	0
	54-60	---	---	---	---	---	---	---
110:								
Cluff	0-4	17-27	---	5.6-6.5	0	0	0	0
	4-9	17-27	---	5.6-6.5	0	0	0	0
	9-16	15-22	---	5.6-6.5	0	0	0	0
	16-20	25-30	---	5.6-6.5	0	0	0	0
	20-33	25-30	---	5.6-6.5	0	0	0	0
	33-54	28-37	---	5.6-6.5	0	0	0	0
	54-60	---	---	---	---	---	---	---
111:								
Crandall	0-5	15-25	---	6.1-7.3	0	0	0	0
	5-14	15-20	---	6.1-7.3	0	0	0	0
	14-45	17-22	---	6.6-7.3	0	0	0	0
	45-55	12-20	---	7.4-7.8	3-15	0	0	0
	55-60	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
112:								
Crandall	0-5	15-25	---	6.1-7.3	0	0	0	0
	5-14	15-20	---	6.1-7.3	0	0	0	0
	14-45	17-22	---	6.6-7.3	0	0	0	0
	45-55	12-20	---	7.4-7.8	3-15	0	0	0
	55-60	---	---	---	---	---	---	---
Lucky Star	0-6	20-38	---	6.1-7.3	0	0	0	0
	6-12	12-28	---	6.1-7.3	0	0	0	0
	12-25	5.0-15	---	6.1-7.3	0	0	0	0
	25-47	5.0-15	---	6.1-7.3	0	0	0	0
	47-62	10-25	---	6.1-7.3	0	0	0	0
	62-80	10-25	---	6.1-7.3	0	0	0	0
113:								
Crandall	0-5	15-25	---	6.1-7.3	0	0	0	0
	5-14	15-20	---	6.1-7.3	0	0	0	0
	14-45	17-22	---	6.6-7.3	0	0	0	0
	45-55	12-20	---	7.4-7.8	3-15	0	0	0
	55-60	---	---	---	---	---	---	---
Lucky Star	0-6	20-38	---	6.1-7.3	0	0	0	0
	6-12	12-28	---	6.1-7.3	0	0	0	0
	12-25	5.0-15	---	6.1-7.3	0	0	0	0
	25-47	5.0-15	---	6.1-7.3	0	0	0	0
	47-62	10-25	---	6.1-7.3	0	0	0	0
	62-80	10-25	---	6.1-7.3	0	0	0	0
Starley Family	0-6	10-25	---	6.6-8.4	0	0	0	0
	6-15	10-20	---	6.6-8.4	0	0	0	0
	15-19	10-20	---	6.6-8.4	0-3	0	0	0
	19-29	---	---	---	---	---	---	---
114:								
Crandall	0-5	15-25	---	6.1-7.3	0	0	0	0
	5-14	15-20	---	6.1-7.3	0	0	0	0
	14-45	17-22	---	6.6-7.3	0	0	0	0
	45-55	12-20	---	7.4-7.8	3-15	0	0	0
	55-60	---	---	---	---	---	---	---
Starley Family	0-6	10-25	---	6.6-8.4	0	0	0	0
	6-15	10-20	---	6.6-8.4	0	0	0	0
	15-19	10-20	---	6.6-8.4	0-3	0	0	0
	19-29	---	---	---	---	---	---	---
Rock outcrop	---	---	---	---	---	---	---	---
115:								
Dastrup	0-12	10-25	---	7.4-7.8	1-3	0	0.0-2.0	0
	12-16	10-25	---	7.4-7.8	3-15	0	0.0-2.0	0
	16-36	10-22	---	7.4-7.8	15-40	0	0.0-2.0	0
	36-48	10-22	---	7.4-8.4	15-40	0	0.0-2.0	0
	48-60	10-22	---	7.4-8.4	15-40	0	0.0-2.0	0
116:								
Dastrup	0-12	10-25	---	7.4-7.8	1-3	0	0.0-2.0	0
	12-16	10-25	---	7.4-7.8	3-15	0	0.0-2.0	0
	16-36	10-22	---	7.4-7.8	15-40	0	0.0-2.0	0
	36-48	10-22	---	7.4-8.4	15-40	0	0.0-2.0	0
	48-60	10-22	---	7.4-8.4	15-40	0	0.0-2.0	0

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
117:								
Dastrup	0-12	10-25	---	7.4-7.8	1-3	0	0.0-2.0	0
	12-16	10-25	---	7.4-7.8	3-15	0	0.0-2.0	0
	16-36	10-22	---	7.4-7.8	15-40	0	0.0-2.0	0
	36-48	10-22	---	7.4-8.4	15-40	0	0.0-2.0	0
	48-60	10-22	---	7.4-8.4	15-40	0	0.0-2.0	0
118:								
Dromedary	0-6	15-28	---	6.1-7.3	0	0	0	0
	6-22	10-15	---	6.1-7.3	0	0	0	0
	22-44	15-25	---	6.1-7.3	0	0	0	0
	44-51	15-25	---	6.1-7.3	0	0	0	0
	51-60	15-25	---	6.1-7.3	0	0	0	0
Rock outcrop	---	---	---	---	---	---	---	---
119:								
Duchesne	0-4	15-25	---	5.1-6.5	0	0	0	0
	4-11	15-25	---	5.1-6.5	0	0	0	0
	11-18	15-25	---	5.1-6.5	0	0	0	0
	18-30	15-25	---	5.1-6.5	0	0	0	0
	30-42	15-25	---	5.1-6.5	0	0	0	0
	42-60	15-25	---	5.1-6.5	0	0	0	0
120:								
Duchesne	0-4	15-25	---	5.1-6.5	0	0	0	0
	4-11	15-25	---	5.1-6.5	0	0	0	0
	11-18	15-25	---	5.1-6.5	0	0	0	0
	18-30	15-25	---	5.1-6.5	0	0	0	0
	30-42	15-25	---	5.1-6.5	0	0	0	0
	42-60	15-25	---	5.1-6.5	0	0	0	0
121:								
Duchesne	0-4	15-25	---	5.1-6.5	0	0	0	0
	4-11	15-25	---	5.1-6.5	0	0	0	0
	11-18	15-25	---	5.1-6.5	0	0	0	0
	18-30	15-25	---	5.1-6.5	0	0	0	0
	30-42	15-25	---	5.1-6.5	0	0	0	0
	42-60	15-25	---	5.1-6.5	0	0	0	0
122:								
Duchesne	0-4	15-25	---	5.1-6.5	0	0	0	0
	4-11	15-25	---	5.1-6.5	0	0	0	0
	11-18	15-25	---	5.1-6.5	0	0	0	0
	18-30	15-25	---	5.1-6.5	0	0	0	0
	30-42	15-25	---	5.1-6.5	0	0	0	0
	42-60	15-25	---	5.1-6.5	0	0	0	0
Haydenfork	0-3	---	---	---	0	0	0	0
	3-9	25-35	---	5.6-6.5	0	0	0	0
	9-17	20-30	---	5.6-6.5	0	0	0	0
	17-21	18-28	---	5.6-6.5	0	0	0	0
	21-25	15-25	---	5.6-6.5	0	0	0	0
	25-36	10-20	---	5.6-6.5	0	0	0	0
	36-55	10-20	---	5.6-6.5	0	0	0	0
	55-63	10-20	---	5.6-6.5	0	0	0	0
123:								
Dumps, mines	---	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
124:								
Dunford	0-10	17-27	---	6.6-7.3	0	0	0	0
	10-21	18-30	---	6.6-7.3	0	0	0	0
	21-36	15-25	---	6.1-7.3	0	0	0	0
	36-46	---	---	---	---	---	---	---
Ayoub	0-6	17-28	---	6.1-7.3	0	0	0	0
	6-12	18-25	---	6.1-7.3	0	0	0	0
	12-18	18-25	---	6.1-7.3	0	0	0	0
	18-23	18-25	---	6.1-7.3	0	0	0	0
	23-35	12-20	---	6.1-7.3	0	0	0	0
	35-45	---	---	---	---	---	---	---
Melling	0-6	15-25	---	6.6-7.3	0	0	0	0
	6-19	18-30	---	6.6-7.3	0	0	0	0
	19-29	---	---	---	---	---	---	---
125:								
Dunford	0-10	17-27	---	6.6-7.3	0	0	0	0
	10-21	18-30	---	6.6-7.3	0	0	0	0
	21-36	15-25	---	6.1-7.3	0	0	0	0
	36-46	---	---	---	---	---	---	---
Ayoub	0-6	17-28	---	6.1-7.3	0	0	0	0
	6-12	18-25	---	6.1-7.3	0	0	0	0
	12-18	18-25	---	6.1-7.3	0	0	0	0
	18-23	18-25	---	6.1-7.3	0	0	0	0
	23-35	12-20	---	6.1-7.3	0	0	0	0
	35-45	---	---	---	---	---	---	---
Melling	0-6	15-25	---	6.6-7.3	0	0	0	0
	6-19	18-30	---	6.6-7.3	0	0	0	0
	19-29	---	---	---	---	---	---	---
126:								
Echocreek	0-7	15-28	---	6.6-7.8	0-3	0	0.0-2.0	0
	7-18	15-28	---	6.6-7.8	0-3	0	0.0-2.0	0
	18-26	12-25	---	6.6-7.8	0-3	0	0.0-2.0	0
	26-38	12-20	---	7.4-8.4	3-15	0	0.0-2.0	0
	38-45	12-20	---	7.4-8.4	3-15	0	0.0-2.0	0
	45-60	12-20	---	7.4-8.4	3-15	0	0.0-2.0	0
127:								
Echocreek	0-7	15-28	---	6.6-7.8	0-3	0	0.0-2.0	0
	7-18	15-28	---	6.6-7.8	0-3	0	0.0-2.0	0
	18-26	12-25	---	6.6-7.8	0-3	0	0.0-2.0	0
	26-38	12-20	---	7.4-8.4	3-15	0	0.0-2.0	0
	38-45	12-20	---	7.4-8.4	3-15	0	0.0-2.0	0
	45-60	12-20	---	7.4-8.4	3-15	0	0.0-2.0	0
Kovich	0-9	22-37	---	6.1-7.3	0	0	0	0
	9-22	15-32	---	6.1-7.3	0	0	0	0
	22-29	15-32	---	6.1-7.3	0	0	0	0
	29-44	10-17	---	6.1-7.3	0	0	0	0
	44-60	0.0-10	---	6.1-7.3	0	0	0	0

