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Natural Resources Conservation Service

In cooperation with United States Department of the Interior, Bureau of Land Management, and University of Nevada Aricultural Experiment Station

Soil Survey of Northwest Elko County Area, Nevada,

Parts of Elko and Eureka Counties

Part I

How To Use This Soil Survey

This survey is divided into three parts. Part I includes general information about the survey area; descriptions of the detailed soil map units and soil series in the area; and a description of how the soils formed. Part II describes the use and management of the soils and the major soil properties. Part III includes the maps.

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

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

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

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

A **State Soil Geographic Database (STATSGO)** is available for this survey area. This database 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 database can be used for multicounty planning, and map output can be tailored for a specific use. More information about the State Soil Geographic Database for this survey area, or any portion of Nevada, is available at the local office of the Natural Resources Conservation Service.

Some standards or values may change as more information is collected and analyzed. Thus, as older published interpretive information becomes outdated, new interpretive data must be generated and tailored to local conditions. This information is added to the State Subset of the **Map Unit Interpretation Record (MUIR)** database as needed. Map Unit Interpretation Records are the soil survey specific data and interpretations in the state soil survey database.

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 has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1985. Soil names and descriptions were approved in 1986. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1985. This survey was made cooperatively by the Natural Resources Conservation Service, the United States Department of Interior, Bureau of Land Management, and the University of Nevada Agricultural Experiment Station. It is part of the technical assistance furnished to the Owyhee Conservation District.

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

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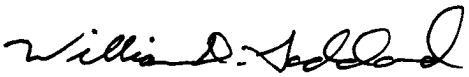
Foreword

This soil survey contains information that can be used in land-planning programs in Northwest Elko County Area, Nevada, Parts of Elko and Eureka Counties. It contains predictions of soil behavior for selected land uses. The survey also highlights limitations and hazards inherent in the soil, 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.

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. 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 Nevada Cooperative Extension.



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Soil Survey of Northwest Elko County Area, Nevada, Parts of Elko and Eureka Counties

By Terry S. Bowerman, Natural Resources Conservation Service

Fieldwork by Terry S. Bowerman, Paul W. Blackburn, Alan R. Wasner, Roderick W. Douglass, Jr., and H. David Pickel, Natural Resources Conservation Service; Mike Jackson, Steve Mellington and Mike Zielinski, Bureau of Land Management; Goodson and Associates, Inc. under Bureau of Land Management contract in the Owyhee Desert

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
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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 or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or model, of how the soils were formed. Thus, during mapping, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Individual soils on the landscape commonly merge into one another as their characteristics gradually change. To construct an accurate 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 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.

General Nature of the Survey Area

This section gives general information about the survey area. It briefly discusses history; industries, transportation, and recreation; physiography, drainage, and geology; and climate.

History

The survey area was long inhabited by the tribes of the Shoshone Indians. Fur trappers first entered the area in 1826 via the South Fork of the Owyhee River. For the next twenty years, the area saw little intrusion by others. However, in the 1850's the Overland Trail, which follows the Humboldt River, became the major route to California. Emigrants and gold seekers began filtering into the area, settling in the valleys and searching for gold in the mountains.

Sheep ranching was the first livestock industry to get its start when the first flocks were herded to California. The Owyhee Desert became a popular winter range, and, by 1860, permanent flocks were a common sight in the area.

The cattle industry was of major importance by the 1880's. Herds were being driven north from Texas and Mexico. When it was discovered that these cattle could survive the winters, stockmen began settling into the area. The Owyhee Desert served as a favorite winter range for the cattle.

In 1867, gold was discovered in the Tuscarora Mountains and the mining camp of Tuscarora was established. Tuscarora became the biggest producing mine in northeast Nevada, and by 1884, it outnumbered Elko in population, importance and influence. The community flourished through the turn of the century until the mines began to close, and by the 1930's, Tuscarora had dwindled to a mere handful of people.

In 1907, gold was discovered in the mountains near Rock Creek and the mining camp of Midas was established. Although this community did not grow as large as Tuscarora, it was a thriving little boomtown during its peak from 1916 through 1921. The mine was eventually closed in 1942, and today, few people remain in Midas.

Industry, Transportation, and Recreation

The main industries in the survey area are ranching and mining.

The ranches are dominantly cow-calf operations, usually weaning and selling the calves in the fall of the year. A few operations carry over yearling steers to be sold at a later date. There are a limited number of ranches that are cow-calf-sheep operations.

The crops grown are dominantly meadow hay with some areas of alfalfa. The major sources of irrigation water in the survey area are the South Fork of the Owyhee River and its tributaries, Willow Creek, Rock Creek and Evans Creek. Irrigation water is stored in Desert Ranch Reservoir, Wilson Reservoir, Bull Run Reservoir, and Willow Creek Reservoir. At the higher elevations, numerous small springs and seeps and several small perennial streams provide adequate watering facilities for livestock and wildlife. In the valleys, most of the streams are intermittent. The ground water supply in the valleys is quite variable in quality. The amount that is available for irrigation in each valley has not been determined.

There has been mining of gold, silver, and barite in the past, but, at present, there is little mining activity in the survey area.

The area is so sparsely settled that there is little need for improved roads. In the summer and fall, most of the survey area is accessible by dirt roads or jeep trails.

There is one main highway in the survey area. This is State Route 226 which runs from Taylor Canyon north through Independence Valley.

The survey area provides recreational opportunities for hunting, fishing, backpacking, and other back country activities. Wilson Reservoir, Willow Reservoir, and Bull Run Reservoir are noted fisheries. Perennial streams also provide opportunities for fishing. Game birds, deer, and pronghorn antelope are common in the area. The remoteness and rugged terrain typical of the

area are desired by many backpacking enthusiasts and campers.

Physiography, Drainage, and Geology

The Northwest Elko County Area, Nevada, Parts of Elko and Eureka Counties, is in the north-central part of Nevada. It has a total area of 1,899,379 acres or 2,968 square miles. The small unincorporated town of Tuscarora is located in the southeastern part of the survey area, and the town of Midas is located in the southwestern part of the survey area.

Important physiographic features in the survey area include the Tuscarora, Bull Run, and Independence Mountains; Squaw and Independence Valleys; and the Owyhee Desert. Elevation ranges from about 4,600 feet in the Evans Creek drainage to about 8,500 feet in the Bull Run mountains.

The northern two-thirds of the survey area, including Independence Valley, is drained by the South Fork of the Owyhee River and its tributaries. The South Fork of the Owyhee River joins the main fork in the north, outside the survey area.

The south part of the survey area is drained by Rock Creek, Maggie Creek, and their tributaries. These two creeks join the Humboldt River south of the survey area.

The southwestern corner of the survey area is drained by intermittent Evans Creek, its tributaries, and by many intermittent creeks which end in valleys to the southwest.

The valleys in the survey area consist of Quaternary alluvial deposits *(4)*. These deposits makeup the floodplains and the fan piedmonts. Typical soils formed in these deposits include Donna, Fulstone, Hunnton, Orovada, Shabliss, and Stampede.

The fan piedmonts of the Owyhee Desert and the fan piedmonts around Willow Creek Reservoir and north of Squaw Valley consist of Tertiary basalt, gravel and tuffaceous sediments, ash-flow tuffs, and tuffaceous sedimentary rocks all overlain by a thin mantle of Quaternary alluvial deposits. Typical soils derived from this material include Bartome, Chiara, Donna, Fulstone, Hunnton, Orovada, Shabliss, and Stampede.

The hills and plateaus in the survey area consist of Tertiary ash-flow tuffs, tuffaceous sedimentary rocks, welded and non-welded silicic ash-flow tuffs, and rhyolitic flows *(4)*. Typical soils derived from these rocks include Chen, Coltroop, Cotant, Lerrow, Linkup, Ninemile, Petan, Sumine, and Vanwyper.

The mountains in the survey area consist mainly of Tertiary welded and non-welded silicic ash-flow tuffs, andesite, rhyolitic flows with minor amounts of shale, chert, quartzite, and limestone *(4)*. Typical soils derived from these rocks include Bregar, Carstump, Cleavage, Graley, Hapgood, Linkup, Ninemile, and Sumine.

Climate

Prepared by the National Climatic Center, Asheville, North Carolina.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Owyhee and Tuscarora in the period 1951 to 1978. 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.

In winter, the average temperature is 29 degrees F and the average daily minimum temperature is 19 degrees F. The lowest temperature on record, which occurred at Owyhee on January 19, 1922, is -35 degrees. In summer, the average temperature is 64 degrees and the average daily maximum temperature is 82 degrees. The highest recorded temperature, which occurred at Owyhee on August 13, 1933, is 108 degrees.

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

The total annual precipitation is 14 inches at Owyhee and 12 inches at Tuscarora. Forty to fifty percent of the precipitation usually falls in April through September. The growing season for most crops is within this period. Thunderstorms occur on about 20 days each year, mainly in the summer.

The average seasonal snowfall is 40 to 80 inches. The greatest snow depth at any one time during the period of record was 42 inches. On an average of 20 to 30 days, at least 1 inch of snow is on the ground. The number of such days varies greatly from year to year.

The average relative humidity in mid-afternoon is about 40 percent. Humidity is higher at night, and the average at dawn is about 70 percent. The sun shines 80 percent of the time in summer and 70 percent in winter. The prevailing wind is from the southwest. Average windspeed (7 miles per hour) is highest in spring.

Detailed Soil Map Units

The map units on the detailed maps in Part III of this publication 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. More information about each map unit is given under the headings "Use and Management of the Soils" and "Soil Properties."

A map unit delineation on the detailed soil maps represents an area dominated by one or more soils or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils or miscellaneous areas. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils and miscellaneous areas 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, are mapped without including areas of other taxonomic classes. Consequently, map units are made up of the soils or miscellaneous areas for which they are named and some "included" areas that belong to other taxonomic classes.

Most included soils have properties and behavioral characteristics 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, inclusions. They may or may not be mentioned in the map unit description. Other included soils and miscellaneous areas, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, inclusions. 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 included areas of contrasting soils or miscellaneous areas are mentioned in the map unit descriptions. A few included areas 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 included areas 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 segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but, if intensive use of small areas is planned, 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. The principal hazards and limitations to be considered in planning for specific uses are identified in the tables and narrative in Part II.

Kinds of Map Units

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, wetness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Some 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, gravelly loam is a phase of the Gochea series.

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

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. Cotant-Lerrow-Akler association is an example.

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

Acreage and Extent

Table 4 gives the acreage and proportionate extent of each map unit. Other tables (see "Summary of 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.

Headings and Introductory Phases

In the map unit descriptions that follow, a semitabular format is used. In this format, the major headings are centered in the column (for example, *Composition*). They identify the information grouped directly below them. Introducing each item of information under the centered heading is a term or phrase (for example, *Major Components*) that identifies or describes the information. Many of the centered headings and introductory terms are self-explanatory, however, some of them need further explanation and are defined in the Glossary. Explanations of the headings and introductory phrases are provided in the following paragraphs, generally in the order in which they are used in the map unit descriptions.

Composition is given for the components (soils or miscellaneous areas) identified in the name of the map unit as well as for the contrasting inclusions.

Contrasting Inclusions are areas of components that differ sufficiently in use and management from the soils or miscellaneous areas for which the map unit is named. As was explained earlier, inclusions can either be *similar* or *contrasting*. Note that in the *Composition* section a single percentage is provided for a named soil and its similar inclusions because their use and management are similar.

Map Unit Setting is given for the entire map unit. This section gives the position on the landscape. The landscape positions given for the entire map unit generally are broader than those given for each component. Below the map unit setting, the position of each component and inclusion is listed, and the physiographic location of each is identified.

Major Component Description lists the characteristics of the major components. These include elevation, texture of the surface layer, drainage class, parent material, and climatic data.

Dominant Present Vegetation lists the common plants growing on each soil at the present time. The present vegetation may be similar to the potential native plant community, but, in some areas it consists of other plants, either cultivated or wild, that dominate the soils in the map unit.

Ecological Site is the assigned rangeland or grazed forest land ecological site that identifies a unique potential native plant community. The plant species and production typical of each ecological site are listed by map unit in the section "Rangeland Plants and Woodland Understory." Additional information about these sites is provided under the heading "Rangeland and Grazeable Woodland Resource Management" in Part II of this publication. Further information also can be obtained from the local office of the Natural Resources Conservation Service.

Map Unit Descriptions

001--Rubble land

Composition

Major Components

Rubble land fragmental material, 50 to 75 percent slopes--100 percent

Map Unit Setting

Landscape position: Mountains

Rubble land--Landform: Mountains; geomorphic position: backslope

Major Component Description

Rubble land Miscellaneous Area

Elevation: 5,200 to 8,000 feet

Surface layer texture: Fragmental material

Drainage class: Excessively drained

Dominant Present Vegetation

Rubble land: None

Ecological Site

Rubble land: None

120--Cotant, moderately steep-Lerrow-Cotant association

Composition

Major Components

Cotant gravelly clay loam, 15 to 30 percent slopes--40 percent

Lerrow gravelly loam, 4 to 15 percent slopes--30 percent

Cotant gravelly clay loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Bregar very gravelly sandy loam, 15 to 30 percent slopes--5 percent

Inclusion 2: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--5 percent

Map Unit Setting

Landscape position: Hills

Cotant--Landform: Hills; geomorphic position: backslope

Lerrow--Landform: Hills; geomorphic position: backslope; aspect: north

Cotant--Landform: Hills; geomorphic position: summit

Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south

Inclusion 2--Landform: Drainageways

Major Component Description

Cotant Series

Elevation: 5,000 to 6,500 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Lerrow Series
Elevation: 5,000 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Cotant Series
Elevation: 5,000 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Lerrow: Idaho fescue, basin big sagebrush, bluebunch wheatgrass
Cotant: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Low sagebrush
Inclusion 2: Basin big sagebrush, basin wildrye

Ecological Site
Cotant: 025XY017NV
Lerrow: 025XY027NV
Cotant: 025XY017NV
Inclusion 1: 025XY051NV
Inclusion 2: 025XY003NV

126--Cotant-Lerrow-Akler association

Composition
Major Components
Cotant very gravelly loam, 15 to 30 percent slopes--40 percent
Lerrow cobbly loam, 15 to 50 percent slopes--25 percent
Akler loam, 4 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Crooked Creek silty clay loam, 0 to 2 percent slopes, occasionally flooded--5 percent
Inclusion 2: Cleavage extremely gravelly loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Lerrow gravelly loam, 4 to 15 percent slopes--3 percent

Map Unit Setting
Landscape position: Hills
Cotant--Landform: Hills; geomorphic position: backslope
Lerrow--Landform: Hills; geomorphic position: backslope; aspect: south
Akler--Landform: Hills; geomorphic position: toeslope
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Hills; geomorphic position: summit
Inclusion 4--Landform: Hills; geomorphic position: backslope; aspect: north

Major Component Description
Cotant Series
Elevation: 6,200 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Lerrow Series
Elevation: 6,200 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Akler Series
Elevation: 6,200 to 6,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Lerrow: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Akler: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Nevada bluegrass
Inclusion 2: Idaho fescue, low sagebrush
Inclusion 3: None
Inclusion 4: Idaho fescue, big sagebrush

Ecological Site
Cotant: 025XY017NV
Lerrow: 025XY009NV
Akler: 025XY018NV

Inclusion 1: 025XY006NV
Inclusion 2: 025XY024NV
Inclusion 3: None
Inclusion 4: 025XY027NV

127--Cotant-Ninemile-Lerrow association

Composition

Major Components

Cotant very gravelly silty clay loam, 4 to 15 percent slopes--35 percent
Ninemile very cobbly loam, 15 to 30 percent slopes--35 percent
Lerrow gravelly loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Loncan very gravelly loam, 15 to 30 percent slopes--7 percent
Inclusion 2: Rugar loam, 8 to 15 percent slopes--6 percent
Inclusion 3: Crooked Creek gravelly silty clay loam, 2 to 4 percent slopes--1 percent
Inclusion 4: Quarz very gravelly loam, 15 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills
Cotant--Landform: Hills; geomorphic position: toeslope
Ninemile--Landform: Hills; geomorphic position: summit
Lerrow--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: toeslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: toeslope; shape of slope: concave
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Hills; geomorphic position: backslope; aspect: south

Major Component Description

Cotant Series

Elevation: 5,200 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly silty clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Ninemile Series

Elevation: 5,200 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Lerrow Series

Elevation: 5,200 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Dominant Present Vegetation

Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Lerrow: Idaho fescue, basin big sagebrush, bluebunch wheatgrass
Inclusion 1: Antelope bitterbrush, big sagebrush, bluebunch wheatgrass
Inclusion 2: Idaho fescue, bulbous oniongrass, wyethia
Inclusion 3: Nevada bluegrass
Inclusion 4: Big sagebrush, bluebunch wheatgrass

Ecological Site

Cotant: 025XY017NV
Ninemile: 025XY017NV
Lerrow: 025XY027NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY047NV
Inclusion 3: 025XY006NV
Inclusion 4: 025XY009NV

128--Cotant-Graley association

Composition

Major Components

Cotant very gravelly loam, 8 to 15 percent slopes--45 percent
Graley very gravelly loam, 8 to 15 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Typic Argixerolls, fine-loamy, mixed, frigid very gravelly loam--10 percent
Inclusion 2: Lerrow cobbly loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Crooked Creek silty clay loam, 2 to 4 percent slopes, frequently flooded--2 percent

Map Unit Setting

Landscape position: Hills
Cotant--Landform: Hills; geomorphic position: summit
Graley--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Drainageways

Major Component Description

Cotant Series
Elevation: 6,200 to 6,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Graley Series
Elevation: 6,200 to 6,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Graley: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Big sagebrush, bluebunch wheatgrass
Inclusion 2: Antelope bitterbrush, big sagebrush, bluebunch wheatgrass
Inclusion 3: Sedge, tufted hairgrass

Ecological Site

Cotant: 025XY017NV
Graley: 025XY012NV
Inclusion 1: 025XY027NV
Inclusion 2: 025XY009NV
Inclusion 3: 025XY005NV

129--Cotant-Chen-Crooked Creek association

Composition

Major Components
Cotant very gravelly clay loam, 4 to 15 percent slopes --35 percent
Chen very gravelly loam, 4 to 15 percent slopes--30 percent
Crooked Creek silty clay loam, 0 to 4 percent slopes, occasionally flooded--20 percent

Contrasting Inclusions
Inclusion 1: Aridic Palexerolls, very fine, montmorillonitic, frigid silty clay loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Quarz very gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 3: Loncan very gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Crooked Creek silty clay loam, 0 to 2 percent slopes, frequently flooded--2 percent

Map Unit Setting

Landscape position: Hills
Cotant--Landform: Hills; geomorphic position: toeslope
Chen--Landform: Hills; geomorphic position: summit
Crooked Creek--Landform: Stream terraces
Inclusion 1--Landform: Hills; geomorphic position: toeslope
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 4--Landform: Flood plains

Major Component Description

Cotant Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Chen Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Crooked Creek Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Crooked Creek: Nevada bluegrass, alpine timothy
Inclusion 1: Low sagebrush
Inclusion 2: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Sedge, tufted hairgrass

Ecological Site

Cotant: 025XY017NV
Chen: 025XY017NV
Crooked Creek: 025XY006NV
Inclusion 1: 025XY017NV