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
128:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
129:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
130:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
131:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
Heiners	0-3	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	3-8	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	8-12	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	12-19	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	19-29	---	---	---	---	---	---	---
132:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
Hades	0-3	15-30	---	6.1-7.3	0	0	0	0
	3-18	15-30	---	6.1-7.3	0	0	0	0
	18-33	15-30	---	6.6-7.3	0	0	0	0
	33-44	15-30	---	6.6-7.3	0	0	0	0
	44-60	15-25	---	6.6-7.8	0-3	0	0	0

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
133:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
Hades	0-3	15-30	---	6.1-7.3	0	0	0	0
	3-18	15-30	---	6.1-7.3	0	0	0	0
	18-33	15-30	---	6.6-7.3	0	0	0	0
	33-44	15-30	---	6.6-7.3	0	0	0	0
	44-60	15-25	---	6.6-7.8	0-3	0	0	0
134:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
Yeates Hollow	0-12	15-30	---	5.6-7.3	0	0	0	0
	12-25	30-42	---	5.6-7.3	0	0	0	0
	25-37	30-42	---	5.6-7.3	0	0	0	0
	37-43	25-30	---	5.6-7.3	0	0	0	0
	43-53	---	---	---	---	---	---	---
135:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
Yeates Hollow	0-12	15-30	---	5.6-7.3	0	0	0	0
	12-25	30-42	---	5.6-7.3	0	0	0	0
	25-37	30-42	---	5.6-7.3	0	0	0	0
	37-43	25-30	---	5.6-7.3	0	0	0	0
	43-53	---	---	---	---	---	---	---
136:								
Hades	0-3	15-30	---	6.1-7.3	0	0	0	0
	3-18	15-30	---	6.1-7.3	0	0	0	0
	18-33	15-30	---	6.6-7.3	0	0	0	0
	33-44	15-30	---	6.6-7.3	0	0	0	0
	44-60	15-25	---	6.6-7.8	0-3	0	0	0
Agassiz	0-6	15-25	---	7.4-8.4	0-3	0	0	0
	6-14	15-25	---	7.4-8.4	0-3	0	0	0
	14-24	---	---	---	---	---	---	---
Rock outcrop	---	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
137:								
Hades	0-3	15-30	---	6.1-7.3	0	0	0	0
	3-18	15-30	---	6.1-7.3	0	0	0	0
	18-33	15-30	---	6.6-7.3	0	0	0	0
	33-44	15-30	---	6.6-7.3	0	0	0	0
	44-60	15-25	---	6.6-7.8	0-3	0	0	0
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
138:								
Hades	0-3	15-30	---	6.1-7.3	0	0	0	0
	3-18	15-30	---	6.1-7.3	0	0	0	0
	18-33	15-30	---	6.6-7.3	0	0	0	0
	33-44	15-30	---	6.6-7.3	0	0	0	0
	44-60	15-25	---	6.6-7.8	0-3	0	0	0
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
139:								
Harter	0-5	20-30	---	6.6-7.3	0	0	0	0
	5-12	20-30	---	6.6-7.3	0	0	0	0
	12-19	20-30	---	6.6-7.3	0	0	0	0
	19-24	25-30	---	6.6-7.3	0	0	0	0
	24-33	25-30	---	6.1-7.3	0	0	0	0
	33-60	30-37	---	6.1-7.3	0	0	0	0
140:								
Heiners	0-3	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	3-8	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	8-12	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	12-19	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	19-29	---	---	---	---	---	---	---
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
141:								
Heiners	0-3	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	3-8	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	8-12	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	12-19	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	19-29	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
141:								
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
Hades	0-3	15-30	---	6.1-7.3	0	0	0	0
	3-18	15-30	---	6.1-7.3	0	0	0	0
	18-33	15-30	---	6.6-7.3	0	0	0	0
	33-44	15-30	---	6.6-7.3	0	0	0	0
	44-60	15-25	---	6.6-7.8	0-3	0	0	0
142:								
Henefer	0-7	20-30	---	6.6-7.3	0	0	0	0
	7-12	18-28	---	6.6-7.3	0	0	0	0
	12-21	27-42	---	6.6-7.8	0	0	0	0
	21-30	20-40	---	6.6-7.8	0	0	0	0
	30-37	20-30	---	6.6-7.8	0	0	0	0
	37-43	20-30	---	6.6-7.8	0	0	0	0
	43-50	20-30	---	6.6-7.8	0	0	0	0
	50-60	20-30	---	6.6-7.8	0	0	0	0
Harter	0-5	20-30	---	6.6-7.3	0	0	0	0
	5-12	20-30	---	6.6-7.3	0	0	0	0
	12-19	20-30	---	6.6-7.3	0	0	0	0
	19-24	25-30	---	6.6-7.3	0	0	0	0
	24-33	25-30	---	6.1-7.3	0	0	0	0
	33-60	30-37	---	6.1-7.3	0	0	0	0
143:								
Horrocks	0-10	15-28	---	6.1-7.3	0	0	0	0
	10-19	18-32	---	6.1-7.3	0	0	0	0
	19-32	15-28	---	6.1-7.3	0	0	0	0
	32-40	15-25	---	6.1-7.3	0	0	0	0
	40-59	10-20	---	6.6-7.8	0	0	0	0
	59-60	---	---	---	---	---	---	---
Agassiz	0-6	15-25	---	7.4-8.4	0-3	0	0	0
	6-14	15-25	---	7.4-8.4	0-3	0	0	0
	14-24	---	---	---	---	---	---	---
144:								
Horrocks	0-10	15-28	---	6.1-7.3	0	0	0	0
	10-19	18-32	---	6.1-7.3	0	0	0	0
	19-32	15-28	---	6.1-7.3	0	0	0	0
	32-40	15-25	---	6.1-7.3	0	0	0	0
	40-59	10-20	---	6.6-7.8	0	0	0	0
	59-60	---	---	---	---	---	---	---
Cutoff	0-1	15-20	---	7.9-8.4	3-15	0	0	0
	1-9	15-20	---	7.9-8.4	3-15	0	0	0
	9-16	10-20	---	8.5-9.0	10-20	0	0.0-2.0	0
	16-29	10-20	---	8.5-9.0	15-40	0	0.0-2.0	0
	29-38	10-20	---	8.5-9.0	15-40	0	0.0-2.0	0
	38-48	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
145:								
Horrocks	0-10	15-28	---	6.1-7.3	0	0	0	0
	10-19	18-32	---	6.1-7.3	0	0	0	0
	19-32	15-28	---	6.1-7.3	0	0	0	0
	32-40	15-25	---	6.1-7.3	0	0	0	0
	40-59	10-20	---	6.6-7.8	0	0	0	0
	59-60	---	---	---	---	---	---	---
Cutoff	0-1	15-20	---	7.9-8.4	3-15	0	0	0
	1-9	15-20	---	7.9-8.4	3-15	0	0	0
	9-16	10-20	---	8.5-9.0	10-20	0	0.0-2.0	0
	16-29	10-20	---	8.5-9.0	15-40	0	0.0-2.0	0
	29-38	10-20	---	8.5-9.0	15-40	0	0.0-2.0	0
	38-48	---	---	---	---	---	---	---
146:								
Horrocks	0-10	15-28	---	6.1-7.3	0	0	0	0
	10-19	18-32	---	6.1-7.3	0	0	0	0
	19-32	15-28	---	6.1-7.3	0	0	0	0
	32-40	15-25	---	6.1-7.3	0	0	0	0
	40-59	10-20	---	6.6-7.8	0	0	0	0
	59-60	---	---	---	---	---	---	---
Hades	0-3	15-30	---	6.1-7.3	0	0	0	0
	3-18	15-30	---	6.1-7.3	0	0	0	0
	18-33	15-30	---	6.6-7.3	0	0	0	0
	33-44	15-30	---	6.6-7.3	0	0	0	0
	44-60	15-25	---	6.6-7.8	0-3	0	0	0
147:								
Hovarka	0-4	---	---	---	0	0	0	0
	4-12	20-35	---	5.6-7.3	0	0	0	0
	12-32	20-35	---	5.6-7.3	0	0	0	0
	32-36	5.0-15	---	5.6-7.3	0	0	0	0
	36-64	1.0-5.0	---	5.6-7.3	0	0	0	0
Millcreek	0-14	20-30	---	6.1-7.3	0	0	0	0
	14-24	15-25	---	6.1-7.3	0	0	0	0
	24-60	0.0-10	---	6.1-7.3	0	0	0	0
148:								
Jana	0-1	10-17	---	7.9-8.4	15-30	0	0	0
	1-6	10-15	---	7.9-8.4	15-30	0	0	0
	6-12	10-15	---	7.9-8.4	15-30	0	0	0
	12-22	---	---	---	---	---	---	---
Richsum	0-2	15-25	---	6.6-8.4	0-15	0	0	0
	2-14	12-20	---	7.4-8.4	3-15	0	0	0
	14-23	10-20	---	7.4-9.0	15-40	0	0	0
	23-32	10-20	---	7.4-9.0	15-40	0	0	0
	32-52	10-20	---	7.4-9.0	15-40	0	0	0
	52-60	---	---	---	---	---	---	---
Rock outcrop	---	---	---	---	---	---	---	---
149:								
Kovich	0-9	22-37	---	6.1-7.3	0	0	0	0
	9-22	15-32	---	6.1-7.3	0	0	0	0
	22-29	15-32	---	6.1-7.3	0	0	0	0
	29-44	10-17	---	6.1-7.3	0	0	0	0
	44-60	0.0-10	---	6.1-7.3	0	0	0	0

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
149:								
Toddspan	0-4	20-38	---	6.6-7.8	0-10	0	0	0
	4-14	20-38	---	6.6-7.8	0-10	0	0	0
	14-19	20-38	---	6.6-8.4	0-10	0	0	0
	19-24	12-25	---	6.6-8.4	0-10	0	0	0
	24-32	12-25	---	6.6-8.4	0-10	0	0	0
	32-37	12-20	---	6.6-8.4	0-10	0	0	0
	37-44	12-20	---	6.6-8.4	0-10	0	0	0
	44-60	0.0-10	---	6.6-8.4	0-10	0	0	0
150:								
Lucky Star	0-6	20-38	---	6.1-7.3	0	0	0	0
	6-12	12-28	---	6.1-7.3	0	0	0	0
	12-25	5.0-15	---	6.1-7.3	0	0	0	0
	25-47	5.0-15	---	6.1-7.3	0	0	0	0
	47-62	10-25	---	6.1-7.3	0	0	0	0
	62-80	10-25	---	6.1-7.3	0	0	0	0
151:								
Lucky Star	0-6	20-38	---	6.1-7.3	0	0	0	0
	6-12	12-28	---	6.1-7.3	0	0	0	0
	12-25	5.0-15	---	6.1-7.3	0	0	0	0
	25-47	5.0-15	---	6.1-7.3	0	0	0	0
	47-62	10-25	---	6.1-7.3	0	0	0	0
	62-80	10-25	---	6.1-7.3	0	0	0	0
152:								
Lucky Star	0-6	20-38	---	6.1-7.3	0	0	0	0
	6-12	12-28	---	6.1-7.3	0	0	0	0
	12-25	5.0-15	---	6.1-7.3	0	0	0	0
	25-47	5.0-15	---	6.1-7.3	0	0	0	0
	47-62	10-25	---	6.1-7.3	0	0	0	0
	62-80	10-25	---	6.1-7.3	0	0	0	0
Dromedary	0-6	15-28	---	6.1-7.3	0	0	0	0
	6-22	10-15	---	6.1-7.3	0	0	0	0
	22-44	15-25	---	6.1-7.3	0	0	0	0
	44-51	15-25	---	6.1-7.3	0	0	0	0
	51-60	15-25	---	6.1-7.3	0	0	0	0
153:								
Lucky Star	0-6	20-38	---	6.1-7.3	0	0	0	0
	6-12	12-28	---	6.1-7.3	0	0	0	0
	12-25	5.0-15	---	6.1-7.3	0	0	0	0
	25-47	5.0-15	---	6.1-7.3	0	0	0	0
	47-62	10-25	---	6.1-7.3	0	0	0	0
	62-80	10-25	---	6.1-7.3	0	0	0	0
Fewkes	0-12	17-28	---	6.6-7.8	0	0	0	0
	12-17	17-25	---	6.6-7.8	0	0	0	0
	17-22	17-25	---	6.6-7.8	0	0	0	0
	22-28	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	28-40	15-25	---	7.9-8.4	10-30	0	0.0-2.0	0
	40-50	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0
	50-60	10-25	---	7.9-9.0	15-40	0	0.0-2.0	0

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
154:								
Manila	0-4	17-30	---	6.1-7.3	0	0	0	0
	4-15	15-25	---	6.1-7.3	0	0	0	0
	15-22	25-37	---	6.1-7.3	0	0	0	0
	22-40	25-37	---	6.1-7.3	0	0	0	0
	40-46	25-37	---	6.6-7.8	0	0	0	0
	46-60	25-37	---	6.6-7.8	0	0	0	0
Ant Flat	0-13	20-30	---	6.1-7.3	0	0	0	0
	13-19	20-32	---	6.1-7.3	0	0	0	0
	19-30	28-42	---	6.1-7.3	0	0	0	0
	30-45	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
	45-60	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
155:								
Manila	0-4	17-30	---	6.1-7.3	0	0	0	0
	4-15	15-25	---	6.1-7.3	0	0	0	0
	15-22	25-37	---	6.1-7.3	0	0	0	0
	22-40	25-37	---	6.1-7.3	0	0	0	0
	40-46	25-37	---	6.6-7.8	0	0	0	0
	46-60	25-37	---	6.6-7.8	0	0	0	0
Ant Flat	0-13	20-30	---	6.1-7.3	0	0	0	0
	13-19	20-32	---	6.1-7.3	0	0	0	0
	19-30	28-42	---	6.1-7.3	0	0	0	0
	30-45	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
	45-60	20-28	---	7.4-8.4	15-30	0	0.0-2.0	0
156:								
Manila	0-4	17-30	---	6.1-7.3	0	0	0	0
	4-15	15-25	---	6.1-7.3	0	0	0	0
	15-22	25-37	---	6.1-7.3	0	0	0	0
	22-40	25-37	---	6.1-7.3	0	0	0	0
	40-46	25-37	---	6.6-7.8	0	0	0	0
	46-60	25-37	---	6.6-7.8	0	0	0	0
Harter	0-5	20-30	---	6.6-7.3	0	0	0	0
	5-12	20-30	---	6.6-7.3	0	0	0	0
	12-19	20-30	---	6.6-7.3	0	0	0	0
	19-24	25-30	---	6.6-7.3	0	0	0	0
	24-33	25-30	---	6.1-7.3	0	0	0	0
	33-60	30-37	---	6.1-7.3	0	0	0	0
157:								
Manila	0-4	17-30	---	6.1-7.3	0	0	0	0
	4-15	15-25	---	6.1-7.3	0	0	0	0
	15-22	25-37	---	6.1-7.3	0	0	0	0
	22-40	25-37	---	6.1-7.3	0	0	0	0
	40-46	25-37	---	6.6-7.8	0	0	0	0
	46-60	25-37	---	6.6-7.8	0	0	0	0
Henefer	0-7	20-30	---	6.6-7.3	0	0	0	0
	7-12	18-28	---	6.6-7.3	0	0	0	0
	12-21	27-42	---	6.6-7.8	0	0	0	0
	21-30	20-40	---	6.6-7.8	0	0	0	0
	30-37	20-30	---	6.6-7.8	0	0	0	0
	37-43	20-30	---	6.6-7.8	0	0	0	0
	43-50	20-30	---	6.6-7.8	0	0	0	0
	50-60	20-30	---	6.6-7.8	0	0	0	0