Inclusion 2: 025XY009NV
Inclusion 3: 025XY012NV
Inclusion 4: 025XY005NV

130--Cotant-Booford association

Composition

Major Components

Cotant gravelly clay loam, 2 to 8 percent slopes--65 percent
Booford silt loam, 2 to 8 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Puett sandy loam, 8 to 15 percent slopes--3 percent
Inclusion 2: Welch loam, drained, 2 to 4 percent slopes, rarely flooded--2 percent

Map Unit Setting

Landscape position: Hills
Cotant--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Booford--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: south
Inclusion 2--Landform: Drainageways

Major Component Description

Cotant Series

Elevation: 5,700 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Booford Series

Elevation: 5,700 to 6,000 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Booford: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Wyoming big sagebrush, rabbitbrush
Inclusion 2: Basin big sagebrush, basin wildrye, rabbitbrush

Ecological Site

Cotant: 025XY017NV
Booford: 025XY012NV
Inclusion 1: 025XY025NV
Inclusion 2: 025XY003NV

140--Upville, frequently flooded-Upville association

Composition

Major Components

Upville gravelly loam, 0 to 2 percent slopes, frequently flooded--55 percent
Upville gravelly loam, 0 to 2 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Aridic Haploxerolls, sandy-skeletal, mixed, frigid gravelly sandy loam--5 percent
Inclusion 2: Cumulic Haplaquolls, sandy-skeletal, mixed, frigid sandy loam--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Upville--Landform: Alluvial fans; geomorphic position: summit; shape of slope: concave
Upville--Landform: Alluvial fans; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Drainageways

Major Component Description

Upville Series

Elevation: 5,700 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Upville Series

Elevation: 5,700 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Upville: Nevada bluegrass, cheatgrass
Upville: Big sagebrush, bluebunch wheatgrass, bluegrass, cheatgrass
Inclusion 1: Basin big sagebrush, cheatgrass
Inclusion 2: Nevada bluegrass, sedge, tufted hairgrass, willow

Ecological Site

Upville: 025XY006NV
Upville: 025XY014NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY005NV

141--Upville-Kleckner association

Composition

Major Components

Upville gravelly loam, 2 to 4 percent slopes--45 percent
Kleckner gravelly loam, 2 to 8 percent slopes--45 percent

Contrasting Inclusions

Inclusion 1: Clurde very fine sandy loam, 2 to 8 percent slopes--10 percent

Map Unit Setting

Landscape position: Intermontane basins
Upville--Landform: Fan skirts; geomorphic position: footslope
Kleckner--Landform: Fan remnants; geomorphic position: summit; position on slope: upper; shape of slope: plane
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; position on slope: upper; shape of slope: concave

Major Component Description

Upville Series

Elevation: 5,000 to 5,500 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Kleckner Series

Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Upville: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Kleckner: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush

Ecological Site

Upville: 025XY014NV
Kleckner: 025XY014NV
Inclusion 1: 025XY019NV

150--Gochea gravelly loam, 2 to 4 percent slopes

Composition

Major Components

Gochea gravelly loam, 2 to 4 percent slopes--85 percent

Contrasting Inclusions

Inclusion 1: Aridic Duric Haploxerolls, loamy-skeletal, mixed, frigid gravelly loam--10 percent
Inclusion 2: Upville gravelly loam, wet, 0 to 2 percent slopes--3 percent
Inclusion 3: Durargidic Argixerolls, fine, montmorillonitic, frigid gravelly loam--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Gochea--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: footslope

Major Component Description

Gochea Series

Elevation: 5,600 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Gochea: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush
Inclusion 2: Nevada bluegrass
Inclusion 3: Bluegrass, bottlebrush squirreltail, low sagebrush

Ecological Site

Gochea: 025XY014NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY006NV
Inclusion 3: 025XY017NV

161--Sonoma silt loam, drained, 0 to 2 percent slopes

Composition

Major Components

Sonoma silt loam, drained, 0 to 2 percent slopes--85 percent

Contrasting Inclusions

Inclusion 1: Sonoma silt loam, slightly saline, 0 to 2 percent slopes, occasionally flooded--10 percent

Inclusion 2: Fluvaquentic Haplaquolls, fine-loamy, mixed (calcareous), frigid silt loam--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Sonoma--Landform: Flood plains
Inclusion 1--Landform: Flood plains
Inclusion 2--Landform: Flood plains; position on slope: upper part

Major Component Description

Sonoma Series
Elevation: 4,900 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Sonoma: Douglas rabbitbrush, basin big sagebrush
Inclusion 1: Basin big sagebrush, rubber rabbitbrush
Inclusion 2: Basin big sagebrush

Ecological Site

Sonoma: 025XY003NV
Inclusion 1: 024XY006NV
Inclusion 2: 025XY003NV

162--Sonoma silt loam, drained, occasionally flooded

Composition

Major Components
Sonoma silt loam, 0 to 2 percent slopes, occasionally flooded--90 percent
Contrasting Inclusions
Inclusion 1: Aquic Torriorthents, fine-silty, mixed (calcareous), mesic silt loam--5 percent
Inclusion 2: Aquic Durorthidic Torriorthents, fine-silty, mixed (calcareous), mesic silt loam--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Sonoma--Landform: Flood plains
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Stream terraces

Major Component Description

Sonoma Series
Elevation: 4,500 to 4,600 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Sonoma: Basin big sagebrush, basin wildrye, black greasewood
Inclusion 1: Basin big sagebrush, basin wildrye
Inclusion 2: Black greasewood

Ecological Site

Sonoma: 024XY006NV
Inclusion 1: 024XY006NV
Inclusion 2: 024XY011NV

184--Crooked Creek silty clay loam, frequently flooded, 0 to 2 percent slopes

Composition

Major Components
Crooked Creek silty clay loam, 0 to 2 percent slopes, frequently flooded--95 percent
Contrasting Inclusions
Inclusion 1: Welch silt loam, 0 to 2 percent slopes, frequently flooded--2 percent
Inclusion 2: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent

Map Unit Setting

Landscape position: Intermontane basins
Crooked Creek--Landform: Flood plains
Inclusion 1--Landform: Flood plains
Inclusion 2--Landform: Stream terraces; position on slope: upper part

Major Component Description

Crooked Creek Series
Elevation: 5,700 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Crooked Creek: Cinquefoil, rush, sedge, tufted hairgrass
Inclusion 1: Rush, sedge
Inclusion 2: Basin big sagebrush, basin wildrye

Ecological Site

Crooked Creek: 025XY005NV
Inclusion 1: 025XY005NV
Inclusion 2: 025XY003NV

185--Crooked Creek, moderately wet-Crooked Creek association

Composition

Major Components

Crooked Creek silty clay loam, moderately wet, 0 to 2 percent slopes, frequently flooded--70 percent
Crooked Creek silty clay loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--10 percent
Inclusion 2: Crooked Creek silty clay loam, 0 to 2 percent slopes, occasionally flooded--4 percent
Inclusion 3: Sonoma silt loam, drained, slightly saline, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
Crooked Creek--Landform: Stream terraces
Crooked Creek--Landform: Flood plains
Inclusion 1--Landform: Stream terraces
Inclusion 2--Landform: Stream terraces
Inclusion 3--Landform: Stream terraces; position on slope: lower part

Major Component Description

Crooked Creek Series

Elevation: 5,600 to 5,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Crooked Creek Series

Elevation: 5,600 to 5,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Crooked Creek: Nevada bluegrass, basin wildrye, mat muhly, willow
Crooked Creek: Bluegrass, rush, sedge, tufted hairgrass
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Nevada bluegrass, alpine timothy
Inclusion 3: Basin wildrye, black greasewood

Ecological Site

Crooked Creek: 025XY001NV
Crooked Creek: 025XY005NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY006NV
Inclusion 3: 024XY007NV

186--Crooked Creek-Crooked Creek, occasionally flooded-Crooked Creek, drained association

Composition

Major Components

Crooked Creek silty clay loam, 0 to 2 percent slopes, frequently flooded--60 percent
Crooked Creek silty clay loam, 0 to 2 percent slopes, occasional flooded--15 percent
Crooked Creek silty clay loam, drained, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Cumulic Haplaquolls, loamy-skeletal, mixed, frigid silt loam--5 percent
Inclusion 2: Cumulic Haplaquolls, loamy-skeletal, mixed, frigid silt loam, drained--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Crooked Creek--Landform: Stream terraces
Crooked Creek--Landform: Stream terraces
Crooked Creek--Landform: Stream terraces
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Drainageways

Major Component Description

Crooked Creek Series

Elevation: 5,700 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Crooked Creek Series

Elevation: 5,700 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Crooked Creek Series

Elevation: 5,700 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Crooked Creek: Cinquefoil, rush, sedge, tufted hairgrass
Crooked Creek: Nevada bluegrass, alpine timothy, basin wildrye, sedge
Crooked Creek: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 1: Rush, sedge, tufted hairgrass
Inclusion 2: Basin big sagebrush, basin wildrye

Ecological Site

Crooked Creek: 025XY005NV
Crooked Creek: 025XY006NV
Crooked Creek: 025XY003NV
Inclusion 1: 025XY005NV
Inclusion 2: 025XY003NV

188--Crooked Creek-Welch-Crooked Creek, drained association

Composition

Major Components

Crooked Creek silty clay loam, 0 to 2 percent slopes, frequently flooded--45 percent
Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--25 percent
Crooked Creek silty clay loam, drained, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Welch silt loam, 0 to 2 percent slopes, frequently flooded--10 percent
Inclusion 2: Crooked Creek silty clay loam, gravelly substratum, 0 to 2 percent slopes, frequently flooded--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Crooked Creek--Landform: Flood plains
Welch--Landform: Stream terraces
Crooked Creek--Landform: Stream terraces
Inclusion 1--Landform: Flood plains
Inclusion 2--Landform: Flood plains

Major Component Description

Crooked Creek Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Welch Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Crooked Creek Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Crooked Creek: Nevada bluegrass, rush, sedge, tufted hairgrass, willow
Welch: Basin big sagebrush, basin wildrye, bluegrass
Crooked Creek: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 1: Rush, sedge, tufted hairgrass
Inclusion 2: Rush, sedge, tufted hairgrass

Ecological Site

Crooked Creek: 025XY005NV
Welch: 025XY003NV
Crooked Creek: 025XY003NV
Inclusion 1: 025XY005NV
Inclusion 2: 025XY005NV

190--Heechee-Heechee, cobbly association

Composition

Major Components

Heechee gravelly loam, 4 to 15 percent slopes--60 percent
Heechee cobbly loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Typic Argixerolls, fine-loamy, mixed, frigid very gravelly loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Durargidic Argixerolls, clayey-skeletal, montmorillonitic, frigid gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Crooked Creek silty clay loam, 2 to 8 percent slopes, frequently flooded--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Heechee--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Heechee--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Fan remnants; geomorphic position: toeslope; position on slope: lower part
Inclusion 2--Landform: Fan remnants; geomorphic position: summit
Inclusion 3--Landform: Inset fans

Major Component Description

Heechee Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Heechee Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Heechee: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Heechee: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, basin big sagebrush
Inclusion 2: Idaho fescue, bluegrass, low sagebrush
Inclusion 3: Rush, sedge, tufted hairgrass, willow

Ecological Site

Heechee: 025XY027NV
Heechee: 025XY007NV
Inclusion 1: 025XY027NV
Inclusion 2: 025XY017NV
Inclusion 3: 025XY005NV

200--Lynnbow-Rugar association

Composition

Major Components
Lynnbow silt loam, 2 to 8 percent slopes--55 percent
Rugar loam, 2 to 8 percent slopes--30 percent
Contrasting Inclusions
Inclusion 1: Bilbo very gravelly very fine sandy loam, 30 to 50 percent slopes--7 percent
Inclusion 2: Cotant gravelly clay loam, 15 to 50 percent slopes--4 percent
Inclusion 3: Crooked Creek silty clay loam, drained, 0 to 2 percent slopes--2 percent
Inclusion 4: Crooked Creek silty clay loam, 0 to 2 percent slopes, frequently flooded--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Lynnbow--Landform: Pediments; geomorphic position: summit; shape of slope: plane
Rugar--Landform: Pediments; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Pediments; geomorphic position: backslope
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Inset fans

Major Component Description

Lynnbow Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Rugar Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Lynnbow: Idaho fescue, low sagebrush
Rugar: Idaho fescue, basin big sagebrush, bluegrass
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Idaho fescue, low sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Rush, sedge, willow

Ecological Site

Lynnbow: 025XY017NV
Rugar: 025XY027NV
Inclusion 1: 025XY015NV
Inclusion 2: 025XY017NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY005NV

201--Lynnbow-Lerrow-Crooked Creek association

Composition

Major Components
Lynnbow silt loam, 4 to 15 percent slopes--40 percent
Lerrow gravelly loam, 4 to 15 percent slopes--30 percent
Crooked Creek silty clay loam, 2 to 4 percent slopes, occasionally flooded--15 percent
Contrasting Inclusions
Inclusion 1: Cotant gravelly clay loam, 2 to 8 percent slopes--7 percent

Inclusion 2: Chen very gravelly sandy clay loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Ninemile very cobbly loam, 2 to 8 percent slopes--3 percent
Inclusion 4: Cotant cobbly loam, 8 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Lynnbow--Landform: Hills; geomorphic position: summit; shape of slope: convex
Lerrow--Landform: Hills; geomorphic position: summit; shape of slope: plane
Crooked Creek--Landform: Stream terraces
Inclusion 1--Landform: Hills; geomorphic position: summit; shape of slope: plane
Inclusion 2--Landform: Hills; geomorphic position: summit; shape of slope: plane
Inclusion 3--Landform: Hills; geomorphic position: summit; shape of slope: plane
Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Lynnbow Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Lerrow Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Crooked Creek Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Lynnbow: Nevada bluegrass, alpine timothy, mat muhly, sedge
Lerrow: Antelope bitterbrush, big sagebrush, bluebunch wheatgrass, cheatgrass
Crooked Creek: Nevada bluegrass, cheatgrass, meadow barley, sedge, squirreltail
Inclusion 1: Low sagebrush
Inclusion 2: Bluegrass, low sagebrush
Inclusion 3: Bluegrass, low sagebrush
Inclusion 4: Bluegrass, low sagebrush

Ecological Site

Lynnbow: 025XY017NV
Lerrow: 025XY027NV
Crooked Creek: 025XY006NV
Inclusion 1: 025XY017NV
Inclusion 2: 025XY017NV
Inclusion 3: 025XY017NV
Inclusion 4: 025XY017NV

210--Soonaker-Bulake association

Composition

Major Components
Soonaker fine sandy loam, 2 to 8 percent slopes--50 percent
Bulake gravelly loam, 2 to 8 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Typic Argixerolls, fine-loamy, mixed, frigid very gravelly loam, 2 to 8 percent slopes--10 percent
Inclusion 2: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--5 percent

Map Unit Setting

Landscape position: Hills
Soonaker--Landform: Hills; geomorphic position: summit
Bulake--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: toeslope
Inclusion 2--Landform: Drainageways

Major Component Description

Soonaker Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Bulake Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Soonaker: Idaho fescue, basin big sagebrush, bluegrass, cheatgrass, rabbitbrush
Bulake: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Basin big sagebrush
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Soonaker: 025XY027NV
Bulake: 025XY017NV
Inclusion 1: 025XY027NV
Inclusion 2: 025XY003NV

220--Cavanaugh-Rugar-McIvey association

Composition

Major Components

Cavanaugh very stony loam, 15 to 50 percent slopes--50 percent
Rugar clay loam, 4 to 15 percent slopes--20 percent
McIvey cobbly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Crooked Creek silty clay loam, 0 to 2 percent slopes, occasionally flooded--10 percent
Inclusion 2: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam--3 percent
Inclusion 3: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Hills
Cavanaugh--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Rugar--Landform: Hills; geomorphic position: footslope; shape of slope: concave
McIvey--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Hills
Inclusion 3--Landform: Hills

Major Component Description

Cavanaugh Series

Elevation: 5,600 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Rugar Series

Elevation: 5,600 to 6,700 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

McIvey Series

Elevation: 5,600 to 6,700 feet
Precipitation: About 15 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from sedimentary rocks

Dominant Present Vegetation

Cavanaugh: Idaho fescue, bluebunch wheatgrass, low sagebrush
Rugar: Basin wildrye, bottlebrush squirreltail, mulesear wyethia, slender wheatgrass
McIvey: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 1: Nevada bluegrass, alpine timothy
Inclusion 2: Idaho fescue, bottlebrush squirreltail, serviceberry
Inclusion 3: None

Ecological Site

Cavanaugh: 025XY017NV
Rugar: 025XY047NV
McIvey: 025XY012NV
Inclusion 1: 025XY006NV
Inclusion 2: 025XY046NV
Inclusion 3: None

221--Cavanaugh-Quarz-Alyan association

Composition

Major Components

Cavanaugh very stony loam, 15 to 50 percent slopes--35 percent
Quarz very gravelly loam, 30 to 50 percent slopes--25 percent
Alyan gravelly clay loam, 15 to 30 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Pachic Argixerolls, fine-loamy, mixed, frigid very gravelly loam, 15 to 50 percent slopes--10 percent
Inclusion 2: Tweener very cobbly sandy loam, 15 to 30 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills
Cavanaugh--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Quarz--Landform: Hills; geomorphic position: backslope; aspect: south
Alyan--Landform: Hills; geomorphic position: backslope; aspect: north

Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: lower; shape of slope: concave; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: summit

Major Component Description

Cavanaugh Series
Elevation: 5,400 to 6,100 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Quarz Series
Elevation: 5,400 to 6,100 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Alyan Series
Elevation: 5,400 to 6,100 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Cavanaugh: Idaho fescue, bluebunch wheatgrass, low sagebrush
Quarz: Basin wildrye, big sagebrush, bluebunch wheatgrass
Alyan: Idaho fescue, bluegrass, mountain big sagebrush
Inclusion 1: Idaho fescue, basin big sagebrush
Inclusion 2: Antelope bitterbrush, bluegrass, cheatgrass, mountain big sagebrush

Ecological Site

Cavanaugh: 025XY017NV
Quarz: 025XY009NV
Alyan: 025XY027NV
Inclusion 1: 0250X027NV
Inclusion 2: 025XY007NV

233--Bioya-Bilbo-Chiara association

Composition

Major Components
Bioya loam, 2 to 8 percent slopes--55 percent
Bilbo gravelly loam, 15 to 30 percent slopes--15 percent
Chiara silt loam, 2 to 8 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Puett fine sandy loam, 8 to 15 percent slopes--5 percent
Inclusion 2: Hunnton silt loam, 2 to 8 percent slopes--5 percent
Inclusion 3: Xerollic Durargids, loamy, mixed, mesic, shallow gravelly loam, 2 to 8 percent slopes--3 percent
Inclusion 4: Orovada loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Bioya--Landform: Fan remnants; geomorphic position: summit
Bilbo--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Chiara--Landform: Fan remnants; geomorphic position: summit; position on slope: upper part
Inclusion 1--Landform: Fan remnants; geomorphic position: shoulder; aspect: south
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; aspect: north
Inclusion 3--Landform: Fan remnants; geomorphic position: summit; aspect: north
Inclusion 4--Landform: Inset fans

Major Component Description

Bioya Series
Elevation: 5,300 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Bilbo Series
Elevation: 5,300 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Chiara Series
Elevation: 5,300 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Bioya: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Bilbo: Big sagebrush, bluebunch wheatgrass, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass, rabbitbrush
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Bioya: 025XY019NV
Bilbo: 025XY015NV
Chiara: 025XY019NV
Inclusion 1: 025XY025NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