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
158:								
Melling	0-6	15-25	---	6.6-7.3	0	0	0	0
	6-19	18-30	---	6.6-7.3	0	0	0	0
	19-29	---	---	---	---	---	---	---
Ayoub	0-6	17-28	---	6.1-7.3	0	0	0	0
	6-12	18-25	---	6.1-7.3	0	0	0	0
	12-18	18-25	---	6.1-7.3	0	0	0	0
	18-23	18-25	---	6.1-7.3	0	0	0	0
	23-35	12-20	---	6.1-7.3	0	0	0	0
	35-45	---	---	---	---	---	---	---
Rock outcrop	---	---	---	---	---	---	---	---
159:								
Parkcity	0-5	15-25	---	6.1-7.3	0	0	0	0
	5-19	10-20	---	6.1-7.3	0	0	0	0
	19-36	5.0-15	---	6.1-7.3	0	0	0	0
	36-60	5.0-15	---	6.1-7.3	0	0	0	0
Dromedary	0-6	15-28	---	6.1-7.3	0	0	0	0
	6-22	10-15	---	6.1-7.3	0	0	0	0
	22-44	15-25	---	6.1-7.3	0	0	0	0
	44-51	15-25	---	6.1-7.3	0	0	0	0
	51-60	15-25	---	6.1-7.3	0	0	0	0
160:								
Parkcity	0-5	15-25	---	6.1-7.3	0	0	0	0
	5-19	10-20	---	6.1-7.3	0	0	0	0
	19-36	5.0-15	---	6.1-7.3	0	0	0	0
	36-60	5.0-15	---	6.1-7.3	0	0	0	0
Dromedary	0-6	15-28	---	6.1-7.3	0	0	0	0
	6-22	10-15	---	6.1-7.3	0	0	0	0
	22-44	15-25	---	6.1-7.3	0	0	0	0
	44-51	15-25	---	6.1-7.3	0	0	0	0
	51-60	15-25	---	6.1-7.3	0	0	0	0
161:								
Pits	---	---	---	---	---	---	---	---
162:								
Richsum	0-2	15-25	---	6.6-8.4	0-15	0	0	0
	2-14	12-20	---	7.4-8.4	3-15	0	0	0
	14-23	10-20	---	7.4-9.0	15-40	0	0	0
	23-32	10-20	---	7.4-9.0	15-40	0	0	0
	32-52	10-20	---	7.4-9.0	15-40	0	0	0
	52-60	---	---	---	---	---	---	---
Heiners	0-3	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	3-8	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	8-12	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	12-19	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	19-29	---	---	---	---	---	---	---
163:								
Richsum	0-2	15-25	---	6.6-8.4	0-15	0	0	0
	2-14	12-20	---	7.4-8.4	3-15	0	0	0
	14-23	10-20	---	7.4-9.0	15-40	0	0	0
	23-32	10-20	---	7.4-9.0	15-40	0	0	0
	32-52	10-20	---	7.4-9.0	15-40	0	0	0
	52-60	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
163:								
Heiners	0-3	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	3-8	10-20	---	7.9-8.4	15-30	0	0.0-2.0	0
	8-12	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	12-19	10-15	---	8.5-9.0	15-30	0	0.0-2.0	0
	19-29	---	---	---	---	---	---	---
164:								
Rock outcrop	---	---	---	---	---	---	---	---
Agassiz	0-6	15-25	---	7.4-8.4	0-3	0	0	0
	6-14	15-25	---	7.4-8.4	0-3	0	0	0
	14-24	---	---	---	---	---	---	---
Starley Family	0-6	10-25	---	6.6-8.4	0	0	0	0
	6-15	10-20	---	6.6-8.4	0	0	0	0
	15-19	10-20	---	6.6-8.4	0-3	0	0	0
	19-29	---	---	---	---	---	---	---
Hades	0-3	15-30	---	6.1-7.3	0	0	0	0
	3-18	15-30	---	6.1-7.3	0	0	0	0
	18-33	15-30	---	6.6-7.3	0	0	0	0
	33-44	15-30	---	6.6-7.3	0	0	0	0
	44-60	15-25	---	6.6-7.8	0-3	0	0	0
Parkcity	0-5	15-25	---	6.1-7.3	0	0	0	0
	5-19	10-20	---	6.1-7.3	0	0	0	0
	19-36	5.0-15	---	6.1-7.3	0	0	0	0
	36-60	5.0-15	---	6.1-7.3	0	0	0	0
165:								
Rock outcrop	---	---	---	---	---	---	---	---
Starley Family	0-6	10-25	---	6.6-8.4	0	0	0	0
	6-15	10-20	---	6.6-8.4	0	0	0	0
	15-19	10-20	---	6.6-8.4	0-3	0	0	0
	19-29	---	---	---	---	---	---	---
166:								
Sessions	0-8	20-35	---	6.1-7.3	0	0	0	0
	8-15	20-35	---	6.1-7.3	0	0	0	0
	15-48	28-35	---	6.1-7.8	0	0	0	0
	48-52	20-30	---	6.1-7.8	0	0	0	0
	52-60	20-30	---	7.4-7.8	10-30	0	0	0
Haydenfork	0-3	---	---	---	0	0	0	0
	3-9	25-35	---	5.6-6.5	0	0	0	0
	9-17	20-30	---	5.6-6.5	0	0	0	0
	17-21	18-28	---	5.6-6.5	0	0	0	0
	21-25	15-25	---	5.6-6.5	0	0	0	0
	25-36	10-20	---	5.6-6.5	0	0	0	0
	36-55	10-20	---	5.6-6.5	0	0	0	0
	55-63	10-20	---	5.6-6.5	0	0	0	0
167:								
Sessions	0-8	20-35	---	6.1-7.3	0	0	0	0
	8-15	20-35	---	6.1-7.3	0	0	0	0
	15-48	28-35	---	6.1-7.8	0	0	0	0
	48-52	20-30	---	6.1-7.8	0	0	0	0
	52-60	20-30	---	7.4-7.8	10-30	0	0	0

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
167:								
Skutum	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-17	15-27	---	6.1-7.3	0	0	0	0
	17-32	25-35	---	6.1-7.3	0	0	0	0
	32-44	25-35	---	6.1-7.3	0	0	0	0
	44-48	25-35	---	6.1-7.3	0	0	0	0
	48-56	10-17	---	6.1-7.3	0	0	0	0
	56-60	---	---	---	---	---	---	---
168:								
Sessions	0-8	20-35	---	6.1-7.3	0	0	0	0
	8-15	20-35	---	6.1-7.3	0	0	0	0
	15-48	28-35	---	6.1-7.8	0	0	0	0
	48-52	20-30	---	6.1-7.8	0	0	0	0
	52-60	20-30	---	7.4-7.8	10-30	0	0	0
Uinta	0-13	8.0-18	---	6.1-7.3	0	0	0	0
	13-23	5.0-15	---	6.1-7.3	0	0	0	0
	23-35	15-25	---	6.1-7.3	0	0	0	0
	35-50	15-25	---	6.1-7.3	0	0	0	0
	50-60	15-25	---	6.1-7.3	0	0	0	0
169:								
Skutum	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-17	15-27	---	6.1-7.3	0	0	0	0
	17-32	25-35	---	6.1-7.3	0	0	0	0
	32-44	25-35	---	6.1-7.3	0	0	0	0
	44-48	25-35	---	6.1-7.3	0	0	0	0
	48-56	10-17	---	6.1-7.3	0	0	0	0
	56-60	---	---	---	---	---	---	---
170:								
Skutum	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-17	15-27	---	6.1-7.3	0	0	0	0
	17-32	25-35	---	6.1-7.3	0	0	0	0
	32-44	25-35	---	6.1-7.3	0	0	0	0
	44-48	25-35	---	6.1-7.3	0	0	0	0
	48-56	10-17	---	6.1-7.3	0	0	0	0
	56-60	---	---	---	---	---	---	---
171:								
Skutum	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-17	15-27	---	6.1-7.3	0	0	0	0
	17-32	25-35	---	6.1-7.3	0	0	0	0
	32-44	25-35	---	6.1-7.3	0	0	0	0
	44-48	25-35	---	6.1-7.3	0	0	0	0
	48-56	10-17	---	6.1-7.3	0	0	0	0
	56-60	---	---	---	---	---	---	---
172:								
Skutum	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-17	15-27	---	6.1-7.3	0	0	0	0
	17-32	25-35	---	6.1-7.3	0	0	0	0
	32-44	25-35	---	6.1-7.3	0	0	0	0
	44-48	25-35	---	6.1-7.3	0	0	0	0
	48-56	10-17	---	6.1-7.3	0	0	0	0
	56-60	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
172:								
Uinta	0-13	8.0-18	---	6.1-7.3	0	0	0	0
	13-23	5.0-15	---	6.1-7.3	0	0	0	0
	23-35	15-25	---	6.1-7.3	0	0	0	0
	35-50	15-25	---	6.1-7.3	0	0	0	0
	50-60	15-25	---	6.1-7.3	0	0	0	0
173:								
Skutum	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-17	15-27	---	6.1-7.3	0	0	0	0
	17-32	25-35	---	6.1-7.3	0	0	0	0
	32-44	25-35	---	6.1-7.3	0	0	0	0
	44-48	25-35	---	6.1-7.3	0	0	0	0
	48-56	10-17	---	6.1-7.3	0	0	0	0
	56-60	---	---	---	---	---	---	---
Uinta	0-13	8.0-18	---	6.1-7.3	0	0	0	0
	13-23	5.0-15	---	6.1-7.3	0	0	0	0
	23-35	15-25	---	6.1-7.3	0	0	0	0
	35-50	15-25	---	6.1-7.3	0	0	0	0
	50-60	15-25	---	6.1-7.3	0	0	0	0
174:								
Snyderville	0-10	10-25	---	6.6-7.8	0-3	0	0	0
	10-16	10-20	---	6.6-7.8	0-3	0	0	0
	16-28	10-20	---	6.6-7.8	0-3	0	0	0
	28-35	0.0-10	---	6.6-7.8	0-3	0	0	0
	35-60	0.0-5.0	---	6.6-7.8	0-3	0	0	0
175:								
Snyderville	0-10	10-25	---	6.6-7.8	0-3	0	0	0
	10-16	10-20	---	6.6-7.8	0-3	0	0	0
	16-28	10-20	---	6.6-7.8	0-3	0	0	0
	28-35	0.0-10	---	6.6-7.8	0-3	0	0	0
	35-60	0.0-5.0	---	6.6-7.8	0-3	0	0	0
176:								
Snyderville	0-10	10-25	---	6.6-7.8	0-3	0	0	0
	10-16	10-20	---	6.6-7.8	0-3	0	0	0
	16-28	10-20	---	6.6-7.8	0-3	0	0	0
	28-35	0.0-10	---	6.6-7.8	0-3	0	0	0
	35-60	0.0-5.0	---	6.6-7.8	0-3	0	0	0
177:								
Uinta	0-13	8.0-18	---	6.1-7.3	0	0	0	0
	13-23	5.0-15	---	6.1-7.3	0	0	0	0
	23-35	15-25	---	6.1-7.3	0	0	0	0
	35-50	15-25	---	6.1-7.3	0	0	0	0
	50-60	15-25	---	6.1-7.3	0	0	0	0
Duchesne	0-4	15-25	---	5.1-6.5	0	0	0	0
	4-11	15-25	---	5.1-6.5	0	0	0	0
	11-18	15-25	---	5.1-6.5	0	0	0	0
	18-30	15-25	---	5.1-6.5	0	0	0	0
	30-42	15-25	---	5.1-6.5	0	0	0	0
	42-60	15-25	---	5.1-6.5	0	0	0	0

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
178:								
Wanship	0-8	20-38	---	6.6-8.4	0	0	0	0
	8-14	12-28	---	6.6-8.4	0	0	0	0
	14-24	12-28	---	6.6-8.4	0	0	0	0
	24-26	0.0-5.0	---	6.6-8.4	0	0	0	0
	26-60	0.0-5.0	---	6.6-8.4	0	0	0	0
179:								
Wanship	0-8	20-38	---	6.6-8.4	0	0	0	0
	8-14	12-28	---	6.6-8.4	0	0	0	0
	14-24	12-28	---	6.6-8.4	0	0	0	0
	24-26	0.0-5.0	---	6.6-8.4	0	0	0	0
	26-60	0.0-5.0	---	6.6-8.4	0	0	0	0
Kovich	0-9	22-37	---	6.1-7.3	0	0	0	0
	9-22	15-32	---	6.1-7.3	0	0	0	0
	22-29	15-32	---	6.1-7.3	0	0	0	0
	29-44	10-17	---	6.1-7.3	0	0	0	0
	44-60	0.0-10	---	6.1-7.3	0	0	0	0
180:								
Yeates Hollow	0-12	15-30	---	5.6-7.3	0	0	0	0
	12-25	30-42	---	5.6-7.3	0	0	0	0
	25-37	30-42	---	5.6-7.3	0	0	0	0
	37-43	25-30	---	5.6-7.3	0	0	0	0
	43-53	---	---	---	---	---	---	---
Henefer	0-7	20-30	---	6.6-7.3	0	0	0	0
	7-12	18-28	---	6.6-7.3	0	0	0	0
	12-21	27-42	---	6.6-7.8	0	0	0	0
	21-30	20-40	---	6.6-7.8	0	0	0	0
	30-37	20-30	---	6.6-7.8	0	0	0	0
	37-43	20-30	---	6.6-7.8	0	0	0	0
	43-50	20-30	---	6.6-7.8	0	0	0	0
	50-60	20-30	---	6.6-7.8	0	0	0	0
181:								
Yeates Hollow	0-12	15-30	---	5.6-7.3	0	0	0	0
	12-25	30-42	---	5.6-7.3	0	0	0	0
	25-37	30-42	---	5.6-7.3	0	0	0	0
	37-43	25-30	---	5.6-7.3	0	0	0	0
	43-53	---	---	---	---	---	---	---
Henefer	0-7	20-30	---	6.6-7.3	0	0	0	0
	7-12	18-28	---	6.6-7.3	0	0	0	0
	12-21	27-42	---	6.6-7.8	0	0	0	0
	21-30	20-40	---	6.6-7.8	0	0	0	0
	30-37	20-30	---	6.6-7.8	0	0	0	0
	37-43	20-30	---	6.6-7.8	0	0	0	0
	43-50	20-30	---	6.6-7.8	0	0	0	0
	50-60	20-30	---	6.6-7.8	0	0	0	0
182:								
Yeates Hollow	0-12	15-30	---	5.6-7.3	0	0	0	0
	12-25	30-42	---	5.6-7.3	0	0	0	0
	25-37	30-42	---	5.6-7.3	0	0	0	0
	37-43	25-30	---	5.6-7.3	0	0	0	0
	43-53	---	---	---	---	---	---	---

Table 17.--Chemical properties of the soils--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In.	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos./cm.	
182:								
Henefer	0-7	20-30	---	6.6-7.3	0	0	0	0
	7-12	18-28	---	6.6-7.3	0	0	0	0
	12-21	27-42	---	6.6-7.8	0	0	0	0
	21-30	20-40	---	6.6-7.8	0	0	0	0
	30-37	20-30	---	6.6-7.8	0	0	0	0
	37-43	20-30	---	6.6-7.8	0	0	0	0
	43-50	20-30	---	6.6-7.8	0	0	0	0
	50-60	20-30	---	6.6-7.8	0	0	0	0
183:								
Water	---	---	---	---	---	---	---	---
184:								
Dams	---	---	---	---	---	---	---	---