234--Bioya-Shabliss-Puett association

Composition

Major Components

Bioya very fine sandy loam, 2 to 8 percent slopes--55 percent
Shabliss very fine sandy loam, 2 to 8 percent slopes--15 percent
Puett stony sandy loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--5 percent
Inclusion 2: Xeric Torriorthents, coarse-loamy, mixed, nonacid, mesic gravelly loam, 0 to 8 percent slopes --4 percent
Inclusion 3: Kelk silt loam, 0 to 2 percent slopes, occasionally flooded--4 percent
Inclusion 4: Shabliss stony loam, 8 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Bioya--Landform: Fan remnants; geomorphic position: backslope
Shabliss--Landform: Fan remnants; geomorphic position: summit
Puett--Landform: Pediments; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Pediments; geomorphic position: backslope
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: shoulder

Major Component Description

Bioya Series

Elevation: 5,100 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Shabliss Series

Elevation: 5,100 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Puett Series

Elevation: 5,100 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Stony sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Bioya: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Puett: Wyoming big sagebrush, bluegrass, rabbitbrush
Inclusion 1: None
Inclusion 2: Thurber needlegrass, big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 4: Thurber needlegrass, big sagebrush

Ecological Site

Bioya: 024XY005NV
Shabliss: 024XY005NV
Puett: 025XY025NV
Inclusion 1: None
Inclusion 2: 024XY005NV
Inclusion 3: 024XY006NV
Inclusion 4: 024XY005NV

235--Bioya-Trunk-Alley association

Composition

Major Components

Bioya loam, 2 to 8 percent slopes--40 percent
Trunk gravelly loam, 30 to 50 percent slopes--30 percent

Alley very stony loam, 15 to 30 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Bioya very stony loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Plateaus
Bioya--Landform: Plateaus; geomorphic position: summit
Trunk--Landform: Plateaus; geomorphic position: backslope
Alley--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder

Major Component Description

Bioya Series
Elevation: 4,800 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Trunk Series
Elevation: 4,800 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Alley Series
Elevation: 4,800 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Bioya: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Trunk: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Alley: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, cheatgrass

Ecological Site

Bioya: 025XY019NV
Trunk: 025XY019NV
Alley: 025XY019NV
Inclusion 1: 025XY019NV

236--Bioya-Wieland-Kleckner association

Composition

Major Components
Bioya very fine sandy loam, 0 to 2 percent slopes--45 percent
Wieland loam, 2 to 8 percent slopes--20 percent
Kleckner gravelly loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Clurde very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Shabliss very fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Durixerollic Camborthids, coarse-silty, mixed, mesic fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Hunnton silt loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
Bioya--Landform: Fan remnants; geomorphic position: summit; position on slope: lower part
Wieland--Landform: Fan remnants; geomorphic position: summit
Kleckner--Landform: Fan remnants; geomorphic position: summit; position on slope: upper part
Inclusion 1--Landform: Fan remnants; geomorphic position: footslope
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; position on slope: lower part
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Bioya Series
Elevation: 5,100 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Wieland Series
Elevation: 5,200 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Kleckner Series
Elevation: 5,300 to 5,400 feet

Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Bioya: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Kleckner: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, cheatgrass
Inclusion 2: Big sagebrush, cheatgrass
Inclusion 3: Basin big sagebrush, basin wildrye, rabbitbrush
Inclusion 4: Big sagebrush, cheatgrass

Ecological Site

Bioya: 025XY019NV
Wieland: 025XY019NV
Kleckner: 025XY014NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY031NV
Inclusion 4: 025XY019NV

241--Wickahoney-Deunah-Petan association

Composition

Major Components

Wickahoney extremely stony loam, 2 to 8 percent slopes--50 percent
Deunah loam, 2 to 4 percent slopes--20 percent
Petan very cobbly loam, 4 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Durixeralfs, clayey-skeletal, montmorillonitic, frigid very cobbly loam, 2 to 8 percent slopes--10 percent

Map Unit Setting

Landscape position: Plateaus
Wickahoney--Landform: Plateaus; geomorphic position: summit
Deunah--Landform: Plateaus
Petan--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: summit

Major Component Description

Wickahoney Series

Elevation: 5,400 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Deunah Series

Elevation: 5,400 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Petan Series

Elevation: 5,400 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Wickahoney: Idaho fescue, bluegrass, low sagebrush
Deunah: Idaho fescue, bluegrass, low sagebrush
Petan: Bluegrass, low sagebrush
Inclusion 1: Idaho fescue, low sagebrush

Ecological Site

Wickahoney: 025XY017NV
Deunah: 025XY017NV
Petan: 025XY022NV
Inclusion 1: 025XY017NV

270--Pernty, steep-Loncan-Pernty association

Composition

Major Components

Pernty very gravelly loam, 30 to 50 percent slopes--45 percent
Loncan very gravelly loam, 30 to 50 percent slopes--35 percent
Pernty very gravelly loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--2 percent
Inclusion 2: Rubble land fragmental material--2 percent
Inclusion 3: Typic Haplaquolls, sandy-skeletal, mixed, frigid very gravelly loam--1 percent

Map Unit Setting

Landscape position: Mountains
Pernty--Landform: Mountains; geomorphic position: backslope
Loncan--Landform: Mountains; geomorphic position: backslope

Pernty--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: backslope
Inclusion 3--Landform: Drainageways

Major Component Description

Pernty Series
Elevation: 6,400 to 7,800 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Loncan Series
Elevation: 6,400 to 7,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Pernty Series
Elevation: 6,400 to 7,800 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Dominant Present Vegetation

Pernty: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Loncan: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Pernty: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: None
Inclusion 2: None
Inclusion 3: Nevada bluegrass, alpine timothy, basin wildrye

Ecological Site

Pernty: 025XY012NV
Loncan: 025XY012NV
Pernty: 025XY012NV
Inclusion 1: None
Inclusion 2: None
Inclusion 3: 025XY006NV

280--Humboldt silty clay loam, occasionally flooded

Composition

Major Components
Humboldt silty clay loam, 0 to 2 percent slopes--90 percent
Contrasting Inclusions
Inclusion 1: Sonoma silty clay loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Fluvaquentic Haploxerolls, coarse-loamy, mixed, mesic silt loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Humboldt silty clay loam, saline--1 percent

Map Unit Setting

Landscape position: Intermontane basins
Humboldt--Landform: Flood plains
Inclusion 1--Landform: Stream terraces; position on slope: upper part
Inclusion 2--Landform: Stream terraces
Inclusion 3--Landform: Stream terraces; shape of slope: convex

Major Component Description

Humboldt Series
Elevation: 4,500 to 4,600 feet
Precipitation: About 7 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Humboldt: Alkali sacaton, black greasewood, inland saltgrass
Inclusion 1: Alkali sacaton, black greasewood, inland saltgrass
Inclusion 2: Basin wildrye, inland saltgrass
Inclusion 3: Basin wildrye, inland saltgrass

Ecological Site

Humboldt: 024XY007NV
Inclusion 1: 024XY007NV
Inclusion 2: 025XY001NV
Inclusion 3: 025XY001NV

308--Akler-Pattani-Cotant association

Composition

Major Components
Akler loam, 4 to 15 percent slopes--45 percent
Pattani clay, 4 to 15 percent slopes--30 percent
Cotant cobbly loam, 4 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Mahala loam, 8 to 15 percent slopes--4 percent

Inclusion 2: Aridic Argixerolls, fine, montmorillonitic, frigid gravelly loam, 8 to 15 percent slopes--4 percent
Inclusion 3: Welch silt loam, 0 to 2 percent slopes, frequently flooded--1 percent
Inclusion 4: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--1 percent

Map Unit Setting

Landscape position: Hills
Akler--Landform: Hills; geomorphic position: summit; position on slope: lower part
Pattani--Landform: Hills; geomorphic position: summit; position on slope: lower part
Cotant--Landform: Hills; geomorphic position: backslope; position on slope: upper part
Inclusion 1--Landform: Hills; geomorphic position: backslope
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Akler Series
Elevation: 5,000 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Pattani Series
Elevation: 5,000 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Clay
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Cotant Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Akler: Bluegrass, bottlebrush squirreltail, low sagebrush
Pattani: Basin wildrye, big sagebrush, rabbitbrush
Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Bluebunch wheatgrass, low sagebrush
Inclusion 2: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 3: Rush, sedge, tufted hairgrass, willow
Inclusion 4: Basin big sagebrush, basin wildrye, bluegrass, cheatgrass

Ecological Site

Akler: 025XY018NV
Pattani: 025XY013NV
Cotant: 025XY017NV
Inclusion 1: 025XY018NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY005NV
Inclusion 4: 025XY003NV

309--Akler-Susie Creek association

Composition

Major Components
Akler loam, 4 to 15 percent slopes--45 percent
Susie Creek loam, 4 to 15 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Clementine silt loam, drained, 0 to 2 percent slopes--7 percent
Inclusion 2: Durargidic Argixerolls, fine-loamy, mixed, frigid loam, 8 to 15 percent slopes--5 percent
Inclusion 3: Bregar very gravelly sandy loam, 4 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Hills
Akler--Landform: Hills; geomorphic position: summit; shape of slope: convex
Susie Creek--Landform: Hills; geomorphic position: summit; shape of slope: concave
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Hills; geomorphic position: summit; shape of slope: convex

Major Component Description

Akler Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Susie Creek Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Loam
Drainage class: Well drained

Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Akler: Bluegrass, bottlebrush squirreltail, low sagebrush
Susie Creek: Basin big sagebrush, bluebunch wheatgrass, bluegrass, rabbitbrush
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Idaho fescue, basin big sagebrush, bluegrass
Inclusion 3: Bluegrass, bottlebrush squirreltail, low sagebrush

Ecological Site

Akler: 025XY018NV
Susie Creek: 025XY014NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY027NV
Inclusion 3: 025XY051NV

457--Donna-Stampede-Short Creek association

Composition

Major Components

Donna gravelly loam, 2 to 8 percent slopes--40 percent
Stampede gravelly loam, 4 to 15 percent slopes--25 percent
Short Creek gravelly clay loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Pie Creek gravelly loam, 2 to 15 percent slopes--5 percent
Inclusion 2: Sumine very gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 3: Welch silt loam, drained, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Donna--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Stampede--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Short Creek--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Pediments; geomorphic position: footslope; shape of slope: convex
Inclusion 2--Landform: Pediments; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Inset fans

Major Component Description

Donna Series

Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Stampede Series

Elevation: 5,500 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Short Creek Series

Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixec rocks

Dominant Present Vegetation

Donna: Bluegrass, bottlebrush squirreltail, low sagebrush
Stampede: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, rabbitbrush
Short Creek: Big sagebrush, bluebunch wheatgrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Bluebunch wheatgrass, bluegrass, low sagebrush
Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Donna: 025XY018NV
Stampede: 025XY014NV
Short Creek: 025XY015NV
Inclusion 1: 025XY018NV
Inclusion 2: 025XY009NV
Inclusion 3: 025XY003NV

458--Donna-Stampede association

Composition

Major Components

Donna gravelly loam, 2 to 8 percent slopes--45 percent
Stampede gravelly loam, 4 to 15 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Short Creek gravelly clay loam, 30 to 50 percent slopes--10 percent
Inclusion 2: Gochea silt loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Donna--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Stampede--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Fan remnants; geomorphic position: footslope

Major Component Description

Donna Series
Elevation: 5,700 to 6,400 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Stampede Series
Elevation: 5,700 to 6,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Donna: Bluegrass, bottlebrush squirreltail, low sagebrush
Stampede: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, rabbitbrush
Inclusion 1: Basin wildrye, big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Basin big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Donna: 025XY018NV
Stampede: 025XY014NV
Inclusion 1: 025XY015NV
Inclusion 2: 025XY014NV

464--Stampede silt loam, 2 to 8 percent slopes

Composition

Major Components
Stampede silt loam, 2 to 8 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Crooked Creek silty clay loam, drained, 0 to 2 percent slopes, rarely flooded--5 percent
Inclusion 2: Crooked Creek silty clay loam, 0 to 2 percent slopes, frequently flooded--5 percent
Inclusion 3: Bilbo gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 4: Donna loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Stampede--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 4--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave

Major Component Description

Stampede Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Stampede: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, rabbitbrush
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Rush, sedge, tufted hairgrass, willow
Inclusion 3: Basin wildrye, big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 4: Bluegrass, bottlebrush squirreltail, low sagebrush

Ecological Site

Stampede: 025XY014NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY005NV
Inclusion 3: 025XY015NV
Inclusion 4: 025XY018NV

570--Sumine-Cleavage-Hapgood association

Composition

Major Components
Sumine very gravelly loam, 15 to 50 percent slopes--40 percent
Cleavage extremely gravelly loam, 15 to 30 percent slopes--30 percent
Hapgood very gravelly loam, 30 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam, 30 to 50 percent slopes--6 percent

Inclusion 2: Cumulic Haplaquolls, loamy-skeletal silt loam--4 percent
Inclusion 3: Bullump very gravelly loam, 15 to 50 percent slopes--3 percent
Inclusion 4: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam--2 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Cleavage--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: south
Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave; aspect: north

Major Component Description

Sumine Series
Elevation: 6,000 to 7,800 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from tuffaceous rocks

Cleavage Series
Elevation: 6,000 to 7,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hapgood Series
Elevation: 6,500 to 7,800 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Hapgood: Mountain brome, snowberry
Inclusion 1: Letterman needlegrass, mountain brome, quaking aspen
Inclusion 2: Rush, sedge, tufted hairgrass, willow
Inclusion 3: Antelope bitterbrush, basin wildrye, mountain big sagebrush, mountain brome
Inclusion 4: Letterman needlegrass, lupine

Ecological Site

Sumine: 025XY009NV
Cleavage: 025XY024NV
Hapgood: 025XY004NV
Inclusion 1: 025XY002NV
Inclusion 2: 025XY005NV
Inclusion 3: 025XY005NV
Inclusion 4: 025XY028NV

571--Sumine-Tusel-Gando association

Composition

Major Components
Sumine very gravelly loam, 15 to 50 percent slopes--50 percent
Tusel gravelly loam, 15 to 50 percent slopes--20 percent
Gando very gravelly loam, 8 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--7 percent
Inclusion 2: Hackwood gravelly loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Cleavage extremely gravelly loam, 15 to 50 percent slopes--2 percent
Inclusion 4: Rubble land fragmental material--2 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Tusel--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Gando--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Inclusion 4--Landform: Mountains; geomorphic position: backslope

Major Component Description

Sumine Series
Elevation: 6,400 to 6,800 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees

Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Tusel Series
Elevation: 6,400 to 6,800 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Gando Series
Elevation: 6,400 to 6,800 feet
Precipitation: About 16 inches
Air temperature: About 42 degrees
Frost-free season: About 80 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Dominant Present Vegetation
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Gando: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: None
Inclusion 2: Mountain brome, quaking aspen, slender wheatgrass, sweetanise
Inclusion 3: Bluegrass, low sagebrush
Inclusion 4: None

Ecological Site
Sumine: 025XY009NV
Tusel: 025XY010NV
Gando: 025XY024NV
Inclusion 1: None
Inclusion 2: 025XY065NV
Inclusion 3: 025XY024NV
Inclusion 4: None

572--Sumine-Reluctan-Cleavage association

Composition
Major Components
Sumine very gravelly loam, 15 to 50 percent slopes--40 percent
Reluctan cobbly loam, 15 to 30 percent slopes--30 percent
Cleavage very gravelly loam, 8 to 15 percent slopes--15 percent

Contrasting Inclusions
Inclusion 1: Loncan very gravelly loam, 15 to 30 percent slopes--9 percent
Inclusion 2: Cotant cobbly loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Cleavage extremely gravelly loam, 8 to 15 percent slopes--2 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting
Landscape position: Hills
Sumine--Landform: Hills; geomorphic position: backslope; shape of slope: plane; aspect: south
Reluctan--Landform: Hills; geomorphic position: backslope; aspect: north
Cleavage--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: south
Inclusion 2--Landform: Hills; geomorphic position: footslope; position on slope: lower; shape of slope: convex
Inclusion 3--Landform: Hills; geomorphic position: summit; position on slope: upper part
Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description
Sumine Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Reluctan Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface rock fragments: 10 percent cobbles; 10 percent gravel
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Cleavage Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Reluctan: Bluegrass, bottlebrush squirreltail, mountain big sagebrush, rabbitbrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, mountain big sagebrush
Inclusion 2: Idaho fescue, low sagebrush
Inclusion 3: Idaho fescue, black sagebrush
Inclusion 4: None

Ecological Site

Sumine: 025XY009NV
Reluctan: 025XY012NV
Cleavage: 025XY017NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY017NV
Inclusion 3: 025XY024NV
Inclusion 4: None

576--Sumine-Hapgood-Cleavage association, very gravelly

Composition

Major Components

Sumine very gravelly loam, 30 to 50 percent slopes--35 percent
Hapgood very gravelly loam, 30 to 50 percent slopes--30 percent
Cleavage very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Cleavage extremely gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--4 percent
Inclusion 3: Bullump very gravelly loam, 30 to 50 percent slopes--4 percent
Inclusion 4: Lithic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam--2 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Cleavage--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; position on slope: upper; aspect: south
Inclusion 4--Landform: Mountains; shape of slope: convex

Major Component Description

Sumine Series

Elevation: 6,100 to 7,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Hapgood Series

Elevation: 6,100 to 7,200 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Cleavage Series

Elevation: 6,100 to 7,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Hapgood: Mountain brome, snowberry
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, black sagebrush
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Antelope bitterbrush, basin wildrye, mountain big sagebrush, mountain brome
Inclusion 4: Bluegrass, bottlebrush squirreltail, serviceberry

Ecological Site

Sumine: 025XY009NV
Hapgood: 025XY004NV
Cleavage: 025XY017NV
Inclusion 1: 025XY024NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY016NV
Inclusion 4: 025XY046NV

577--Sumine-Hapgood-Chen association

Composition

Major Components

Sumine very gravelly loam, 30 to 50 percent slopes--40 percent
Hapgood very gravelly loam, 30 to 50 percent slopes--30 percent
Chen very gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Reluctan very gravelly loam, 30 to 50 percent slopes--10 percent
Inclusion 2: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent
Inclusion 3: Lithic Torriorthents very gravelly loam--1 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Chen--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; geomorphic position: backslope
Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description

Sumine Series

Elevation: 6,500 to 6,900 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Hapgood Series

Elevation: 6,500 to 6,900 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Chen Series

Elevation: 6,500 to 6,900 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Hapgood: Mountain brome, snowberry
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Bluegrass, mountain big sagebrush
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Bluegrass, bottlebrush squirreltail, mountain big sagebrush
Inclusion 4: None

Ecological Site

Sumine: 025XY009NV
Hapgood: 025XY004NV
Chen: 025XY017NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY042NV
Inclusion 4: None

578--Sumine-Tusel-Hapgood association, very steep

Composition

Major Components

Sumine very gravelly loam, 50 to 75 percent slopes--45 percent
Tusel gravelly loam, 50 to 75 percent slopes--25 percent
Hapgood very gravelly loam, 50 to 75 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Cleavage extremely gravelly loam, 15 to 50 percent slopes--10 percent
Inclusion 2: Chen very gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 3: Welch silt loam, 2 to 4 percent slopes, frequently flooded--1 percent
Inclusion 4: Bullump very gravelly loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Tusel--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Inclusion 2--Landform: Mountains; geomorphic position: summit; position on slope: lower part

Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: south

Major Component Description

Sumine Series
Elevation: 5,600 to 7,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from quartzite

Tusel Series
Elevation: 5,600 to 7,400 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from quartzite

Hapgood Series
Elevation: 5,600 to 7,400 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from quartzite

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Hapgood: Mountain brome, snowberry
Inclusion 1: Idaho fescue, bluegrass, low sagebrush
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 3: Rush, sedge, tufted hairgrass, willow
Inclusion 4: Basin wildrye, mountain big sagebrush, mountain brome

Ecological Site

Sumine: 025XY009NV
Tusel: 025XY010NV
Hapgood: 025XY004NV
Inclusion 1: 025XY024NV
Inclusion 2: 025XY017NV
Inclusion 3: 025XY005NV
Inclusion 4: 025XY016NV

579--Sumine-Pernty-Tusel association

Composition

Major Components
Sumine very gravelly loam, 30 to 50 percent slopes--35 percent
Pernty very stony loam, 15 to 50 percent slopes--30 percent
Tusel very gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions
Inclusion 1: Cleavage extremely gravelly loam, 15 to 50 percent slopes--9 percent
Inclusion 2: Rock outcrop--4 percent
Inclusion 3: Welch silt loam, 2 to 4 percent slopes, frequently flooded--1 percent
Inclusion 4: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--1 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Pernty--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Tusel--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Inclusion 2--Landform: Mountains; geomorphic position: summit
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Sumine Series
Elevation: 6,600 to 7,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Pernty Series
Elevation: 6,600 to 7,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Tusel Series
Elevation: 6,600 to 7,400 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam

Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Pernty: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Inclusion 1: Idaho fescue, bluegrass, low sagebrush
Inclusion 2: None
Inclusion 3: Rush, sedge, tufted hairgrass, willow
Inclusion 4: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Sumine: 025XY009NV
Pernty: 025XY046NV
Tusel: 025XY004NV
Inclusion 1: 025XY024NV
Inclusion 2: None
Inclusion 3: 025XY005NV
Inclusion 4: 025XY003NV

580--Sumine-Pie Creek-Reluctan association

Composition

Major Components

Sumine very gravelly loam, 15 to 30 percent slopes--40 percent
Pie Creek very cobbly silt loam, 4 to 15 percent slopes --25 percent
Reluctan gravelly loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam--7 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--4 percent
Inclusion 3: Cleavage very gravelly loam, 15 to 30 percent slopes--4 percent

Map Unit Setting

Landscape position: Hills
Sumine--Landform: Hills; geomorphic position: backslope; aspect: south
Pie Creek--Landform: Hills; geomorphic position: summit
Reluctan--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position: backslope; shape of slope: convex

Major Component Description

Sumine Series

Elevation: 5,800 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Pie Creek Series

Elevation: 5,800 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly silt loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Reluctan Series

Elevation: 5,800 to 6,300 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Pie Creek: Bluegrass, bottlebrush squirreltail, low sagebrush
Reluctan: Bluegrass, bottlebrush squirreltail, mountain big sagebrush, rabbitbrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Nevada bluegrass, alpine timothy
Inclusion 3: Bluegrass, bottlebrush squirreltail, low sagebrush

Ecological Site

Sumine: 025XY009NV
Pie Creek: 025XY018NV
Reluctan: 025XY012NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY006NV
Inclusion 3: 025XY017NV

581--Sumine-Hapgood-Cleavage association

Composition

Major Components

Sumine very gravelly loam, 30 to 50 percent slopes--35 percent
Hapgood very gravelly loam, 30 to 50 percent slopes--35 percent

Cleavage extremely gravelly loam, 15 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Tusel very gravelly loam, 30 to 50 percent slopes--9 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--2 percent
Inclusion 3: Pachic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam--2 percent
Inclusion 4: Typic Haploxerolls, loamy-skeletal, mixed, frigid very gravelly loam--2 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Cleavage--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: north

Major Component Description

Sumine Series
Elevation: 6,500 to 7,850 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Hapgood Series
Elevation: 6,500 to 7,850 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Cleavage Series
Elevation: 6,500 to 7,850 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Hapgood: Mountain brome, snowberry
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, slender wheatgrass, snowberry
Inclusion 2: Nevada bluegrass, alpine timothy
Inclusion 3: Idaho fescue, basin wildrye
Inclusion 4: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Sumine: 025XY009NV
Hapgood: 025XY004NV
Cleavage: 025XY024NV
Inclusion 1: 025XY004NV
Inclusion 2: 025XY006NV
Inclusion 3: 025XY029NV
Inclusion 4: 025XY012NV

582--Sumine-Tusel-Cleavage association

Composition

Major Components
Sumine very gravelly loam, 30 to 50 percent slopes--45 percent
Tusel very gravelly loam, 30 to 50 percent slopes--25 percent
Cleavage very gravelly loam, 15 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Bullump very gravelly loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Cleavage extremely gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--3 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Tusel--Landform: Mountains; geomorphic position: backslope; aspect: north
Cleavage--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper part
Inclusion 3--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Inclusion 4--Landform: Drainageways

Major Component Description

Sumine Series
Elevation: 6,200 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Tusel Series
Elevation: 6,200 to 7,000 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Cleavage Series
Elevation: 6,200 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from quartzite

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, mountain big sagebrush
Inclusion 2: Basin wildrye, mountain big sagebrush, mountain brome
Inclusion 3: Idaho fescue, black sagebrush
Inclusion 4: Basin big sagebrush, basin wildrye

Ecological Site

Sumine: 025XY009NV
Tusel: 025XY004NV
Cleavage: 025XY017NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY016NV
Inclusion 3: 025XY024NV
Inclusion 4: 025XY003NV

583--Sumine-Hapgood-Pernty association

Composition

Major Components
Sumine very gravelly loam, 50 to 75 percent slopes--40 percent
Hapgood very gravelly loam, 50 to 75 percent slopes--30 percent
Pernty very gravelly loam, 50 to 75 percent slopes--15 percent

Contrasting Inclusions
Inclusion 1: Cryic Lithic Rendolls, loamy-skeletal, carbonatic very gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Lithic Haploxerolls, loamy-skeletal, carbonatic, frigid very gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Cryic Rendolls, loamy-skeletal, carbonatic very gravelly loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Pernty--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: backslope
Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: south
Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Major Component Description

Sumine Series
Elevation: 5,800 to 8,300 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Hapgood Series
Elevation: 5,800 to 8,300 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Pernty Series
Elevation: 5,800 to 6,500 feet

Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Hapgood: Mountain brome, snowberry
Pernty: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Utah juniper, big sagebrush
Inclusion 2: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Basin wildrye, mountain big sagebrush, mountain brome
Inclusion 4: Idaho fescue, snowberry

Ecological Site

Sumine: 025XY009NV
Hapgood: 025XY004NV
Pernty: 025XY012NV
Inclusion 1: 025XY059NV
Inclusion 2: 025XY009NV
Inclusion 3: 025XY016NV
Inclusion 4: 025XY004NV

584--Sumine-Tusel-Hapgood association, steep

Composition

Major Components

Sumine very gravelly loam, 30 to 50 percent slopes--35 percent
Tusel very gravelly loam, 30 to 50 percent slopes--30 percent
Hapgood very gravelly loam, 50 to 75 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 8 to 50 percent slopes--8 percent
Inclusion 2: Bullump very gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Welch silt loam, drained, 2 to 8 percent slopes, rarely flooded--2 percent
Inclusion 4: Lithic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Tusel--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit; position on slope: lower part
Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: south
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: south

Major Component Description

Sumine Series

Elevation: 6,100 to 7,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Tusel Series

Elevation: 6,100 to 7,500 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Hapgood Series

Elevation: 6,100 to 7,500 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Hapgood: Mountain brome, snowberry
Inclusion 1: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Basin wildrye, mountain big sagebrush, mountain brome
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Basin wildrye, big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Sumine: 025XY009NV

Tusel: 025XY004NV
Hapgood: 025XY004NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY016NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY015NV

585--Sumine-Rock outcrop-Rubble land association

Composition

Major Components

Sumine very gravelly loam, 30 to 50 percent slopes--40 percent
Rock outcrop--25 percent
Rubble land fragmental material, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Pachic Haploxerolls, fine-loamy, mixed, frigid very gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Graley very gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Cumulic Haplaquolls silt loam, 0 to 4 percent slopes--3 percent
Inclusion 4: Hackwood silt loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; shape of slope: plane; aspect: south
Rock outcrop--Landform: Mountains; geomorphic position: summit
Rubble land--Landform: Mountains; geomorphic position: backslope
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Major Component Description

Sumine Series

Elevation: 6,000 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Rock outcrop Miscellaneous Area

Elevation: 6,000 to 7,000 feet
Drainage class: Excessively drained

Rubble land Miscellaneous Area

Elevation: 6,000 to 7,000 feet
Surface layer texture: Fragmental material
Drainage class: Excessively drained

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Rock outcrop: None
Rubble land: None
Inclusion 1: Snowbrush ceanothus
Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Quaking aspen, rush, sedge, streambank wheatgrass, yarrow
Inclusion 4: Idaho fescue, mountain big sagebrush

Ecological Site

Sumine: 025XY009NV
Rubble land: None
Rock outcrop: None
Inclusion 1: 025XY052NV
Inclusion 2: 025XY064NV
Inclusion 3: 025XY012NV
Inclusion 4: 025XY065NV

586--Sumine-Loncan-Cleavage association

Composition

Major Components

Sumine very gravelly loam, 15 to 50 percent slopes--45 percent
Loncan very gravelly loam, 15 to 50 percent slopes--30 percent
Cleavage extremely gravelly loam, 8 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: McIvey cobbly loam, 8 to 15 percent slopes--4 percent
Inclusion 2: Chen very cobbly loam, 4 to 15 percent slopes--4 percent
Inclusion 3: Rock outcrop--1 percent
Inclusion 4: Fluvaquentic Haplaquolls, sandy-skeletal, mixed, frigid gravelly loam--1 percent

Map Unit Setting

Landscape position: Mountains
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Loncan--Landform: Mountains; geomorphic position: backslope; aspect: north
Cleavage--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: lower part
Inclusion 3--Landform: Mountains; geomorphic position: summit

Inclusion 4--Landform: Drainageways

Major Component Description

Sumine Series
Elevation: 6,400 to 7,100 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Loncan Series
Elevation: 6,400 to 7,100 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Cleavage Series
Elevation: 6,600 to 7,100 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Loncan: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue, low sagebrush
Inclusion 3: None
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Sumine: 025XY009NV
Loncan: 025XY012NV
Cleavage: 025XY024NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY017NV
Inclusion 3: None
Inclusion 4: 025XY006NV

600--Hapgood-Bullump-Gando association

Composition

Major Components
Hapgood very gravelly loam, 30 to 50 percent slopes--30 percent
Bullump very gravelly loam, 15 to 50 percent slopes--30 percent
Gando very gravelly loam, 15 to 30 percent slopes--25 percent

Contrasting Inclusions
Inclusion 1: Hackwood very gravelly sandy loam, 30 to 50 percent slopes, frequently flooded--6 percent
Inclusion 2: Cumulic Haplaquolls, loamy-skeletal silt loam--4 percent
Inclusion 3: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Cumulic Haplaquolls, loamy-skeletal silt loam--2 percent

Map Unit Setting

Landscape position: Mountains
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Bullump--Landform: Mountains; geomorphic position: backslope; aspect: south
Gando--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 4--Landform: Drainageways

Major Component Description

Hapgood Series
Elevation: 6,500 to 7,700 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Bullump Series
Elevation: 6,500 to 7,700 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 75 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from mixed rocks

Gando Series
Elevation: 6,800 to 7,700 feet

Precipitation: About 16 inches
Air temperature: About 42 degrees
Frost-free season: About 80 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Dominant Present Vegetation

Hapgood: Mountain brome, snowberry
Bullump: Idaho fescue, basin wildrye, bluebunch wheatgrass, mountain brome
Gando: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Mountain brome, quaking aspen, slender wheatgrass
Inclusion 2: Rush, sedge, tufted hairgrass, willow
Inclusion 3: Letterman needlegrass, mountain brome, quaking aspen
Inclusion 4: Quaking aspen, rush, sedge, streambank wheatgrass, yarrow

Ecological Site

Hapgood: 025XY004NV
Bullump: 025XY016NV
Gando: 025XY024NV
Inclusion 1: 025XY065NV
Inclusion 2: 025XY005NV
Inclusion 3: 025XY002NV
Inclusion 4: 025XY064NV

601--Hapgood-Blitzen-Tusel association

Composition

Major Components

Hapgood very gravelly loam, 30 to 75 percent slopes--35 percent
Blitzen very gravelly loam, 30 to 75 percent slopes--35 percent
Tusel gravelly loam, 50 to 75 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Typic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 2: Cleavage very gravelly loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--3 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--3 percent

Map Unit Setting

Landscape position: Hills
Hapgood--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Blitzen--Landform: Hills; geomorphic position: backslope; aspect: south
Tusel--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: toeslope; shape of slope: convex
Inclusion 2--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Hapgood Series

Elevation: 5,800 to 6,400 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from tuffaceous rocks

Blitzen Series

Elevation: 5,800 to 6,400 feet
Precipitation: About 13 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Tusel Series

Elevation: 5,800 to 6,400 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Hapgood: Mountain brome, snowberry
Blitzen: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Inclusion 1: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Hapgood: 025XY004NV
Blitzen: 025XY009NV
Tusel: 025XY010NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY017NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY006NV

602--Hapgood-Hackwood-Tusel association

Composition

Major Components

Hapgood very gravelly loam, 15 to 50 percent slopes--45 percent
Hackwood silt loam, 15 to 50 percent slopes--25 percent
Tusel gravelly loam, 30 to 75 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 2: Cumulic Haplaquolls silt loam, 4 to 30 percent slopes--4 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Cleavage very gravelly loam, 15 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Hackwood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Tusel--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; geomorphic position: summit
Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Major Component Description

Hapgood Series

Elevation: 6,200 to 7,500 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Hackwood Series

Elevation: 6,200 to 7,500 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from mixed rocks

Tusel Series

Elevation: 6,200 to 7,500 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Dominant Present Vegetation

Hapgood: Mountain brome, snowberry
Hackwood: Mountain brome, quaking aspen, slender wheatgrass
Tusel: Idaho fescue, mountain big sagebrush
Inclusion 1: Letterman needlegrass, mountain brome, quaking aspen
Inclusion 2: Quaking aspen, rush, sedge, streambank wheatgrass, yarrow
Inclusion 3: None
Inclusion 4: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush

Ecological Site

Hapgood: 025XY004NV
Hackwood: 025XY065NV
Tusel: 025XY010NV
Inclusion 1: 025XY002NV
Inclusion 2: 025XY064NV
Inclusion 3: None
Inclusion 4: 025XY017NV

623--Soughe-Rock outcrop association

Composition

Major Components

Soughe very cobbly loam, 15 to 30 percent slopes--60 percent
Rock outcrop--25 percent

Contrasting Inclusions

Inclusion 1: Aridic Argixerolls, loamy-skeletal, mixed, frigid gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 2: Soughe very gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--3 percent
Inclusion 4: Weso very fine sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Soughe--Landform: Hills; geomorphic position: summit
Rock outcrop--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Hills; position on slope: lower part

Major Component Description

Soughe Series
Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks
Rock outcrop Miscellaneous Area
Elevation: 4,800 to 5,600 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Soughe: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Rock outcrop: None
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Bottlebrush squirreltail, bud sagebrush, shadscale

Ecological Site

Soughe: 025XY019NV
Rock outcrop: None
Inclusion 1: 025XY014NV
Inclusion 2: 025XY015NV
Inclusion 3: 025XY003NV
Inclusion 4: 024XY002NV

624--Soughe-Soughe, very steep-Rock outcrop association

Composition

Major Components
Soughe very stony loam, 30 to 50 percent slopes--40 percent
Soughe very stony loam, 50 to 75 percent slopes--30 percent
Rock outcrop--15 percent
Contrasting Inclusions
Inclusion 1: Rubble land fragmental material--10 percent
Inclusion 2: Durixerollic Camborthids, loamy-skeletal, mixed, mesic fine sandy loam, 8 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Plateaus
Soughe--Landform: Plateaus; geomorphic position: backslope
Soughe--Landform: Plateaus; geomorphic position: backslope; position on slope: upper part
Rock outcrop--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Plateaus; geomorphic position: footslope

Major Component Description

Soughe Variant
Elevation: 5,200 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Soughe Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 5,200 to 5,400 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Soughe: Wyoming big sagebrush, bluegrass, cheatgrass
Soughe: Wyoming big sagebrush, bluegrass, cheatgrass
Rock outcrop: None
Inclusion 1: None
Inclusion 2: Wyoming big sagebrush, bluegrass, cheatgrass

Ecological Site

Soughe: 025XY015NV
Soughe: 025XY015NV
Rock outcrop: None
Inclusion 1: None
Inclusion 2: 025XY019NV

625--Soughe-Alyan-Shalper association

Composition

Major Components
Soughe very cobbly loam, 30 to 50 percent slopes--40 percent
Alyan very gravelly loam, 15 to 50 percent slopes--30 percent
Shalper very gravelly loam, 4 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Chen very gravelly loam, 15 to 30 percent slopes--7 percent

Inclusion 2: Rock outcrop--4 percent
Inclusion 3: Lithic Xerollic Haplargids, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 4 to 15 percent slopes--2 percent
Inclusion 4: Aridic Haploxerolls, loamy-skeletal, mixed, frigid gravelly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Soughe--Landform: Hills; geomorphic position: backslope; aspect: south
Alyan--Landform: Hills; geomorphic position: backslope; shape of slope: plane; aspect: north
Shalper--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: lower; shape of slope: convex
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Hills; geomorphic position: summit; position on slope: lower part; shape of slope: convex
Inclusion 4--Landform: Hills; geomorphic position: backslope; shape of slope: concave

Major Component Description

Soughe Series
Elevation: 5,500 to 6,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Alyan Series
Elevation: 5,500 to 6,300 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Shalper Series
Elevation: 5,600 to 6,300 feet
Precipitation: About 10 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Soughe: Wyoming big sagebrush, bluebunch wheatgrass, bluegrass, cheatgrass
Alyan: Big sagebrush, bluebunch wheatgrass, bottlebrush squirreltail, cheatgrass
Shalper: Basin big sagebrush, bluebunch wheatgrass, bluegrass, bottlebrush squirreltail
Inclusion 1: Bluegrass, low sagebrush
Inclusion 2: None
Inclusion 3: Bluebunch wheatgrass, low sagebrush
Inclusion 4: Basin big sagebrush, basin wildrye, cheatgrass

Ecological Site

Soughe: 025XY015NV
Alyan: 025XY014NV
Shalper: 025XY021NV
Inclusion 1: 025XY017NV
Inclusion 2: None
Inclusion 3: 025XY022NV
Inclusion 4: 025XY003NV

626--Soughe, cobbly-Vanwyper-Soughe associaiton

Composition

Major Components
Soughe cobbly loam, 15 to 30 percent slopes--35 percent
Vanwyper cobbly loam, 30 to 50 percent slopes--30 percent
Soughe very cobbly loam, 4 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Haploxerollic Durorthids, coarse-loamy, mixed, mesic cobbly loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Xerollic Nadurargids, fine, montmorillonitic, mesic cobbly loam, 2 to 4 percent slopes--5 percent
Inclusion 3: Clementine silt loam, drained, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Plateaus
Soughe--Landform: Plateaus; geomorphic position: backslope
Vanwyper--Landform: Plateaus; geomorphic position: backslope; aspect: south
Soughe--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; position on slope: lower part
Inclusion 2--Landform: Fan remnants
Inclusion 3--Landform: Drainageways