Table 18.--Water features

(Depths of layers are in feet. 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	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft.	Ft.	Ft.				
101:									
Agassiz	D	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	---	Jan-Dec	---	---	---	---	None	---	None
102:									
Ant Flat	C	Jan-Dec	---	---	---	---	None	---	None
103:									
Ant Flat	C	Jan-Dec	---	---	---	---	None	---	None
104:									
Ant Flat	C	Jan-Dec	---	---	---	---	None	---	None
105:									
Ant Flat	C	Jan-Dec	---	---	---	---	None	---	None
Henefer	C	Jan-Dec	---	---	---	---	None	---	None
Skutum	C	Jan-Dec	---	---	---	---	None	---	None
106:									
Ayoub	C	Jan-Dec	---	---	---	---	None	---	None
107:									
Ayoub	C	Jan-Dec	---	---	---	---	None	---	None
Dunford	C	Jan-Dec	---	---	---	---	None	---	None
Melling	D	Jan-Dec	---	---	---	---	None	---	None
108:									
Ayoub	C	Jan-Dec	---	---	---	---	None	---	None
Dunford	C	Jan-Dec	---	---	---	---	None	---	None
Melling	D	Jan-Dec	---	---	---	---	None	---	None
109:									
Cluff	C	Jan-Dec	---	---	---	---	None	---	None
110:									
Cluff	C	Jan-Dec	---	---	---	---	None	---	None
111:									
Crandall	B	Jan-Dec	---	---	---	---	None	---	None
112:									
Crandall	B	Jan-Dec	---	---	---	---	None	---	None
Lucky Star	B	Jan-Dec	---	---	---	---	None	---	None
113:									
Crandall	B	Jan-Dec	---	---	---	---	None	---	None
Lucky Star	B	Jan-Dec	---	---	---	---	None	---	None
Starley Family	D	Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water features--continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft.	Ft.	Ft.				
114:									
Crandall	B	Jan-Dec	---	---	---	---	None	---	None
Starley Family	D	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	---	Jan-Dec	---	---	---	---	None	---	None
115:									
Dastrup	B	Jan-Dec	---	---	---	---	None	---	None
116:									
Dastrup	B	Jan-Dec	---	---	---	---	None	---	None
117:									
Dastrup	B	Jan-Dec	---	---	---	---	None	---	None
118:									
Dromedary	B	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	---	Jan-Dec	---	---	---	---	None	---	None
119:									
Duchesne	B	Jan-Dec	---	---	---	---	None	---	None
120:									
Duchesne	B	Jan-Dec	---	---	---	---	None	---	None
121:									
Duchesne	B	Jan-Dec	---	---	---	---	None	---	None
122:									
Duchesne	B	Jan-Dec	---	---	---	---	None	---	None
Haydenfork	D	April	0.8-1.6	>6.0	0.7-1.3	Brief	Occasional	---	None
		May	0.8-1.6	>6.0	0.7-1.3	Brief	Occasional	---	None
		June	0.8-1.6	>6.0	0.7-1.3	Brief	Occasional	---	None
123:									
Dumps, Mines	---	Jan-Dec	---	---	---	---	None	---	None
124:									
Dunford	C	Jan-Dec	---	---	---	---	None	---	None
Ayoub	C	Jan-Dec	---	---	---	---	None	---	None
Melling	D	Jan-Dec	---	---	---	---	None	---	None
125:									
Dunford	C	Jan-Dec	---	---	---	---	None	---	None
Ayoub	C	Jan-Dec	---	---	---	---	None	---	None
Melling	D	Jan-Dec	---	---	---	---	None	---	None
126:									
Echocreek	B	Jan-Dec	---	---	---	---	None	---	None
127:									
Echocreek	B	Jan-Dec	---	---	---	---	None	---	None
Kovich	D	April	1.0-2.0	>6.0	---	---	None	Brief	Rare
		May	1.0-2.0	>6.0	---	---	None	Brief	Occasional
		June	1.0-2.0	>6.0	---	---	None	---	None

Table 18.--Water features--continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft.	Ft.	Ft.				
128:									
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
129:									
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
130:									
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
131:									
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
Heiners	D	Jan-Dec	---	---	---	---	None	---	None
132:									
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
Hades	C	Jan-Dec	---	---	---	---	None	---	None
133:									
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
Hades	C	Jan-Dec	---	---	---	---	None	---	None
134:									
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
Yeates Hollow	C	Jan-Dec	---	---	---	---	None	---	None
135:									
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
Yeates Hollow	C	Jan-Dec	---	---	---	---	None	---	None
136:									
Hades	C	Jan-Dec	---	---	---	---	None	---	None
Agassiz	D	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	---	Jan-Dec	---	---	---	---	None	---	None
137:									
Hades	C	Jan-Dec	---	---	---	---	None	---	None
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
138:									
Hades	C	Jan-Dec	---	---	---	---	None	---	None
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
139:									
Harter	C	Jan-Dec	---	---	---	---	None	---	None
140:									
Heiners	D	Jan-Dec	---	---	---	---	None	---	None
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
141:									
Heiners	D	Jan-Dec	---	---	---	---	None	---	None
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water features--continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft.	Ft.	Ft.				
141:									
Hades	C	Jan-Dec	---	---	---	---	None	---	None
142:									
Henefer	C	Jan-Dec	---	---	---	---	None	---	None
Harter	C	Jan-Dec	---	---	---	---	None	---	None
143:									
Horrocks	B	Jan-Dec	---	---	---	---	None	---	None
Agassiz	D	Jan-Dec	---	---	---	---	None	---	None
144:									
Horrocks	B	Jan-Dec	---	---	---	---	None	---	None
Cutoff	B	Jan-Dec	---	---	---	---	None	---	None
145:									
Horrocks	B	Jan-Dec	---	---	---	---	None	---	None
Cutoff	B	Jan-Dec	---	---	---	---	None	---	None
146:									
Horrocks	B	Jan-Dec	---	---	---	---	None	---	None
Hades	C	Jan-Dec	---	---	---	---	None	---	None
147:									
Hovarka	D	January	0.8-1.6	>6.0	---	---	None	---	None
		February	0.8-1.6	>6.0	---	---	None	---	None
		March	0.8-1.6	>6.0	---	---	None	Brief	Frequent
		April	0.8-1.6	>6.0	---	---	None	Brief	Frequent
		May	0.8-1.6	>6.0	---	---	None	Brief	Frequent
		June	0.8-1.6	>6.0	---	---	None	---	None
		July	0.8-1.6	>6.0	---	---	None	---	None
		August	0.8-1.6	>6.0	---	---	None	---	None
		September	0.8-1.6	>6.0	---	---	None	---	None
		October	0.8-1.6	>6.0	---	---	None	---	None
		November	0.8-1.6	>6.0	---	---	None	---	None
		December	0.8-1.6	>6.0	---	---	None	---	None
Millcreek	B	March	3.3-4.9	>6.0	---	---	None	Brief	Rare
		April	3.3-4.9	>6.0	---	---	None	Brief	Rare
		May	3.3-4.9	>6.0	---	---	None	Brief	Rare
148:									
Jana	D	Jan-Dec	---	---	---	---	None	---	None
Richsum	B	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	---	Jan-Dec	---	---	---	---	None	---	None
149:									
Kovich	D	April	1.0-2.0	>6.0	---	---	None	Brief	Rare
		May	1.0-2.0	>6.0	---	---	None	Brief	Occasional
Toddspan	D	March	---	---	---	---	None	Brief	Rare
		April	0.8-1.6	>6.0	---	---	None	Brief	Occasional
		May	0.8-1.6	>6.0	---	---	None	Brief	Occasional
		June	0.8-1.6	>6.0	---	---	None	Brief	Rare
150:									
Lucky Star	B	Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water features--continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft.	Ft.	Ft.				
151:									
Lucky Star	B	Jan-Dec	---	---	---	---	None	---	None
152:									
Lucky Star	B	Jan-Dec	---	---	---	---	None	---	None
Dromedary	B	Jan-Dec	---	---	---	---	None	---	None
153:									
Lucky Star	B	Jan-Dec	---	---	---	---	None	---	None
Fewkes	B	Jan-Dec	---	---	---	---	None	---	None
154:									
Manila	C	Jan-Dec	---	---	---	---	None	---	None
Ant Flat	C	Jan-Dec	---	---	---	---	None	---	None
155:									
Manila	C	Jan-Dec	---	---	---	---	None	---	None
Ant Flat	C	Jan-Dec	---	---	---	---	None	---	None
156:									
Manila	C	Jan-Dec	---	---	---	---	None	---	None
Harter	C	Jan-Dec	---	---	---	---	None	---	None
157:									
Manila	C	Jan-Dec	---	---	---	---	None	---	None
Henefer	C	Jan-Dec	---	---	---	---	None	---	None
158:									
Melling	D	Jan-Dec	---	---	---	---	None	---	None
Ayoub	C	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	---	Jan-Dec	---	---	---	---	None	---	None
159:									
Parkcity	B	Jan-Dec	---	---	---	---	None	---	None
Dromedary	B	Jan-Dec	---	---	---	---	None	---	None
160:									
Parkcity	B	Jan-Dec	---	---	---	---	None	---	None
Dromedary	B	Jan-Dec	---	---	---	---	None	---	None
161:									
Pits, Gravel	---	Jan-Dec	---	---	---	---	None	---	None
162:									
Richsum	B	Jan-Dec	---	---	---	---	None	---	None
Heiners	D	Jan-Dec	---	---	---	---	None	---	None
163:									
Richsum	B	Jan-Dec	---	---	---	---	None	---	None
Heiners	D	Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water features--continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft.	Ft.	Ft.				
164:									
Rock outcrop	---	Jan-Dec	---	---	---	---	None	---	None
165:									
Rock outcrop	---	Jan-Dec	---	---	---	---	None	---	None
Starley Family	D	Jan-Dec	---	---	---	---	None	---	None
166:									
Sessions	C	Jan-Dec	---	---	---	---	None	---	None
Haydenfork	D	April	0.0-1.6	>6.0	0.7-1.3	Brief	Occasional	---	None
		May	0.0-1.6	>6.0	0.7-1.3	Brief	Occasional	---	None
		June	0.0-1.6	>6.0	0.7-1.3	Brief	Occasional	---	None
167:									
Sessions	C	Jan-Dec	---	---	---	---	None	---	None
Skutum	C	Jan-Dec	---	---	---	---	None	---	None
168:									
Sessions	C	Jan-Dec	---	---	---	---	None	---	None
Uinta	B	Jan-Dec	---	---	---	---	None	---	None
169:									
Skutum	C	Jan-Dec	---	---	---	---	None	---	None
170:									
Skutum	C	Jan-Dec	---	---	---	---	None	---	None
171:									
Skutum	C	Jan-Dec	---	---	---	---	None	---	None
172:									
Skutum	C	Jan-Dec	---	---	---	---	None	---	None
Uinta	B	Jan-Dec	---	---	---	---	None	---	None
173:									
Skutum	C	Jan-Dec	---	---	---	---	None	---	None
Uinta	B	Jan-Dec	---	---	---	---	None	---	None
174:									
Snyderville	B	Jan-Dec	---	---	---	---	None	---	None
175:									
Snyderville	B	Jan-Dec	---	---	---	---	None	---	None
176:									
Snyderville	B	Jan-Dec	---	---	---	---	None	---	None
177:									
Uinta	B	Jan-Dec	---	---	---	---	None	---	None
Duchesne	B	Jan-Dec	---	---	---	---	None	---	None
178:									
Wanship	C	March	---	---	---	---	None	Brief	Very rare
		April	1.6-2.5	>6.0	---	---	None	Brief	Rare
		May	1.6-2.5	>6.0	---	---	None	Brief	Rare