Major Component Description

Soughe Series
Elevation: 4,800 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Vanwyper Series
Elevation: 4,800 to 5,800 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Soughe Series
Elevation: 4,800 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Soughe: Wyoming big sagebrush
Vanwyper: Basin big sagebrush, big sagebrush, bluebunch wheatgrass
Soughe: Wyoming big sagebrush
Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail, spiny hopsage
Inclusion 3: Basin big sagebrush, basin wildrye, rabbitbrush

Ecological Site

Soughe: 025XY019NV
Vanwyper: 025XY015NV
Soughe: 025XY019NV
Inclusion 1: 024XY005NV
Inclusion 2: 024XY020NV
Inclusion 3: 025XY003NV

690--Welch, drained-Welch association

Composition

Major Components
Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--70 percent
Welch silt loam, 2 to 4 percent slopes, frequently flooded--15 percent
Contrasting Inclusions
Inclusion 1: Cumulic Haploxerolls, loamy-skeletal, mixed, frigid silt loam--5 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--5 percent
Inclusion 3: Crooked Creek silt loam, drained, 0 to 2 percent slopes, rarely flooded--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Welch--Landform: Flood plains
Welch--Landform: Flood plains
Inclusion 1--Landform: Stream terraces; position on slope: upper part
Inclusion 2--Landform: Stream terraces; position on slope: lower part
Inclusion 3--Landform: Stream terraces

Major Component Description

Welch Series
Elevation: 5,200 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Welch Series
Elevation: 5,200 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Welch: Basin big sagebrush, basin wildrye, bluegrass
Welch: Rush, sedge, tufted hairgrass, willow
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Nevada bluegrass, alpine timothy
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Welch: 025XY003NV
Welch: 025XY005NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY006NV
Inclusion 3: 025XY003NV

920--Bullump-Gando-Tusel association

Composition

Major Components
Bullump very gravelly loam, 30 to 50 percent slopes--45 percent
Gando very gravelly loam, 15 to 30 percent slopes--25 percent
Tusel gravelly loam, 30 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Hackwood gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Rock outcrop--5 percent

Inclusion 3: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--2 percent

Map Unit Setting

Landscape position: Mountains
Bullump--Landform: Mountains; geomorphic position: backslope; aspect: south
Gando--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Tusel--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: summit
Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 4--Landform: Drainageways

Major Component Description

Bullump Series
Elevation: 6,600 to 7,200 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 75 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from quartzite

Gando Series
Elevation: 6,600 to 7,200 feet
Precipitation: About 16 inches
Air temperature: About 42 degrees
Frost-free season: About 80 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Tusel Series
Elevation: 6,600 to 7,200 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from quartzite

Dominant Present Vegetation

Bullump: Idaho fescue, basin wildrye, bluebunch wheatgrass, mountain brome
Gando: Bluegrass, bottlebrush squirreltail, low sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Inclusion 1: Mountain brome, slender wheatgrass
Inclusion 2: None
Inclusion 3: Letterman needlegrass, mountain brome, quaking aspen
Inclusion 4: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Bullump: 025XY016NV
Gando: 025XY024NV
Tusel: 025XY010NV
Inclusion 1: 025XY065NV
Inclusion 2: None
Inclusion 3: 025XY002NV
Inclusion 4: 025XY003NV

921--Bullump-Hackwood-Cleavage association

Composition

Major Components
Bullump very gravelly loam, 30 to 50 percent slopes--40 percent
Hackwood silt loam, 15 to 50 percent slopes--25 percent
Cleavage extremely gravelly loam, 15 to 50 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Tusel very gravelly loam, 15 to 50 percent slopes--6 percent
Inclusion 2: Hapgood very gravelly loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam, 15 to 50 percent slopes--4 percent
Inclusion 4: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam--1 percent

Map Unit Setting

Landscape position: Mountains
Bullump--Landform: Mountains; geomorphic position: backslope; aspect: south
Hackwood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Cleavage--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: summit; shape of slope: concave; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: summit; shape of slope: concave; aspect: north

Major Component Description

Bullump Series
Elevation: 6,800 to 8,400 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 75 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Hackwood Series
Elevation: 6,800 to 8,400 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Cleavage Series
Elevation: 6,800 to 8,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Bullump: Idaho fescue, basin wildrye, bluebunch wheatgrass, mountain brome
Hackwood: Mountain brome, quaking aspen, slender wheatgrass
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Inclusion 2: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Inclusion 3: Letterman needlegrass, mountain brome, quaking aspen
Inclusion 4: Letterman needlegrass, lupine

Ecological Site

Bullump: 025XY016NV
Hackwood: 025XY065NV
Cleavage: 025XY024NV
Inclusion 1: 025XY004NV
Inclusion 2: 025XY004NV
Inclusion 3: 025XY002NV
Inclusion 4: 025XY028NV

922--Bullump-Cleavage-Hapgood association

Composition

Major Components
Bullump very gravelly loam, 15 to 50 percent slopes--40 percent
Cleavage extremely gravelly loam, 15 to 50 percent slopes--30 percent
Hapgood very gravelly loam, 30 to 50 percent slopes--15 percent

Contrasting Inclusions
Inclusion 1: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Tusel very gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Hackwood silt loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Argic Pachic Cryoborolls, loamy-skeletal, mixed gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Bullump--Landform: Mountains; geomorphic position: backslope; aspect: south
Cleavage--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: backslope; aspect: north

Major Component Description

Bullump Series
Elevation: 6,600 to 8,600 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 75 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Cleavage Series
Elevation: 6,600 to 8,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained

Dominant parent material: Residuum derived from tuffaceous rocks

Hapgood Series
Elevation: 6,600 to 8,600 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Bullump: Idaho fescue, basin wildrye, bluebunch wheatgrass, mountain brome
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Hapgood: Mountain brome, snowberry
Inclusion 1: Letterman needlegrass, mountain brome, quaking aspen
Inclusion 2: Mountain brome, snowberry
Inclusion 3: Mountain brome, quaking aspen, slender wheatgrass
Inclusion 4: Idaho fescue, black sagebrush, bluegrass, bottlebrush squirreltail

Ecological Site

Bullump: 025XY016NV
Cleavage: 025XY024NV
Hapgood: 025XY004NV
Inclusion 1: 025XY002NV
Inclusion 2: 025XY004NV
Inclusion 3: 025XY065NV
Inclusion 4: 024XY042NV

1130--Clementine silt loam, drained, 0 to 2 percent slopes

Composition

Major Components
Clementine silt loam, drained, 0 to 2 percent slopes--90 percent
Contrasting Inclusions
Inclusion 1: Hunnton silt loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Wieland loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Clementine--Landform: Flood plains
Inclusion 1--Landform: Fan remnants
Inclusion 2--Landform: Fan remnants

Major Component Description

Clementine Series
Elevation: 4,000 to 4,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Clementine: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 2: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass

Ecological Site

Clementine: 025XY003NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV

1131--Clementine, drained-Clementine, gently sloping-Clementine association

Composition

Major Components
Clementine silt loam, drained, 0 to 2 percent slopes--60 percent
Clementine silt loam, drained, 2 to 4 percent slopes--15 percent
Clementine silt loam, 0 to 2 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Bioya loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Cumulic Haplaquolls silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Clementine--Landform: Flood plains
Clementine--Landform: Flood plains
Clementine--Landform: Flood plains
Inclusion 1--Landform: Fan remnants
Inclusion 2--Landform: Flood plains

Major Component Description

Clementine Series
Elevation: 4,000 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Clementine Series
Elevation: 4,000 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam

Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Clementine Series
Elevation: 4,000 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Clementine: Basin big sagebrush, basin wildrye, bluegrass, rabbitbrush
Clementine: Basin big sagebrush, basin wildrye, bluegrass, rabbitbrush
Clementine: Nevada bluegrass, tufted hairgrass, willow
Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 2: Big sagebrush, rabbitbrush, wildrye

Ecological Site

Clementine: 025XY003NV
Clementine: 025XY003NV
Clementine: 025XY005NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY001NV

1135--Clementine-Clurde association

Composition

Major Components

Clementine silt loam, drained, 0 to 2 percent slopes--60 percent
Clurde very fine sandy loam, 0 to 2 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 2: Kelk very fine sandy loam, 0 to 2 percent slopes, occasionally flooded--4 percent
Inclusion 3: Cumulic Haplaquolls, fine-loamy, mixed, mesic silt loam, drained--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Clementine--Landform: Flood plains
Clurde--Landform: Fan remnants
Inclusion 1--Landform: Flood plains
Inclusion 2--Landform: Flood plains
Inclusion 3--Landform: Flood plains

Major Component Description

Clementine Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Clurde Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Clementine: Basin big sagebrush, basin wildrye, bluegrass, rabbitbrush
Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 2: Basin big sagebrush, basin wildrye, rabbitbrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass, rabbitbrush

Ecological Site

Clementine: 025XY003NV
Clurde: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 024XY006NV
Inclusion 3: 025XY003NV

1150--Clurde-Wieland association

Composition

Major Components

Clurde very fine sandy loam, 2 to 8 percent slopes--50 percent
Wieland gravelly loam, 2 to 8 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Orovada fine sandy loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Kleckner gravelly loam, 2 to 15 percent slopes--4 percent
Inclusion 3: Xeric Torriorthents, loamy-skeletal, mixed, nonacid, mesic gravelly loam, 2 to 8 percent slopes--3 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, frequently flooded--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
Clurde--Landform: Fan remnants; geomorphic position: summit; position on slope: lower part

Wieland--Landform: Fan remnants; geomorphic position: summit; position on slope: upper part
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; position on slope: lower part
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; position on slope: upper part
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Inset fans

Major Component Description

Clurde Series
Elevation: 4,800 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wieland Series
Elevation: 4,800 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wieland: Wyoming big sagebrush, bluegrass, cheatgrass
Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 2: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 3: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 4: Rush, sedge, tufted hairgrass, willow

Ecological Site

Clurde: 025XY019NV
Wieland: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY005NV

1155--Clurde very fine sandy loam, 0 to 2 percent slopes

Composition

Major Components
Clurde very fine sandy loam, 0 to 2 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Durixerollic Camborthids, coarse-loamy, mixed, mesic fine sandy loam, 0 to 2 percent slopes--8 percent
Inclusion 2: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 3: Kelk very fine sandy loam, 0 to 2 percent slopes, occasionally flooded--2 percent
Inclusion 4: Zevadez very fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Clurde--Landform: Fan remnants
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: toeslope

Major Component Description

Clurde Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Clurde: Wyoming big sagebrush, bluegrass, cheatgrass
Inclusion 1: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 3: Basin big sagebrush, basin wildrye, rabbitbrush
Inclusion 4: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Clurde: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 024XY006NV
Inclusion 4: 025XY019NV

1156--Clurde-Kortty association

Composition

Major Components
Clurde very fine sandy loam, 0 to 2 percent slopes--45 percent
Kortty silt loam, 0 to 2 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Dacker very fine sandy loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Shalake very fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Chiara very fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 4: Typic Calciorthids, fine-loamy, mixed, mesic very gravelly loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Clurde--Landform: Fan remnants; geomorphic position: footslope
Kortty--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope
Inclusion 4--Landform: Fan remnants; geomorphic position: footslope

Major Component Description

Clurde Series
Elevation: 5,100 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Kortty Series
Elevation: 5,100 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Clurde: Wyoming big sagebrush, bluegrass, cheatgrass, squirreltail
Kortty: Bottlebrush squirreltail, bud sagebrush, shadscale
Inclusion 1: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 3: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 4: Bottlebrush squirreltail, bud sagebrush, shadscale

Ecological Site

Clurde: 025XY019NV
Kortty: 024XY002NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 024XY002NV

1157--Clurde-Zevadez-Chiara association

Composition

Major Components
Clurde very fine sandy loam, 0 to 2 percent slopes--40 percent
Zevadez very fine sandy loam, 0 to 2 percent slopes--25 percent
Chiara very fine sandy loam, 2 to 4 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Shalake very fine sandy loam, 0 to 2 percent slopes--10 percent
Inclusion 2: Xerollic Haplargids, fine, montmorillonitic, mesic gravelly loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Clurde--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Zevadez--Landform: Fan remnants; shape of slope: concave
Chiara--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Inclusion 2--Landform: Inset fans

Major Component Description

Clurde Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Zevadez Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days

Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Bluebunch wheatgrass, bluegrass, bottlebrush squirreltail

Ecological Site

Clurde: 025XY019NV
Zevadez: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY050NV

1190--Cherry Spring-Enko association

Composition

Major Components

Cherry Spring very fine sandy loam, 2 to 8 percent slopes--50 percent
Enko very fine sandy loam, 2 to 8 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Wieland loam, 2 to 8 percent slopes--8 percent
Inclusion 2: Aeric Fluvaquents, coarse-loamy, mixed (calcareous), mesic loam, 0 to 2 percent slopes, occasionally flooded--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Cherry Spring--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Enko--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; position on slope: upper part
Inclusion 2--Landform: Inset fans

Major Component Description

Cherry Spring Series

Elevation: 5,000 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Enko Series

Elevation: 5,000 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Cherry Spring: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Enko: Wyoming big sagebrush, bluegrass, cheatgrass
Inclusion 1: Bluegrass, bottlebrush squirreltail
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Cherry Spring: 025XY019NV
Enko: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY003NV

1191--Cherry Spring-Wieland association

Composition

Major Components

Cherry Spring gravelly loam, 2 to 8 percent slopes--60 percent
Wieland gravelly loam, 8 to 15 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Shabliss gravelly loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Durixerollic Haplargids, fine-loamy, mixed, mesic gravelly loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Cherry Spring--Landform: Fan remnants; geomorphic position: summit
Wieland--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; position on slope: lower part

Major Component Description

Cherry Spring Series

Elevation: 5,000 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wieland Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Cherry Spring: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Cherry Spring: 025XY019NV
Wieland: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV

1193--Cherry Spring-Hunnton-Chiara association

Composition

Major Components
Cherry Spring silt loam, 2 to 8 percent slopes--45 percent
Hunnton silt loam, 2 to 8 percent slopes--25 percent
Chiara silt loam, 2 to 8 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Orovada silt loam--10 percent

Map Unit Setting

Landscape position: Fan piedmonts
Cherry Spring--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Hunnton--Landform: Fan remnants; geomorphic position: summit
Chiara--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Inset fans

Major Component Description

Cherry Spring Series
Elevation: 5,000 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hunnton Series
Elevation: 5,000 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series
Elevation: 5,000 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Cherry Spring: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail

Ecological Site

Cherry Spring: 025XY019NV
Hunnton: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV

1210--Skull Creek-Shabliss-Puett association

Composition

Major Components
Skull Creek very fine sandy loam, 2 to 8 percent slopes--45 percent
Shabliss very fine sandy loam, 2 to 8 percent slopes--25 percent
Puett sandy loam, 8 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--6 percent
Inclusion 2: Tweba very fine sandy loam, drained, 0 to 2 percent slopes, occasionally flooded--4 percent
Inclusion 3: Wieland loam, 2 to 8 percent slopes--4 percent
Inclusion 4: Xeric Torripsamments, mixed, mesic fine sand, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Skull Creek--Landform: Fan remnants; geomorphic position: summit
Shabliss--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave

Puett--Landform: Pediments; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave
Inclusion 4--Landform: Pediments; geomorphic position: backslope; shape of slope: concave

Major Component Description

Skull Creek Series
Elevation: 4,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Shabliss Series
Elevation: 4,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Puett Series
Elevation: 4,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Skull Creek: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Puett: Wyoming big sagebrush, bluegrass, rabbitbrush
Inclusion 1: None
Inclusion 2: Basin big sagebrush, basin wildrye
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Indian ricegrass, basin big sagebrush, hairy horsebrush, rabbitbrush

Ecological Site

Skull Creek: 025XY019NV
Shabliss: 025XY019NV
Puett: 025XY025NV
Inclusion 1: None
Inclusion 2: 025XY003NV
Inclusion 3: 025XY019NV
Inclusion 4: 024XY001NV

1220--Hunnton, strongly sloping-Hunnton-Fulstone association

Composition

Major Components
Hunnton loam, 8 to 15 percent slopes--40 percent
Hunnton loam, 2 to 8 percent slopes--35 percent
Fulstone cobbly loam, 8 to 15 percent slopes--15 percent

Contrasting Inclusions
Inclusion 1: Wieland loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Fulstone cobbly loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Hunnton--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave
Hunnton--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane
Fulstone--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex

Major Component Description

Hunnton Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hunnton Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Fulstone Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Fulstone: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush

Ecological Site

Hunnton: 025XY019NV
Hunnton: 025XY019NV
Fulstone: 025XY018NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY018NV

1221--Hunnton, moderately steep-Hunnton-Fulstone association

Composition

Major Components

Hunnton gravelly loam, 15 to 30 percent slopes--35 percent
Hunnton loam, 4 to 15 percent slopes--30 percent
Fulstone gravelly loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Skull Creek very fine sandy loam, 4 to 15 percent slopes--7 percent
Inclusion 2: Clementine silt loam, drained, 0 to 2 percent slopes--5 percent
Inclusion 3: Puett fine sandy loam, 15 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
Hunnton--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Hunnton--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane
Fulstone--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Pediments; geomorphic position: backslope; aspect: south

Major Component Description

Hunnton Series

Elevation: 5,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hunnton Series

Elevation: 5,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Fulstone Series

Elevation: 5,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Fulstone: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass, rabbitbrush
Inclusion 3: Wyoming big sagebrush, bluegrass, rabbitbrush

Ecological Site

Hunnton: 025XY019NV
Hunnton: 025XY019NV
Fulstone: 025XY018NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY025NV

1223--Hunnton-Shabliss-Puett association

Composition

Major Components

Hunnton gravelly loam, 8 to 15 percent slopes--40 percent
Shabliss very fine sandy loam, 2 to 8 percent slopes--25 percent
Puett very cobbly loamy sand, 15 to 30 percent slopes --20 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents, fine-loamy, mixed, nonacid, mesic gravelly loam, 0 to 4 percent slopes --5 percent

Inclusion 2: Shabliss gravelly fine sandy loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Rock outcrop--4 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, frequently flooded--1 percent

Map Unit Setting

Landscape position: Intermontane basins
Hunnton--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Shabliss--Landform: Fan remnants; geomorphic position: summit
Puett--Landform: Pediments; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex
Inclusion 3--Landform: Pediments; geomorphic position: backslope
Inclusion 4--Landform: Flood plains

Major Component Description

Hunnton Series
Elevation: 4,800 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Shabliss Series
Elevation: 4,800 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Puett Series
Elevation: 4,800 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly loamy sand
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Puett: Wyoming big sagebrush, bluegrass, rabbitbrush
Inclusion 1: Basin big sagebrush, inland saltgrass, rubber rabbitbrush
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: None
Inclusion 4: Rush, sedge, tufted hairgrass, willow

Ecological Site

Hunnton: 025XY019NV
Shabliss: 025XY019NV
Puett: 025XY025NV
Inclusion 1: 024XY006NV
Inclusion 2: 025XY019NV
Inclusion 3: None
Inclusion 4: 025XY005NV

1224--Hunnton-Trunk-Shabliss association

Composition

Major Components
Hunnton loam, 15 to 30 percent slopes--35 percent
Trunk very cobbly loam, 30 to 50 percent slopes--25 percent
Shabliss gravelly loam, 4 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Typic Durorthids, loamy, mixed, mesic, shallow gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Typic Durorthids, loamy, mixed, mesic, shallow gravelly loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Lithic Xerollic Camborthids, loamy-skeletal, mixed, mesic very gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Rock outcrop--3 percent

Map Unit Setting

Landscape position: Mountains and intermontane basins
Hunnton--Landform: Fan remnants; geomorphic position: backslope
Trunk--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Shabliss--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex
Inclusion 3--Landform: Hills; shape of slope: convex
Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Hunnton Series
Elevation: 4,800 to 5,100 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Trunk Series
Elevation: 4,800 to 5,100 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Shabliss Series
Elevation: 4,800 to 5,100 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Trunk: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Inclusion 1: Big sagebrush, bottlebrush squirreltail, shadscale
Inclusion 2: Big sagebrush, bottlebrush squirreltail, shadscale
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: None

Ecological Site
Hunnton: 025XY019NV
Trunk: 025XY019NV
Shabliss: 025XY019NV
Inclusion 1: 024XY002NV
Inclusion 2: 024XY002NV
Inclusion 3: 025XY019NV
Inclusion 4: None

1226--Hunnton-Wieland-Clementine association

Composition
Major Components
Hunnton gravelly loam, 2 to 8 percent slopes--40 percent
Wieland gravelly loam, 2 to 8 percent slopes--30 percent
Clementine silt loam, drained, 2 to 4 percent slopes--20 percent

Contrasting Inclusions
Inclusion 1: Chiara very fine sandy loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Clurde very fine sandy loam, 2 to 8 percent slopes--3 percent
Inclusion 3: Xeric Torriorthents gravelly loam, 0 to 2 percent slopes--2 percent

Map Unit Setting
Landscape position: Intermontane basins
Hunnton--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Wieland--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane
Clementine--Landform: Stream terraces
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Inclusion 3--Landform: Inset fans

Major Component Description
Hunnton Series
Elevation: 4,900 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wieland Series
Elevation: 4,900 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Clementine Series
Elevation: 4,900 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Clementine: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail

Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Basin big sagebrush, basin wildrye, rabbitbrush

Ecological Site

Hunnton: 025XY019NV
Wieland: 025XY019NV
Clementine: 025XY003NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 024XY006NV

1227--Hunnton-Chiara-Bilbo association

Composition

Major Components

Hunnton silt loam, 4 to 15 percent slopes--40 percent
Chiara silt loam, 4 to 15 percent slopes--25 percent
Bilbo cobbly loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Orovada very gravelly loam, 4 to 15 percent slopes--10 percent
Inclusion 2: Xeric Torriorthents, loamy, mixed, mesic, shallow gravelly loam, 15 to 30 percent slopes--2 percent
Inclusion 3: Aridic Argixerolls, loamy-skeletal, mixed, frigid gravelly loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Dewar loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Hunnton--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane
Chiara--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Bilbo--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Inset fans; aspect: south
Inclusion 2--Landform: Fan remnants; geomorphic position: shoulder; position on slope: lower part
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 4--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane

Major Component Description

Hunnton Series

Elevation: 5,300 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,300 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Bilbo Series

Elevation: 5,300 to 5,800 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Bilbo: Cheatgrass, mountain big sagebrush
Inclusion 1: Big sagebrush, bluegrass, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bluegrass, rabbitbrush
Inclusion 3: Big sagebrush, bluegrass
Inclusion 4: Big sagebrush, bluegrass, bottlebrush squirreltail

Ecological Site

Hunnton: 025XY019NV
Chiara: 025XY019NV
Bilbo: 025XY015NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY025NV
Inclusion 3: 025XY014NV
Inclusion 4: 025XY019NV

1228--Hunnton-Hunnton, moderately sloping association

Composition

Major Components

Hunnton silt loam, 2 to 8 percent slopes--65 percent
Hunnton silt loam, 8 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Lithic Xerollic Haplargids, loamy, montmorillonitic, mesic very gravelly loam, 2 to 8 percent slopes--10 percent
Inclusion 2: Gochea silt loam, 15 to 30 percent slopes--2 percent
Inclusion 3: Lithic Haplargids, clayey, montmorillonitic, mesic very gravelly loam, 30 to 50 percent slopes--2 percent

Inclusion 4: Chiara silt loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Hunnton--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane
Hunnton--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Pediments; geomorphic position: shoulder
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Pediments; geomorphic position: backslope; aspect: south
Inclusion 4--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex

Major Component Description

Hunnton Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hunnton Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bluegrass
Inclusion 2: Basin big sagebrush, bluebunch wheatgrass
Inclusion 3: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 4: Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Hunnton: 025XY019NV
Hunnton: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY015NV
Inclusion 4: 025XY019NV

1229--Hunnton-Chiara-Wieland association

Composition

Major Components
Hunnton silt loam, 2 to 8 percent slopes--40 percent
Chiara silt loam, 2 to 8 percent slopes--30 percent
Wieland silt loam, 4 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Enko very fine sandy loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Stampede silt loam, 2 to 8 percent slopes--5 percent
Inclusion 3: Durixerollic Haplargids, loamy-skeletal, mixed, mesic loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Durargidic Argixerolls, fine-loamy, mixed, frigid gravelly loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Hunnton--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane
Chiara--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Wieland--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; aspect: north
Inclusion 3--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; aspect: north

Major Component Description

Hunnton Series
Elevation: 5,200 to 6,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series
Elevation: 5,200 to 6,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wieland Series
Elevation: 5,200 to 6,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days

Surface rock fragments: 10 percent cobbles;
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bluebunch wheatgrass
Inclusion 2: Basin big sagebrush, bluebunch wheatgrass
Inclusion 3: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 4: Idaho fescue, basin big sagebrush, bluebunch wheatgrass

Ecological Site

Hunnton: 025XY019NV
Chiara: 025XY019NV
Wieland: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY027NV

1230--Fulstone-Hunnton association

Composition

Major Components

Fulstone gravelly loam, 2 to 8 percent slopes--45 percent
Hunnton loam, 4 to 15 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Short Creek cobbly loam, 15 to 50 percent slopes--6 percent
Inclusion 2: Clementine silt loam, drained, 0 to 2 percent slopes--6 percent
Inclusion 3: Aridic Argixerolls, fine, montmorillonitic, mesic gravelly loam, 15 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
Fulstone--Landform: Fan remnants; geomorphic position: summit
Hunnton--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; aspect: north

Major Component Description

Fulstone Series

Elevation: 5,200 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Hunnton Series

Elevation: 5,200 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Fulstone: Bluegrass, bottlebrush squirreltail, low sagebrush
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Basin big sagebrush

Ecological Site

Fulstone: 025XY018NV
Hunnton: 025XY019NV
Inclusion 1: 025XY015NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY014NV

1231--Fulstone-Fulstone, moderately steep-Hunnton association

Composition

Major Components

Fulstone very cobbly silt loam, 4 to 15 percent slopes--40 percent
Fulstone very cobbly silt loam, 15 to 30 percent slopes--30 percent
Hunnton loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Clementine silt loam, drained, 0 to 2 percent slopes--6 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, frequently flooded--3 percent
Inclusion 3: Aridic Argixerolls gravelly loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Fulstone--Landform: Fan remnants; geomorphic position: summit
Fulstone--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex
Hunnton--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: summit; position on slope: upper; aspect: north

Major Component Description

Fulstone Series
Elevation: 5,200 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Fulstone Series
Elevation: 5,200 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Hunnton Series
Elevation: 5,200 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Fulstone: Bluegrass, bottlebrush squirreltail, low sagebrush
Fulstone: Bluegrass, bottlebrush squirreltail, low sagebrush
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Rush, sedge, tufted hairgrass, willow
Inclusion 3: Bluebunch wheatgrass, low sagebrush

Ecological Site

Fulstone: 025XY018NV
Fulstone: 025XY018NV
Hunnton: 025XY019NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY005NV
Inclusion 3: 025XY017NV

1232--Fulstone-Fulstone, cobbly loam-Wieland association

Composition

Major Components
Fulstone gravelly loam, 2 to 8 percent slopes--35 percent
Fulstone cobbly loam, 8 to 15 percent slopes--30 percent
Wieland loam, 8 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Bilbo gravelly very fine sandy loam, 30 to 50 percent slopes--7 percent
Inclusion 2: Clementine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Crooked Creek silty clay loam, 2 to 4 percent slopes, frequently flooded--3 percent

Map Unit Setting

Landscape position: Intermontane basins
Fulstone--Landform: Fan remnants; geomorphic position: summit
Fulstone--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex
Wieland--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Stream terraces
Inclusion 3--Landform: Flood plains

Major Component Description

Fulstone Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Fulstone Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Wieland Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam

Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Fulstone: Bluegrass, bottlebrush squirreltail, low sagebrush
Fulstone: Bluegrass, bottlebrush squirreltail, low sagebrush
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Rush, sedge, tufted hairgrass, willow

Ecological Site

Fulstone: 025XY018NV
Fulstone: 025XY018NV
Wieland: 025XY019NV
Inclusion 1: 025XY015NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY005NV

1241--Enko-Shabliss-Orovada association

Composition

Major Components

Enko fine sandy loam, 2 to 8 percent slopes--60 percent
Shabliss very fine sandy loam, 15 to 30 percent slopes--15 percent
Orovada very fine sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xeric Torripsamments fine sand, 8 to 15 percent slopes--10 percent

Map Unit Setting

Landscape position: Fan piedmonts
Enko--Landform: Fan remnants; geomorphic position: summit
Shabliss--Landform: Fan remnants; geomorphic position: backslope
Orovada--Landform: Inset fans
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper part

Major Component Description

Enko Series

Elevation: 4,500 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Shabliss Series

Elevation: 4,500 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Orovada Series

Elevation: 4,500 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Enko: Bluegrass, cheatgrass, squirreltail
Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Orovada: Thurber needlegrass, Wyoming big sagebrush, cheatgrass, rabbitbrush
Inclusion 1: Indian ricegrass, big sagebrush, rabbitbrush

Ecological Site

Enko: 025XY019NV
Shabliss: 025XY019NV
Orovada: 024XY020NV
Inclusion 1: 024XY001NV

1242--Enko-Enko, strongly sloping association

Composition

Major Components

Enko fine sandy loam, 0 to 2 percent slopes--65 percent
Enko fine sandy loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, coarse-silty, mixed, mesic fine sandy loam--8 percent
Inclusion 2: Wieland loam, 2 to 8 percent slopes--7 percent

Map Unit Setting

Landscape position: Fan piedmonts
Enko--Landform: Fan remnants; geomorphic position: summit
Enko--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Fan remnants; geomorphic position: footslope
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex

Major Component Description

Enko Series
Elevation: 4,400 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Enko Series
Elevation: 4,400 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Enko: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Enko: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Enko: 025XY019NV
Enko: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV

1260--Kleckner-Upville-Fulstone association

Composition

Major Components
Kleckner gravelly loam, 8 to 15 percent slopes--40 percent
Upville gravelly loam, 2 to 4 percent slopes--30 percent
Fulstone very cobbly loam, 2 to 8 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Crooked Creek silty clay loam, 2 to 4 percent slopes, frequently flooded--8 percent
Inclusion 2: Hunnton loam, 2 to 8 percent slopes--1 percent
Inclusion 3: Orovada loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
Kleckner--Landform: Fan remnants; geomorphic position: backslope
Upville--Landform: Fan skirts; geomorphic position: footslope
Fulstone--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Flood plains
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; position on slope: lower; shape of slope: convex
Inclusion 3--Landform: Inset fans

Major Component Description

Kleckner Series
Elevation: 5,100 to 6,100 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Upville Series
Elevation: 5,100 to 6,100 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Fulstone Series
Elevation: 4,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Kleckner: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Upville: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Fulstone: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Rush, sedge, tufted hairgrass, willow
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Kleckner: 025XY014NV
Upville: 025XY014NV
Fulstone: 025XY018NV
Inclusion 1: 025XY005NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

1261--Kleckner-Heechee association

Composition

Major Components

Kleckner gravelly loam, 4 to 15 percent slopes--55 percent
Heechee cobbly loam, 4 to 15 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Donna gravelly loam, 2 to 8 percent slopes--8 percent
Inclusion 2: Upville gravelly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Kleckner--Landform: Fan remnants; geomorphic position: backslope
Heechee--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave
Inclusion 2--Landform: Inset fans

Major Component Description

Kleckner Series

Elevation: 5,900 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Heechee Series

Elevation: 5,900 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Kleckner: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Heechee: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Bottlebrush squirreltail, low sagebrush
Inclusion 2: Cheatgrass

Ecological Site

Kleckner: 025XY014NV
Heechee: 025XY007NV
Inclusion 1: 025XY018NV
Inclusion 2: 025XY006NV

1290--Tweba very fine sandy loam, drained, 0 to 2 percent slopes

Composition

Major Components

Tweba very fine sandy loam, drained, 0 to 2 percent slopes--90 percent

Contrasting Inclusions

Inclusion 1: Orovada very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Aeric Haplaquepts, fine-silty, mixed (calcareous), mesic loam, 0 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Tweba--Landform: Inset fans
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Flood plains

Major Component Description

Tweba Series

Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Tweba: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 1: Wyoming big sagebrush, bluegrass, cheatgrass, rabbitbrush
Inclusion 2: Basin wildrye, black greasewood, cheatgrass

Ecological Site

Tweba: 025XY003NV
Inclusion 1: 025XY019NV
Inclusion 2: 024XY008NV

1350--Shabliss-Hunnton-Bioya association

Composition

Major Components

Shabliss gravelly loam, 4 to 15 percent slopes--40 percent
Hunnton gravelly loam, 15 to 30 percent slopes--35 percent
Bioya loam, 8 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents gravelly loam, 0 to 2 percent slopes--3 percent
Inclusion 2: Clementine silt loam, 0 to 2 percent slopes--1 percent
Inclusion 3: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Shabliss--Landform: Fan remnants; geomorphic position: summit
Hunnton--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave
Bioya--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Flood plains
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Shabliss Series
Elevation: 5,100 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hunnton Series
Elevation: 5,100 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Bioya Series
Elevation: 5,100 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Hunnton: Wyoming big sagebrush, bluegrass, cheatgrass
Bioya: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Basin big sagebrush, basin wildrye, rabbitbrush
Inclusion 2: Rush, sedge, tufted hairgrass, willow
Inclusion 3: None

Ecological Site

Shabliss: 025XY019NV
Hunnton: 025XY019NV
Bioya: 025XY019NV
Inclusion 1: 024XY006NV
Inclusion 2: 025XY005NV
Inclusion 3: None

1351--Shabliss-Bartome association

Composition

Major Components
Shabliss very fine sandy loam, 0 to 2 percent slopes--70 percent
Bartome very fine sandy loam, 2 to 4 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Shalake very fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Clurde very fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Zevadez very fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Shabliss--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane
Bartome--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Inclusion 3--Landform: Fan remnants; geomorphic position: footslope; shape of slope: plane
Inclusion 4--Landform: Fan remnants; geomorphic position: footslope; shape of slope: plane

Major Component Description

Shabliss Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Bartome Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail

Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 2: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 3: Wyoming big sagebrush, bluegrass, cheatgrass
Inclusion 4: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass

Ecological Site

Shabliss: 025XY019NV
Bartome: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

1352--Shabliss-Skull Creek-Puett association

Composition

Major Components

Shabliss very fine sandy loam, 4 to 15 percent slopes--40 percent
Skull Creek very fine sandy loam, 2 to 8 percent slopes--30 percent
Puett very cobbly sandy loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--5 percent
Inclusion 2: Durixerollic Camborthids, coarse-silty, mixed, mesic fine sandy loam--2 percent
Inclusion 3: Xeric Torripsamments, mixed, mesic fine sand, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
Shabliss--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Skull Creek--Landform: Fan remnants; geomorphic position: summit
Puett--Landform: Pediments; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Pediments; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave

Major Component Description

Shabliss Series

Elevation: 4,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Skull Creek Series

Elevation: 4,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Puett Series

Elevation: 4,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Skull Creek: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Puett: Wyoming big sagebrush, bluegrass, rabbitbrush
Inclusion 1: None
Inclusion 2: Basin big sagebrush, basin wildrye, rabbitbrush
Inclusion 3: Indian ricegrass, basin big sagebrush, needleandthread

Ecological Site

Shabliss: 025XY019NV
Skull Creek: 025XY019NV
Puett: 025XY025NV
Inclusion 1: None
Inclusion 2: 024XY006NV
Inclusion 3: 024XY001NV

1360--Orovada very fine sandy loam, 0 to 2 percent slopes

Composition

Major Components

Orovada very fine sandy loam, 2 to 8 percent slopes--90 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents gravelly loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Enko fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Orovada--Landform: Fan skirts
Inclusion 1--Landform: Fan skirts
Inclusion 2--Landform: Fan skirts

Major Component Description

Orovada Series
Elevation: 4,400 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Orovada: Thurber needlegrass, Wyoming big sagebrush, cheatgrass, rabbitbrush
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush

Ecological Site

Orovada: 024XY020NV
Inclusion 1: 024XY005NV
Inclusion 2: 024XY005NV

1362--Orovada-Clurde-Wieland association

Composition

Major Components
Orovada very fine sandy loam, 2 to 8 percent slopes--35 percent
Clurde very fine sandy loam, 2 to 8 percent slopes--30 percent
Wieland loam, 8 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Bioya loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Typic Durorthids, fine-loamy, mixed, mesic loam, 2 to 8 percent slopes--4 percent
Inclusion 3: Xeric Torriorthents, loamy-skeletal, mixed, nonacid, mesic gravelly loam, 0 to 2 percent slopes --3 percent
Inclusion 4: Duric Camborthids, coarse-loamy, mixed, mesic fine sandy loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins
Orovada--Landform: Fan skirts
Clurde--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane
Wieland--Landform: Fan remnants; geomorphic position: summit; position on slope: upper part
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; position on slope: lower; shape of slope: convex
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan skirts

Major Component Description

Orovada Series
Elevation: 5,000 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Clurde Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wieland Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Orovada: Thurber needlegrass, Wyoming big sagebrush, cheatgrass, rabbitbrush
Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Bottlebrush squirreltail, bud sagebrush, cheatgrass, shadscale
Inclusion 3: Basin big sagebrush, basin wildrye, rabbitbrush
Inclusion 4: Basin wildrye, black greasewood, cheatgrass, rabbitbrush

Ecological Site

Orovada: 024XY020NV
Clurde: 024XY005NV
Wieland: 024XY005NV
Inclusion 1: 024XY005NV
Inclusion 2: 024XY002NV
Inclusion 3: 024XY006NV
Inclusion 4: 024XY002NV

1363--Orovada-Tweba-Weso association

Composition

Major Components

Orovada very fine sandy loam, 0 to 2 percent slopes--40 percent
Tweba sandy loam, drained, 0 to 2 percent slopes, rarely flooded--25 percent
Weso very fine sandy loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Enko fine sandy loam, 0 to 4 percent slopes--5 percent
Inclusion 2: Tweba sandy loam, drained, 0 to 2 percent slopes, frequently flooded--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Orovada--Landform: Fan skirts; position on slope: upper part
Tweba--Landform: Inset fans
Weso--Landform: Fan skirts; position on slope: lower part
Inclusion 1--Landform: Fan skirts; geomorphic position: summit; position on slope: lower part
Inclusion 2--Landform: Inset fans