Table 18.--Water features--continued

Map symbol and soil name	Hydrologic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft.	Ft.	Ft.				
179:									
Wanship	C	March	---	---	---	---	None	Brief	Very rare
		April	3.0-5.0	>6.0	---	---	None	Brief	Rare
		May	1.6-2.5	>6.0	---	---	None	Brief	Rare
Kovich	D	April	1.0-2.0	>6.0	---	---	None	Brief	Rare
		May	1.0-2.0	>6.0	---	---	None	Brief	Occasional
180:									
Yeates Hollow	C	Jan-Dec	---	---	---	---	None	---	None
Henefer	C	Jan-Dec	---	---	---	---	None	---	None
181:									
Yeates Hollow	C	Jan-Dec	---	---	---	---	None	---	None
Henefer	C	Jan-Dec	---	---	---	---	None	---	None
182:									
Yeates Hollow	C	Jan-Dec	---	---	---	---	None	---	None
Henefer	C	Jan-Dec	---	---	---	---	None	---	None
183:									
Water	---	Jan-Dec	---	---	---	---	None	---	None
184:									
Dams	---	Jan-Dec	---	---	---	---	None	---	None

Table 19.--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.			
101:									
Agassiz	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
102:									
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Dastrup	---	---	---	---	0	---	Moderate	High	Moderate
Manila	---	---	---	---	0	---	Moderate	High	Low
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	Moderate	Low
103:									
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Dastrup	---	---	---	---	0	---	Moderate	High	Moderate
Manila	---	---	---	---	0	---	Moderate	High	Low
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	Moderate	Low
104:									
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	High	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
105:									
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	High	Low
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Harter	---	---	---	---	0	---	Moderate	Moderate	Low
106:									
Ayoub	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Dunford	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Melling	Bedrock (lithic)	12-20	---	Indurated	0	---	Moderate	Moderate	Low

Table 19.--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.			
107:									
Ayoub	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Dunford	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Melling	Bedrock (lithic)	12-20	---	Indurated	0	---	Moderate	Moderate	Low
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Echocreek	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
108:									
Ayoub	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Dunford	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Melling	Bedrock (lithic)	12-20	---	Indurated	0	---	Moderate	Moderate	Low
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Echocreek	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
109:									
Cluff	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	Moderate	Moderate
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
110:									
Cluff	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	Moderate	Moderate
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
111:									
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Duchesne	---	---	---	---	0	---	Moderate	High	Moderate
Sessions	---	---	---	---	0	---	Moderate	High	Low
112:									
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Starley Family	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Moderate
Rock outcrop	---	---	---	---	---	---	---	---	---

Table 19.--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.			
113:									
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Starley Family	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Moderate
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Rock outcrop	---	---	---	---	---	---	---	---	---
114:									
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Starley Family	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Moderate
Rock outcrop	---	---	---	---	---	---	---	---	---
Dromedary	---	---	---	---	0	---	Moderate	Moderate	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
115:									
Dastrup	---	---	---	---	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
Cutoff	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	High	Moderate
116:									
Dastrup	---	---	---	---	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Cutoff	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	High	Moderate
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
117:									
Dastrup	---	---	---	---	0	---	Moderate	High	Moderate
Cutoff	Bedrock (lithic)	22-40	---	Indurated	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
118:									
Dromedary	---	---	---	---	0	---	Moderate	Moderate	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
Parkcity	---	---	---	---	0	---	Moderate	Moderate	Low
Starley Family	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Moderate
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low

Table 19.--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.			
119:									
Duchesne	---	---	---	---	0	---	Moderate	High	Moderate
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Sessions	---	---	---	---	0	---	Moderate	High	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
120:									
Duchesne	---	---	---	---	0	---	Moderate	High	Moderate
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Sessions	---	---	---	---	0	---	Moderate	High	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
121:									
Duchesne	---	---	---	---	0	---	Moderate	High	Moderate
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Sessions	---	---	---	---	0	---	Moderate	High	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
122:									
Duchesne	---	---	---	---	0	---	Moderate	High	Moderate
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Sessions	---	---	---	---	0	---	Moderate	High	Low
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
123:									
Dumps, Mines	---	---	---	---	---	---	---	---	---
124:									
Dunford	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Ayoub	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Melling	Bedrock (lithic)	12-20	---	Indurated	0	---	Moderate	Moderate	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Echocreek	---	---	---	---	0	---	Moderate	High	Moderate

Table 19.--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.			
124:									
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
125:									
Dunford	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Ayoub	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Melling	Bedrock (lithic)	12-20	---	Indurated	0	---	Moderate	Moderate	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Echocreek	---	---	---	---	0	---	Moderate	High	Moderate
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
126:									
Echocreek	---	---	---	---	0	---	Moderate	High	Moderate
Kovich	---	---	---	---	0	---	High	Moderate	Low
Snyderville	---	---	---	---	0	---	Moderate	High	Moderate
Toddspan	---	---	---	---	0	---	High	High	Moderate
Wanship	---	---	---	---	0	---	Moderate	High	Moderate
Dastrup	---	---	---	---	0	---	Moderate	High	Moderate
127:									
Echocreek	---	---	---	---	0	---	Moderate	High	Moderate
Kovich	---	---	---	---	0	---	High	Moderate	Low
Toddspan	---	---	---	---	0	---	High	High	Moderate
Wanship	---	---	---	---	0	---	Moderate	High	Moderate
128:									
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
129:									
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
130:									
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate

Table 19.--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.			
130:									
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
131:									
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Rock outcrop	---	---	---	---	---	---	---	---	---
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
132:									
Fewkes	---	---	---	---	0	---	Moderate	Moderate	Low
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
133:									
Fewkes	---	---	---	---	0	---	Moderate	Moderate	Low
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
134:									
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate

Table 19.--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.			
135:									
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
136:									
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Agassiz	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
137:									
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
138:									
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Fewkes	---	---	---	---	0	---	Moderate	Moderate	Low
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
139:									
Harter	---	---	---	---	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	Moderate	Low
Snyderville	---	---	---	---	0	---	Moderate	High	Moderate

Table 19.--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.			
140:									
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
141:									
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
142:									
Henefer	---	---	---	---	0	---	Moderate	High	Low
Harter	---	---	---	---	0	---	Moderate	Moderate	Low
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
143:									
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Agassiz	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Low
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Harter	---	---	---	---	0	---	Moderate	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
144:									
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Cutoff	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Harter	---	---	---	---	0	---	Moderate	Moderate	Low
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
145:									
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low

Table 19.--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.			
145:									
Cutoff	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Harter	---	---	---	---	0	---	Moderate	Moderate	Low
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
146:									
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Cutoff	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
147:									
Hovarka	---	---	---	---	0	---	High	Moderate	Low
Millcreek	---	---	---	---	0	---	High	Moderate	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Duchesne	---	---	---	---	0	---	Moderate	High	Moderate
148:									
Jana	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
Rock outcrop	---	---	---	---	---	---	---	---	---
Cutoff	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
149:									
Kovich	---	---	---	---	0	---	High	Moderate	Low
Toddspan	---	---	---	---	0	---	High	High	Moderate
Wanship	---	---	---	---	0	---	Moderate	High	Moderate
Poorly Drained, Calcareous Soils	---	---	---	---	---	---	---	---	---
150:									
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Dromedary	---	---	---	---	0	---	Moderate	Moderate	Low
Parkcity	---	---	---	---	0	---	Moderate	Moderate	Low