Major Component Description

Orovada Series

Elevation: 4,400 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Tweba Series

Elevation: 4,400 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Sandy loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Weso Series

Elevation: 4,400 to 5,000 feet
Precipitation: About 7 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Orovada: Thurber needlegrass, Wyoming big sagebrush, cheatgrass, rabbitbrush
Tweba: Basin wildrye, black greasewood
Weso: Big sagebrush, bottlebrush squirreltail, shadscale
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Orovada: 024XY020NV
Tweba: 024XY006NV
Weso: 024XY002NV
Inclusion 1: 024XY005NV
Inclusion 2: 025XY003NV

1530--Creemon-Placeritos association

Composition

Major Components

Creemon silt loam, 0 to 2 percent slopes--45 percent
Placeritos silt loam, 0 to 2 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Clurde very fine sandy loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Orovada very fine sandy loam, 0 to 2 percent slopes--6 percent
Inclusion 3: Durorthidic Torriorthents, coarse-silty, mixed, mesic silt loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins
Creemon--Landform: Stream terraces
Placeritos--Landform: Flood plains
Inclusion 1--Landform: Fan skirts
Inclusion 2--Landform: Fan skirts
Inclusion 3--Landform: Flood plains

Major Component Description

Creemon Series

Elevation: 4,400 to 4,800 feet
Precipitation: About 7 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Placeritos Series

Elevation: 4,400 to 4,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Somewhat poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Creemon: Black greasewood, bottlebrush squirreltail, shadscale
Placeritos: Black greasewood, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Wyoming big sagebrush, cheatgrass, rabbitbrush
Inclusion 3: Basin wildrye, black greasewood, inland saltgrass

Ecological Site

Creemon: 024XY003NV
Placeritos: 024XY022NV
Inclusion 1: 024XY005NV
Inclusion 2: 024XY020NV
Inclusion 3: 024XY011NV

1572--Weso-Orovada-Shabliss association

Composition

Major Components

Weso very fine sandy loam, 0 to 2 percent slopes--45 percent
Orovada very fine sandy loam, 2 to 8 percent slopes--25 percent
Shabliss very fine sandy loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xeric Torripsamments fine sand, 8 to 15 percent slopes--10 percent

Map Unit Setting

Landscape position: Intermontane basins
Weso--Landform: Fan skirts
Orovada--Landform: Inset fans
Shabliss--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Weso Series

Elevation: 4,400 to 4,800 feet
Precipitation: About 7 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Orovada Series

Elevation: 4,400 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Shabliss Series

Elevation: 4,600 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Weso: Big sagebrush, bottlebrush squirreltail, shadscale
Orovada: Thurber needlegrass, Wyoming big sagebrush, cheatgrass, rabbitbrush
Shabliss: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Inclusion 1: Indian ricegrass, basin big sagebrush, cheatgrass, rabbitbrush

Ecological Site

Weso: 024XY002NV
Orovada: 024XY020NV
Shabliss: 024XY005NV
Inclusion 1: 024XY001NV

1573--Weso-Orovada-Tweba associaiton

Composition

Major Components

Weso very fine sandy loam, 2 to 8 percent slopes--30 percent
Orovada loam, 2 to 8 percent slopes--30 percent
Tweba sandy loam, drained, 0 to 2 percent slopes, rarely flooded--25 percent

Contrasting Inclusions

Inclusion 1: Typic Torriorthents, loamy-skeletal, mixed, nonacid, mesic sandy loam, 2 to 8 percent slopes--10 percent
Inclusion 2: Tweba sandy loam, drained, 0 to 2 percent slopes, frequently flooded--3 percent
Inclusion 3: Shabliss loam, 8 to 15 percent slopes--1 percent
Inclusion 4: Wieland loam, 8 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
Weso--Landform: Fan skirts; position on slope: lower part
Orovada--Landform: Fan skirts; position on slope: upper part
Tweba--Landform: Inset fans
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex

Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave

Major Component Description

Weso Series
Elevation: 4,400 to 5,200 feet
Precipitation: About 7 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Orovada Series
Elevation: 4,400 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Tweba Series
Elevation: 4,400 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Sandy loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Weso: Bottlebrush squirreltail, shadscale
Orovada: Wyoming big sagebrush, bluebunch wheatgrass, bottlebrush squirreltail
Tweba: Basin big sagebrush, basin wildrye, black greasewood, rubber rabbitbrush
Inclusion 1: Basin wildrye, black greasewood
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 4: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass

Ecological Site

Weso: 024XY002NV
Orovada: 025XY019NV
Tweba: 024XY006NV
Inclusion 1: 024XY011NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

1617--Cleavage-Hapgood-Tweener association

Composition

Major Components
Cleavage extremely gravelly loam, 30 to 75 percent slopes--40 percent
Hapgood very gravelly loam, 30 to 50 percent slopes--30 percent
Tweener very cobbly sandy loam, 30 to 50 percent slopes--15 percent

Contrasting Inclusions
Inclusion 1: Welch sandy loam, drained, 0 to 2 percent slopes, rarely flooded--6 percent
Inclusion 2: Cleavage extremely gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Cleavage very gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 4: Loncan very gravelly loam, 30 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains
Cleavage--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Tweener--Landform: Mountains; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Mountains; geomorphic position: summit
Inclusion 3--Landform: Mountains; geomorphic position: backslope
Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north

Major Component Description

Cleavage Series
Elevation: 6,600 to 7,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hapgood Series
Elevation: 6,600 to 7,400 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Tweener Series
Elevation: 6,600 to 7,400 feet

Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Hapgood: Mountain brome, snowberry
Tweener: Antelope bitterbrush, bluegrass, cheatgrass, mountain big sagebrush
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 3: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 4: Idaho fescue, antelope bitterbrush, mountain big sagebrush

Ecological Site

Cleavage: 025XY024NV
Hapgood: 025XY004NV
Tweener: 025XY007NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY024NV
Inclusion 3: 025XY017NV
Inclusion 4: 025XY012NV

1618--Cleavage-Sumine-Pequop association

Composition

Major Components

Cleavage very gravelly loam, 15 to 50 percent slopes--40 percent
Sumine very gravelly loam, 15 to 50 percent slopes--25 percent
Pequop gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Tweener very cobbly sandy loam, 15 to 50 percent slopes--8 percent
Inclusion 2: Aridic Argixerolls, fine-loamy, mixed, frigid gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Graley very cobbly loam, 15 to 50 percent slopes--2 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--2 percent

Map Unit Setting

Landscape position: Hills
Cleavage--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Sumine--Landform: Hills; geomorphic position: backslope; aspect: south
Pequop--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: concave
Inclusion 3--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 4--Landform: Drainageways

Major Component Description

Cleavage Series

Elevation: 6,200 to 6,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Sumine Series

Elevation: 6,200 to 6,600 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Pequop Series

Elevation: 6,200 to 6,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Pequop: Idaho fescue, bluegrass, mountain big sagebrush
Inclusion 1: Antelope bitterbrush, bluegrass, mountain big sagebrush
Inclusion 2: Idaho fescue, basin big sagebrush
Inclusion 3: Idaho fescue, bluegrass, mountain big sagebrush
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Cleavage: 025XY017NV
Sumine: 025XY009NV
Pequop: 025XY012NV
Inclusion 1: 025XY007NV
Inclusion 2: 025XY027NV
Inclusion 3: 025XY012NV
Inclusion 4: 025XY006NV

1619--Cleavage-Tusk-Sumine association

Composition

Major Components

Cleavage extremely gravelly loam, 15 to 50 percent slopes--35 percent
Tusk loam, 30 to 50 percent slopes--30 percent
Sumine very gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Chen very gravelly loam, 15 to 50 percent slopes--10 percent
Inclusion 2: Cotant very gravelly loam, 8 to 15 percent slopes--3 percent
Inclusion 3: Hackwood silt loam, 30 to 50 percent slopes--1 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Mountains
Cleavage--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex
Tusk--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: plane; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: backslope

Major Component Description

Cleavage Series

Elevation: 6,800 to 7,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Tusk Series

Elevation: 6,600 to 7,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Sumine Series

Elevation: 6,600 to 7,600 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Tusk: Idaho fescue, basin wildrye, mountain big sagebrush
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Inclusion 1: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 3: Mountain brome, quaking aspen, slender wheatgrass
Inclusion 4: None

Ecological Site

Cleavage: 025XY024NV
Tusk: 025XY029NV
Sumine: 025XY009NV
Inclusion 1: 025XY017NV
Inclusion 2: 025XY017NV
Inclusion 3: 025XY065NV
Inclusion 4: None

1621--Cleavage-Graley-Cleavage, moderately steep association

Composition

Major Components

Cleavage very gravelly loam, 4 to 15 percent slopes--35 percent
Graley stony loam, 4 to 15 percent slopes--30 percent
Cleavage extremely gravelly loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Pachic Argixerolls, fine-loamy, mixed, frigid very gravelly loam, 30 to 50 percent slopes--6 percent
Inclusion 2: Rock outcrop--4 percent
Inclusion 3: Welch silt loam, 0 to 2 percent slopes, frequently flooded--3 percent
Inclusion 4: Sumine very gravelly loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Cleavage--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Graley--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Cleavage--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: plane; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: backslope
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: backslope

Major Component Description

Cleavage Series
Elevation: 6,500 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Graley Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from quartzite

Cleavage Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Cleavage: Idaho fescue, low sagebrush
Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, mountain big sagebrush
Inclusion 2: None
Inclusion 3: Rush, sedge, tufted hairgrass, willow
Inclusion 4: Big sagebrush, bluebunch wheatgrass

Ecological Site

Cleavage: 025XY017NV
Graley: 025XY012NV
Cleavage: 025XY024NV
Inclusion 1: 025XY010NV
Inclusion 2: None
Inclusion 3: 025XY005NV
Inclusion 4: 025XY009NV

1622--Cleavage-Sumine-Hapgood association

Composition

Major Components
Cleavage extremely gravelly loam, 50 to 75 percent slopes--50 percent
Sumine very gravelly loam, 30 to 50 percent slopes--20 percent
Hapgood very gravelly loam, 50 to 75 percent slopes--15 percent

Contrasting Inclusions
Inclusion 1: Cleavage extremely gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 2: Hapgood very gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Tusel gravelly loam, 50 to 75 percent slopes--3 percent
Inclusion 4: Argic Pachic Cryoborolls gravelly loam, 50 to 75 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Cleavage--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: footslope; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: plane; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Major Component Description

Cleavage Series
Elevation: 6,200 to 7,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Sumine Series
Elevation: 6,200 to 7,600 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Hapgood Series
Elevation: 6,200 to 7,600 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from tuffaceous rocks

Dominant Present Vegetation
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Hapgood: Mountain brome, snowberry
Inclusion 1: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 2: Mountain brome, snowberry
Inclusion 3: Idaho fescue, mountain big sagebrush
Inclusion 4: Basin wildrye, mountain big sagebrush

Ecological Site
Cleavage: 025XY024NV
Sumine: 025XY009NV
Hapgood: 025XY004NV
Inclusion 1: 025XY024NV
Inclusion 2: 025XY004NV
Inclusion 3: 025XY010NV
Inclusion 4: 025XY029NV

1623--Cleavage-Hapgood-Sumine association

Composition
Major Components
Cleavage extremely gravelly loam, 15 to 50 percent slopes--50 percent
Hapgood very gravelly loam, 30 to 50 percent slopes--20 percent
Sumine very gravelly loam, 30 to 50 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Typic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 15 to 50 percent slopes--3 percent
Inclusion 2: Cleavage very gravelly loam, 15 to 50 percent slopes--3 percent
Inclusion 3: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--2 percent
Inclusion 4: Aridic Argixerolls, fine-loamy, mixed, frigid gravelly loam, 4 to 15 percent slopes--2 percent

Map Unit Setting
Landscape position: Mountains
Cleavage--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: footslope

Major Component Description
Cleavage Series
Elevation: 6,200 to 7,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hapgood Series
Elevation: 6,200 to 7,200 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from tuffaceous rocks

Sumine Series
Elevation: 6,200 to 7,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Hapgood: Mountain brome, snowberry
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Idaho fescue, basin big sagebrush

Ecological Site
Cleavage: 025XY024NV
Hapgood: 025XY004NV
Sumine: 025XY009NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY017NV

Inclusion 3: 025XY003NV
Inclusion 4: 025XY027NV

1625--Cleavage-Ninemile-Sumine association

Composition

Major Components

Cleavage very gravelly loam, 15 to 50 percent slopes--55 percent
Ninemile gravelly loam, 4 to 15 percent slopes--15 percent
Sumine very gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Welch sandy loam, 0 to 2 percent slopes, occasionally flooded--5 percent
Inclusion 2: Typic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam--5 percent
Inclusion 3: Typic Argixerolls, fine, montmorillonitic, frigid very gravelly loam--3 percent
Inclusion 4: Tusk loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains and foothills
Cleavage--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex
Ninemile--Landform: Mountains; geomorphic position: footslope; position on slope: lower part
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: footslope
Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Major Component Description

Cleavage Series

Elevation: 6,300 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from mixed rocks

Ninemile Series

Elevation: 6,000 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Sumine Series

Elevation: 6,000 to 6,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Dominant Present Vegetation

Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Sumine: Antelope bitterbrush, cheatgrass, mountain big sagebrush
Inclusion 1: Nevada bluegrass, alpine timothy
Inclusion 2: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 3: Idaho fescue, basin big sagebrush
Inclusion 4: Basin wildrye, mountain big sagebrush

Ecological Site

Cleavage: 025XY017NV
Ninemile: 025XY017NV
Sumine: 025XY009NV
Inclusion 1: 025XY006NV
Inclusion 2: 025XY012NV
Inclusion 3: 025XY027NV
Inclusion 4: 025XY029NV

1626--Cleavage-Carstump-Chen association

Composition

Major Components

Cleavage very gravelly loam, 4 to 8 percent slopes--35 percent
Carstump gravelly loam, 4 to 8 percent slopes--30 percent
Chen very cobbly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--10 percent
Inclusion 2: Graley very cobbly loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills
Cleavage--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Carstump--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Chen--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope

Inclusion 2--Landform: Hills; geomorphic position: shoulder; aspect: north

Major Component Description

Cleavage Series
Elevation: 5,600 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Carstump Series
Elevation: 5,600 to 7,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Chen Series
Elevation: 5,600 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Carstump: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: None
Inclusion 2: Antelope bitterbrush, big sagebrush, bluebunch wheatgrass

Ecological Site

Cleavage: 025XY017NV
Carstump: 025XY014NV
Chen: 025XY017NV
Inclusion 1: None
Inclusion 2: 025XY012NV

1628--Cleavage-Chen-Reluctan association

Composition

Major Components
Cleavage very gravelly loam, 15 to 30 percent slopes--40 percent
Chen very cobbly loam, 4 to 15 percent slopes--30 percent
Reluctan gravelly loam, 15 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Carstump gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Aridic Argixerolls, loamy-skeletal, mixed, frigid gravelly loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Clementine silt loam, drained, 0 to 2 percent slopes--3 percent
Inclusion 4: Rock outcrop--3 percent

Map Unit Setting

Landscape position: Mountains
Cleavage--Landform: Mountains; geomorphic position: shoulder
Chen--Landform: Mountains; geomorphic position: summit
Reluctan--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: footslope
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: upper part

Major Component Description

Cleavage Series
Elevation: 5,600 to 7,100 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Chen Series
Elevation: 5,800 to 7,100 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Reluctan Series
Elevation: 5,400 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained

Dominant Present Vegetation

Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Chen: Bluegrass, low sagebrush

Reluctan: Bluegrass, mountain big sagebrush
Inclusion 1: Big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: None

Ecological Site

Cleavage: 025XY017NV
Chen: 025XY017NV
Reluctan: 025XY012NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY003NV
Inclusion 4: None

1640--Tusk-Cleavage-Hackwood association

Composition

Major Components

Tusk gravelly loam, 8 to 15 percent slopes--40 percent
Cleavage very cobbly loam, 4 to 15 percent slopes--30 percent
Hackwood silt loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--6 percent
Inclusion 2: Sumine very gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 3: Welch silt loam, 0 to 2 percent slopes, frequently flooded--3 percent
Inclusion 4: Reluctan gravelly loam, 15 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains
Tusk--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: concave
Cleavage--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Hackwood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: convex
Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex

Major Component Description

Tusk Series

Elevation: 6,500 to 8,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Cleavage Series

Elevation: 6,700 to 8,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Hackwood Series

Elevation: 6,500 to 8,500 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Tusk: Cheatgrass, mountain big sagebrush, rabbitbrush, snowberry
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Hackwood: Mountain brome, quaking aspen, slender wheatgrass
Inclusion 1: None
Inclusion 2: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 3: Rush, sedge, tufted hairgrass, willow
Inclusion 4: Idaho fescue, antelope bitterbrush, mountain big sagebrush

Ecological Site

Tusk: 025XY004NV
Cleavage: 025XY024NV
Hackwood: 025XY065NV
Inclusion 1: None
Inclusion 2: 025XY009NV
Inclusion 3: 025XY005NV
Inclusion 4: 025XY012NV

1650--Ninemile-Tusk-Ninemile, steep association

Composition

Major Components

Ninemile very cobbly loam, 4 to 15 percent slopes--35 percent
Tusk gravelly loam, 15 to 50 percent slopes--30 percent
Ninemile very cobbly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions
Inclusion 1: Pachic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Rock outcrop--5 percent
Inclusion 3: Graley gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 4: Pachic Haploxerolls, fine-loamy, mixed, frigid very gravelly loam, 0 to 4 percent slopes--2 percent

Map Unit Setting
Landscape position: Mountains
Ninemile--Landform: Mountains; geomorphic position: summit
Tusk--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Ninemile--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: plane; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: convex
Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex; aspect: north
Inclusion 4--Landform: Drainageways

Major Component Description
Ninemile Series
Elevation: 7,500 to 8,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Tusk Series
Elevation: 7,000 to 8,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Ninemile Series
Elevation: 7,000 to 8,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Tusk: Cheatgrass, mountain big sagebrush, rabbitbrush, snowberry
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, bottlebrush squirreltail, mountain big sagebrush
Inclusion 2: None
Inclusion 3: Antelope bitterbrush, bluegrass, mountain big sagebrush
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site
Ninemile: 025XY017NV
Tusk: 025XY004NV
Ninemile: 025XY017NV
Inclusion 1: 025XY010NV
Inclusion 2: None
Inclusion 3: 025XY012NV
Inclusion 4: 025XY006NV

1651--Ninemile-Reluctan-Ninemile, moderately steep association

Composition
Major Components
Ninemile very cobbly loam, 4 to 15 percent slopes--35 percent
Reluctan cobbly loam, 15 to 50 percent slopes--35 percent
Ninemile very cobbly loam, 15 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--6 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--3 percent
Inclusion 3: Pachic Argixerolls, loamy-skeletal, mixed, frigid cobbly loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Aridic Argixerolls, fine-loamy, mixed, frigid gravelly loam--3 percent

Map Unit Setting
Landscape position: Mountains
Ninemile--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Reluctan--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: north
Ninemile--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: convex
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 4--Landform: Mountains; geomorphic position: backslope; aspect: south

Major Component Description

Ninemile Series
Elevation: 6,300 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Reluctan Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Reluctan: Bluegrass, mountain big sagebrush, rabbitbrush
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: None
Inclusion 2: Nevada bluegrass, alpine timothy
Inclusion 3: Idaho fescue, mountain big sagebrush
Inclusion 4: Big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Ninemile: 025XY017NV
Reluctan: 025XY012NV
Ninemile: 025XY017NV
Inclusion 1: None
Inclusion 2: 025XY006NV
Inclusion 3: 025XY010NV
Inclusion 4: 025XY009NV