Table 19.--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.			
151:									
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Dromedary	---	---	---	---	0	---	Moderate	Moderate	Low
Parkcity	---	---	---	---	0	---	Moderate	Moderate	Low
152:									
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Dromedary	---	---	---	---	0	---	Moderate	Moderate	Low
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Parkcity	---	---	---	---	0	---	Moderate	Moderate	Low
153:									
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
154:									
Manila	---	---	---	---	0	---	Moderate	High	Low
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	Moderate	Low
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
155:									
Manila	---	---	---	---	0	---	Moderate	High	Low
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	Moderate	Low
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
156:									
Manila	---	---	---	---	0	---	Moderate	High	Low
Harter	---	---	---	---	0	---	Moderate	Moderate	Moderate
Kovich	---	---	---	---	0	---	High	Moderate	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	Moderate	Low
157:									
Manila	---	---	---	---	0	---	Moderate	High	Low
Henefer	---	---	---	---	0	---	Moderate	Moderate	Low

Table 19.--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.			
157:									
Horrocks	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
158:									
Melling	Bedrock (lithic)	12-20	---	Indurated	0	---	Moderate	Moderate	Low
Ayoub	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
Dunford	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	Moderate	Low
Echocreek	---	---	---	---	0	---	Moderate	High	Moderate
159:									
Parkcity	---	---	---	---	0	---	Moderate	Moderate	Low
Dromedary	---	---	---	---	0	---	Moderate	Moderate	Low
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
160:									
Parkcity	---	---	---	---	0	---	Moderate	Moderate	Low
Dromedary	---	---	---	---	0	---	Moderate	Moderate	Low
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Rock outcrop	---	---	---	---	---	---	---	---	---
161:									
Pits, Gravel	---	---	---	---	---	---	---	---	---
162:									
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Cutoff	Bedrock (lithic)	20-40	---	Indurated	0	---	Moderate	High	Moderate
Jana	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
163:									
Richsum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Cutoff	Bedrock (lithic)	22-40	---	Indurated	0	---	Moderate	High	Moderate
Jana	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate

Table 19.--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.			
164:									
Rock outcrop	---	---	---	---	---	---	---	---	---
Agassiz	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Low
Starley Family	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Moderate
Hades	---	---	---	---	0	---	Moderate	Moderate	Low
Parkcity	---	---	---	---	0	---	Moderate	Moderate	Low
165:									
Rock outcrop	---	---	---	---	---	---	---	---	---
Starley Family	Bedrock (lithic)	10-20	---	Indurated	0	---	Moderate	High	Moderate
Dromedary	---	---	---	---	0	---	Moderate	Moderate	Low
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Lucky Star	---	---	---	---	0	---	Moderate	Moderate	Low
166:									
Sessions	---	---	---	---	0	---	Moderate	High	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
167:									
Sessions	---	---	---	---	0	---	Moderate	High	Low
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Parkcity	---	---	---	---	0	---	Moderate	Moderate	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
168:									
Sessions	---	---	---	---	0	---	Moderate	High	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
169:									
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low

Table 19.--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.			
169:									
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Sessions	---	---	---	---	0	---	Moderate	High	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
170:									
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Sessions	---	---	---	---	0	---	Moderate	High	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
171:									
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Sessions	---	---	---	---	0	---	Moderate	High	Low
172:									
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Sessions	---	---	---	---	0	---	Moderate	High	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
173:									
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Sessions	---	---	---	---	0	---	Moderate	High	Low
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
174:									
Snyderville	---	---	---	---	0	---	Moderate	High	Moderate
Harter	---	---	---	---	0	---	Moderate	Moderate	Moderate
Toddspan	---	---	---	---	0	---	High	High	Moderate
Wanship	---	---	---	---	0	---	Moderate	High	Moderate
175:									
Snyderville	---	---	---	---	0	---	Moderate	High	Moderate
Harter	---	---	---	---	0	---	Moderate	Moderate	Low
Toddspan	---	---	---	---	0	---	High	High	Moderate
Wanship	---	---	---	---	0	---	Moderate	High	Moderate

Table 19.--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.			
176:									
Snyderville	---	---	---	---	0	---	Moderate	High	Moderate
Harter	---	---	---	---	0	---	Moderate	Moderate	Moderate
Wanship	---	---	---	---	0	---	Moderate	High	Moderate
Toddspan	---	---	---	---	0	---	High	High	Moderate
177:									
Uinta	---	---	---	---	0	---	Moderate	Moderate	Moderate
Duchesne	---	---	---	---	0	---	Moderate	High	Moderate
Haydenfork	---	---	---	---	0	---	High	Moderate	Moderate
Crandall	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Low
Sessions	---	---	---	---	0	---	Moderate	High	Low
Skutum	Bedrock (paralithic)	40-60	---	Moderately cemented	0	---	Moderate	Moderate	Low
178:									
Wanship	---	---	---	---	0	---	Moderate	High	Moderate
Kovich	---	---	---	---	0	---	High	Moderate	Low
Snyderville	---	---	---	---	0	---	Moderate	High	Moderate
179:									
Wanship	---	---	---	---	0	---	Moderate	High	Moderate
Kovich	---	---	---	---	0	---	High	Moderate	Low
Toddspan	---	---	---	---	0	---	High	High	Moderate
Snyderville	---	---	---	---	0	---	Moderate	High	Moderate
Dastrup	---	---	---	---	0	---	Moderate	High	Moderate
180:									
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	High	Low
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
181:									
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	High	Low
Ant Flat	---	---	---	---	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate

Table 19.--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.			
182:									
Yeates Hollow	Bedrock (lithic)	40-60	---	Indurated	0	---	Moderate	High	Moderate
Henefer	---	---	---	---	0	---	Moderate	High	Low
Fewkes	---	---	---	---	0	---	Moderate	High	Moderate
Heiners	Bedrock (paralithic)	10-20	---	Moderately cemented	0	---	Moderate	High	Moderate
Rock outcrop	---	---	---	---	---	---	---	---	---
183:									
Water	---	---	---	---	---	---	---	---	---
184:									
Dams	---	---	---	---	---	---	---	---	---

Table 20.--Classification of the soils

Soil name	Family or higher taxonomic class
Agassiz	Loamy-skeletal, mixed, superactive, frigid Lithic Haploxerolls
Ant Flat	Fine, smectitic, frigid Calcic Argixerolls
Ayoub	Fine-loamy, mixed, superactive, frigid Typic Argixerolls
Cluff	Clayey-skeletal, smectitic Mollic Haplocryalfs
Crandall	Loamy-skeletal, mixed, superactive Xeric Argicryolls
Cutoff	Loamy-skeletal, mixed, superactive, frigid Typic Calcixerepts
Dastrup	Fine-loamy, mixed, superactive, frigid Typic Calcixerolls
Dromedary	Loamy-skeletal, mixed, superactive Mollic Haplocryalfs
Duchesne	Loamy-skeletal, mixed, superactive Typic Glossocryalfs
Dunford	Fine-loamy, mixed, superactive, frigid Pachic Argixerolls
Echocreek	Fine-loamy, mixed, superactive, frigid Cumulic Haploxerolls
Fewkes	Fine-loamy, mixed, superactive, frigid Calcic Argixerolls
Hades	Fine-loamy, mixed, superactive, frigid Pachic Argixerolls
Harter	Fine, smectitic, frigid Typic Argixerolls
Haydenfork	Fine-loamy, mixed, superactive Typic Cryaquolls
Heiners	Loamy-skeletal, mixed, superactive, frigid, shallow Typic Haploxerepts
Henefer	Fine, smectitic, frigid Pachic Argixerolls
Horrocks	Loamy-skeletal, mixed, superactive, frigid Typic Argixerolls
Hovarka	Fine-loamy over sandy or sandy-skeletal, mixed, superactive Cumulic Cryaquolls
Jana	Loamy-skeletal, mixed, superactive, mesic, shallow Typic Haploxerepts
Kovich	Fine-loamy, mixed, superactive, frigid Cumulic Endoaquolls
Lucky Star	Loamy-skeletal, mixed, superactive Typic Palecryolls
Manila	Fine, smectitic, frigid Typic Argixerolls
Melling	Loamy-skeletal, mixed, superactive, frigid Lithic Argixerolls
Millcreek	Fine-loamy over sandy or sandy-skeletal, mixed, superactive Cumulic Haplocryolls
Parkcity	Loamy-skeletal, mixed, superactive Pachic Haplocryolls
Richsum	Fine-loamy, mixed, superactive, frigid Typic Calcixerepts
Sessions	Fine, smectitic Xeric Argicryolls
Skutum	Fine, smectitic Pachic Argicryolls
Snyderville	Loamy-skeletal, mixed, superactive, frigid Pachic Argixerolls
Starley Family	Loamy-skeletal, mixed, superactive Lithic Haplocryolls
Toddspan	Loamy-skeletal, mixed, superactive, frigid Fluvaquentic Endoaquolls
Uinta	Fine-loamy, mixed, superactive Eutric Glossocryalfs
Wanship	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, frigid Aquic Cumulic Haploxerolls
Yeates Hollow	Clayey-skeletal, smectitic, frigid Typic Argixerolls

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