1652--Ninemile, steep-Graley-Ninemile association

Composition

Major Components
Ninemile very cobbly loam, 30 to 50 percent slopes--35 percent
Graley very cobbly loam, 30 to 50 percent slopes--30 percent
Ninemile very cobbly loam, 4 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--9 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, frequently flooded--2 percent
Inclusion 3: Shively loam, 30 to 50 percent slopes--2 percent
Inclusion 4: Sumine very gravelly loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Ninemile--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Graley--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: concave; aspect: north
Ninemile--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: backslope; aspect: south

Major Component Description

Ninemile Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Graley Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from quartzite

Ninemile Series
Elevation: 6,400 to 7,000 feet

Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: None
Inclusion 2: Rush, sedge, tufted hairgrass, willow
Inclusion 3: Idaho fescue, mountain big sagebrush
Inclusion 4: Big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Ninemile: 025XY017NV
Graley: 025XY012NV
Ninemile: 025XY017NV
Inclusion 1: None
Inclusion 2: 025XY005NV
Inclusion 3: 025XY010NV
Inclusion 4: 025XY009NV

1653--Ninemile-Reluctan-Graley association

Composition

Major Components

Ninemile cobbly loam, 4 to 15 percent slopes--40 percent
Reluctan very gravelly loam, 4 to 15 percent slopes--30 percent
Graley stony loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--6 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, frequently flooded--2 percent
Inclusion 3: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--2 percent

Map Unit Setting

Landscape position: Mountains
Ninemile--Landform: Mountains; geomorphic position: summit
Reluctan--Landform: Mountains; geomorphic position: backslope; position on slope: lower part
Graley--Landform: Mountains; geomorphic position: backslope; position on slope: upper part
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Drainageways

Major Component Description

Ninemile Series

Elevation: 6,400 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Reluctan Series

Elevation: 6,000 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Graley Series

Elevation: 6,200 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from quartzite

Dominant Present Vegetation

Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Reluctan: Bluegrass, bottlebrush squirreltail, mountain big sagebrush, rabbitbrush
Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Rush, sedge, tufted hairgrass, willow
Inclusion 3: Nevada bluegrass, alpine timothy

Ecological Site

Ninemile: 025XY017NV
Reluctan: 025XY012NV
Graley: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY005NV
Inclusion 3: 025XY006NV

1655--Ninemile-Thwoop-Pequop association

Composition

Major Components

Ninemile very stony loam, 15 to 30 percent slopes--35 percent
Thwoop gravelly silt loam, 8 to 15 percent slopes--30 percent
Pequop gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions
Inclusion 1: Quarz very gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Aridic Argixerolls, loamy-skeletal, mixed, frigid gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Rock outcrop--4 percent
Inclusion 4: Lithic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 15 to 50 percent slopes--1 percent

Map Unit Setting
Landscape position: Mountains
Ninemile--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Thwoop--Landform: Mountains; geomorphic position: footslope; position on slope: lower part
Pequop--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
Inclusion 3--Landform: Hills; geomorphic position: summit
Inclusion 4--Landform: Mountains; geomorphic position: shoulder

Major Component Description
Ninemile Series
Elevation: 5,900 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Thwoop Series
Elevation: 5,700 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly silt loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Pequop Series
Elevation: 5,700 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Thwoop: Thurber needlegrass, basin wildrye, big sagebrush, bluegrass
Pequop: Idaho fescue, bluegrass, mountain big sagebrush
Inclusion 1: Big sagebrush, bluebunch wheatgrass, bottlebrush squirreltail
Inclusion 2: Big sagebrush, bluebunch wheatgrass, bottlebrush squirreltail
Inclusion 3: None
Inclusion 4: Idaho fescue

Ecological Site
Ninemile: 025XY017NV
Thwoop: 025XY014NV
Pequop: 025XY012NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY014NV
Inclusion 3: None
Inclusion 4: 025XY046NV

1656--Ninemile-Pequop-Gumble association

Composition
Major Components
Ninemile gravelly loam, 4 to 15 percent slopes--35 percent
Pequop gravelly loam, 15 to 30 percent slopes--35 percent
Gumble very gravelly sandy loam, 15 to 30 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Reluctan gravelly loam, 15 to 30 percent slopes--6 percent
Inclusion 2: Pie Creek gravelly loam, 2 to 15 percent slopes--2 percent
Inclusion 3: Welch sandy loam, drained, 0 to 2 percent slopes, rarely flooded--2 percent

Map Unit Setting
Landscape position: Hills
Ninemile--Landform: Hills; geomorphic position: summit
Pequop--Landform: Hills; geomorphic position: backslope; position on slope: upper; aspect: north
Gumble--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: lower; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Drainageways

Major Component Description
Ninemile Series
Elevation: 5,900 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days

Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Pequop Series
Elevation: 5,800 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Gumble Series
Elevation: 5,500 to 6,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Pequop: Idaho fescue, bluegrass, mountain big sagebrush
Gumble: Wyoming big sagebrush, bluebunch wheatgrass
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site
Ninemile: 025XY017NV
Pequop: 025XY012NV
Gumble: 025XY015NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY018NV
Inclusion 3: 025XY003NV

1657--Ninemile-Alyan association

Composition
Major Components
Ninemile gravelly loam, 4 to 15 percent slopes--45 percent
Alyan gravelly loam, 8 to 15 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Xerollic Haplargids, fine, montmorillonitic, frigid gravelly loam, 4 to 15 percent slopes--9 percent
Inclusion 2: Linkup very gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--2 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--1 percent

Map Unit Setting
Landscape position: Hills
Ninemile--Landform: Hills; geomorphic position: summit
Alyan--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description
Ninemile Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Alyan Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation
Ninemile: Big sagebrush, bluegrass, bottlebrush squirreltail
Alyan: Bluegrass, mountain big sagebrush
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site
Ninemile: 025XY017NV
Alyan: 025XY014NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY018NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY006NV

1658--Ninemile-Vanwyper-Ninemile, moderately steep association

Composition

Major Components

Ninemile gravelly loam, 4 to 15 percent slopes--35 percent
Vanwyper very cobbly loam, 15 to 30 percent slopes--25 percent
Ninemile gravelly loam, 15 to 30 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Aridic Argixerolls, loamy-skeletal, mixed, frigid gravelly loam, 15 to 30 percent slopes--10 percent
Inclusion 2: Rock outcrop--3 percent
Inclusion 3: Rubble land fragmental material--2 percent

Map Unit Setting

Landscape position: Hills
Ninemile--Landform: Hills; geomorphic position: summit
Vanwyper--Landform: Hills; geomorphic position: backslope; aspect: south
Ninemile--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description

Ninemile Series

Elevation: 5,300 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Vanwyper Series

Elevation: 5,300 to 6,700 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series

Elevation: 5,300 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Vanwyper: Big sagebrush, bluebunch wheatgrass, cheatgrass
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: None
Inclusion 3: None

Ecological Site

Ninemile: 025XY017NV
Vanwyper: 025XY015NV
Ninemile: 025XY017NV
Inclusion 1: 025XY014NV
Inclusion 2: None
Inclusion 3: None

1659--Ninemile-Carstump association

Composition

Major Components

Ninemile gravelly loam, 8 to 15 percent slopes--50 percent
Carstump gravelly loam, 8 to 30 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Susie Creek loam, 4 to 15 percent slopes--10 percent
Inclusion 2: Soughe very cobbly loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Rubble land fragmental material--1 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Hills
Ninemile--Landform: Hills; geomorphic position: summit
Carstump--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: footslope
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Hills; geomorphic position: backslope
Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description

Ninemile Series

Elevation: 6,000 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam

Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Carstump Series
Elevation: 5,400 to 6,300 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Carstump: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Basin big sagebrush, rabbitbrush
Inclusion 2: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 3: None
Inclusion 4: None

Ecological Site

Ninemile: 025XY017NV
Carstump: 025XY014NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY015NV
Inclusion 3: None
Inclusion 4: None

1660--Susie Creek-Pie Creek-Pattani association

Composition

Major Components
Susie Creek loam, 4 to 15 percent slopes--55 percent
Pie Creek loam, 15 to 30 percent slopes--25 percent
Pattani clay, 4 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Reluctan gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 2: Xerollic Haplargids, clayey-skeletal, montmorillonitic, frigid gravelly loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Susie Creek--Landform: Hills; geomorphic position: summit; shape of slope: plane
Pie Creek--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Pattani--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south

Major Component Description

Susie Creek Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Pie Creek Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Pattani Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Clay
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Susie Creek: Basin big sagebrush, bluebunch wheatgrass, bluegrass, rabbitbrush
Pie Creek: Bluegrass, bottlebrush squirreltail, low sagebrush
Pattani: Basin wildrye, big sagebrush, rabbitbrush
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: Big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Susie Creek: 025XY014NV
Pie Creek: 025XY018NV
Pattani: 025XY013NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY015NV

1671--Linkup-Carstump-Linkup, very cobbly loam association

Composition

Major Components
Linkup cobbly loam, 15 to 30 percent slopes--45 percent
Carstump very gravelly loam, 15 to 30 percent slopes--20 percent
Linkup very cobbly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions
Inclusion 1: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--6 percent
Inclusion 2: Rock outcrop--5 percent
Inclusion 3: Welch silt loam, 0 to 2 percent slopes, frequently flooded--2 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--2 percent

Map Unit Setting
Landscape position: Hills
Linkup--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Carstump--Landform: Hills; geomorphic position: backslope; shape of slope: concave
Linkup--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description
Linkup Series
Elevation: 5,900 to 7,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Carstump Series
Elevation: 5,900 to 7,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Linkup Series
Elevation: 6,100 to 7,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation
Linkup: Bluegrass, bottlebrush squirreltail
Carstump: Bluegrass, bottlebrush squirreltail, cheatgrass
Linkup: Bluegrass, bottlebrush squirreltail
Inclusion 1: Basin wildrye, bluegrass
Inclusion 2: None
Inclusion 3: Rush, tufted hairgrass, willow
Inclusion 4: Alpine timothy

Ecological Site
Linkup: 025XY018NV
Carstump: 025XY014NV
Linkup: 025XY018NV
Inclusion 1: 025XY003NV
Inclusion 2: None
Inclusion 3: 025XY005NV
Inclusion 4: 025XY006NV

1672--Linkup, steep-Carstump-Linkup association

Composition
Major Components
Linkup very cobbly loam, 30 to 50 percent slopes--40 percent
Carstump gravelly loam, 30 to 50 percent slopes--25 percent
Linkup very cobbly loam, 4 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--3 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, frequently flooded--3 percent
Inclusion 3: Reluctan gravelly loam, 8 to 15 percent slopes--2 percent
Inclusion 4: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--2 percent

Map Unit Setting
Landscape position: Mountains
Linkup--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Carstump--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: plane
Linkup--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: concave; aspect: north
Inclusion 4--Landform: Drainageways

Major Component Description
Linkup Series
Elevation: 6,000 to 8,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Carstump Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Linkup Series
Elevation: 6,500 to 8,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation
Linkup: Bluegrass, bottlebrush squirreltail
Carstump: Bluegrass, bottlebrush squirreltail, cheatgrass
Linkup: Bluegrass, bottlebrush squirreltail
Inclusion 1: None
Inclusion 2: Rush, tufted hairgrass, willow
Inclusion 3: Idaho fescue, antelope bitterbrush
Inclusion 4: Basin wildrye, bluegrass

Ecological Site
Linkup: 025XY018NV
Carstump: 025XY014NV
Linkup: 025XY018NV
Inclusion 1: None
Inclusion 2: 025XY005NV
Inclusion 3: 025XY012NV
Inclusion 4: 025XY003NV

1673--Linkup-Quarz-Alyan association

Composition
Major Components
Linkup very gravelly loam, 2 to 8 percent slopes--35 percent
Quarz very gravelly loam, 30 to 50 percent slopes--35 percent
Alyan cobbly loam, 15 to 50 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Reluctan very gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 2: Rock outcrop--3 percent
Inclusion 3: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--2 percent

Map Unit Setting
Landscape position: Plateaus
Linkup--Landform: Plateaus; geomorphic position: summit
Quarz--Landform: Plateaus; geomorphic position: backslope; aspect: south
Alyan--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: lower; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Drainageways

Major Component Description
Linkup Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Quarz Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Alyan Series
Elevation: 5,300 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation
Linkup: Bluegrass, bottlebrush squirreltail
Quarz: Antelope bitterbrush, basin wildrye, bluebunch wheatgrass
Alyan: Idaho fescue, bluegrass, cheatgrass
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: None
Inclusion 3: Basin wildrye, bluegrass

Ecological Site
Linkup: 025XY018NV
Quarz: 025XY009NV
Alyan: 025XY012NV
Inclusion 1: 025XY012NV
Inclusion 2: None
Inclusion 3: 025XY003NV

1675--Linkup-Snowmore-Ratsow association

Composition

Major Components

Linkup gravelly clay loam, 4 to 15 percent slopes--45 percent
Snowmore very fine sandy loam, 2 to 4 percent slopes --20 percent
Ratsow loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Olac cobbly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Coltroop very fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Rubble land fragmental material--3 percent

Map Unit Setting

Landscape position: Hills
Linkup--Landform: Hills; geomorphic position: backslope; shape of slope: concave
Snowmore--Landform: Hills; geomorphic position: shoulder
Ratsow--Landform: Hills; geomorphic position: summit; shape of slope: plane
Inclusion 1--Landform: Hills; geomorphic position: footslope
Inclusion 2--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 3--Landform: Hills; geomorphic position: summit
Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Linkup Series

Elevation: 5,100 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Snowmore Series

Elevation: 5,100 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Loess and volcanic ash

Ratsow Series

Elevation: 5,100 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Linkup: Bluegrass, bottlebrush squirreltail
Snowmore: Bluegrass, bottlebrush squirreltail, cheatgrass
Ratsow: Bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Bluegrass, bottlebrush squirreltail
Inclusion 2: Bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 3: None
Inclusion 4: None

Ecological Site

Linkup: 025XY018NV
Snowmore: 025XY019NV
Ratsow: 025XY014NV
Inclusion 1: 025XY018NV
Inclusion 2: 025XY019NV
Inclusion 3: None
Inclusion 4: None

1676--Linkup-Quarz association

Composition

Major Components

Linkup cobbly loam, 4 to 15 percent slopes--65 percent
Quarz very gravelly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Vanwyper cobbly loam, 15 to 50 percent slopes--8 percent
Inclusion 2: Rock outcrop--5 percent
Inclusion 3: Welch silt loam, 0 to 2 percent slopes, frequently flooded--2 percent

Map Unit Setting

Landscape position: Hills
Linkup--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Quarz--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Drainageways

Major Component Description

Linkup Series

Elevation: 6,100 to 6,400 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Quarz Series
Elevation: 6,100 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Dominant Present Vegetation
Linkup: Bluegrass, bottlebrush squirreltail
Quarz: Bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Bluebunch wheatgrass
Inclusion 2: None
Inclusion 3: Rush, tufted hairgrass, willow

Ecological Site
Linkup: 025XY018NV
Quarz: 025XY014NV
Inclusion 1: 025XY015NV
Inclusion 2: None
Inclusion 3: 025XY005NV

1680--Carstump-Reluctan-Ninemile association, hilly

Composition
Major Components
Carstump very gravelly loam, 15 to 30 percent slopes--30 percent
Reluctan cobbly loam, 15 to 30 percent slopes--30 percent
Ninemile very cobbly loam, 15 to 30 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Rubble land fragmental material--8 percent
Inclusion 2: Pachic Argixerolls, loamy-skeletal, mixed, frigid cobbly loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Lithic Xerollic Haplargids, clayey, montmorillonitic, frigid very gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, frequently flooded--1 percent

Map Unit Setting
Landscape position: Mountains
Carstump--Landform: Mountains; geomorphic position: backslope; shape of slope: plane; aspect: south
Reluctan--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: north
Ninemile--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: backslope
Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: summit
Inclusion 4--Landform: Drainageways

Major Component Description
Carstump Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Reluctan Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Carstump: Bluegrass, bottlebrush squirreltail, cheatgrass
Reluctan: Bluegrass, bottlebrush squirreltail, rabbitbrush
Ninemile: Bluegrass, bottlebrush squirreltail
Inclusion 1: None
Inclusion 2: Idaho fescue
Inclusion 3: Bluegrass, bottlebrush squirreltail
Inclusion 4: Rush, tufted hairgrass, willow

Ecological Site
Carstump: 025XY014NV
Reluctan: 025XY012NV
Ninemile: 025XY017NV
Inclusion 1: None
Inclusion 2: 025XY010NV
Inclusion 3: 025XY024NV
Inclusion 4: 025XY005NV

1685--Carstump-Ninemile-Graley association

Composition

Major Components

Carstump very gravelly loam, 30 to 50 percent slopes--35 percent
Ninemile very cobbly loam, 15 to 30 percent slopes--30 percent
Graley very cobbly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--6 percent
Inclusion 2: Welch silt loam, 0 to 2 percent slopes, frequently flooded--3 percent
Inclusion 3: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--3 percent
Inclusion 4: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent

Map Unit Setting

Landscape position: Mountains
Carstump--Landform: Mountains; geomorphic position: backslope; aspect: south
Ninemile--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Graley--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Carstump Series

Elevation: 6,000 to 7,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Ninemile Series

Elevation: 6,000 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Graley Series

Elevation: 6,000 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Carstump: Bluegrass, bottlebrush squirreltail, cheatgrass
Ninemile: Bluegrass, bottlebrush squirreltail
Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass
Inclusion 1: None
Inclusion 2: Rush, tufted hairgrass, willow
Inclusion 3: Alpine timothy
Inclusion 4: Basin wildrye, bluegrass

Ecological Site

Carstump: 025XY014NV
Ninemile: 025XY017NV
Graley: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY005NV
Inclusion 3: 025XY006NV
Inclusion 4: 025XY003NV

1686--Carstump-Reluctan-Ninemile association, steep

Composition

Major Components

Carstump gravelly loam, 30 to 50 percent slopes--35 percent
Reluctan cobbly loam, 30 to 50 percent slopes--30 percent
Ninemile very stony loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--5 percent
Inclusion 2: Shively loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, frequently flooded--2 percent

Map Unit Setting

Landscape position: Mountains
Carstump--Landform: Mountains; geomorphic position: backslope; aspect: south
Reluctan--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Ninemile--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper part
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Carstump Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Reluctan Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series
Elevation: 6,500 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Carstump: Bluegrass, bottlebrush squirreltail, cheatgrass
Reluctan: Bluegrass, bottlebrush squirreltail, rabbitbrush
Ninemile: Bluegrass, bottlebrush squirreltail
Inclusion 1: None
Inclusion 2: Idaho fescue
Inclusion 3: Basin wildrye, bluegrass
Inclusion 4: Rush, tufted hairgrass, willow

Ecological Site

Carstump: 025XY014NV
Reluctan: 025XY012NV
Ninemile: 025XY017NV
Inclusion 1: None
Inclusion 2: 025XY010NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY005NV

1687--Carstump, cobbly loam-Linkup-Carstump association

Composition

Major Components
Carstump cobbly loam, 15 to 50 percent slopes--35 percent
Linkup cobbly loam, 4 to 15 percent slopes--35 percent
Carstump gravelly loam, 4 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--7 percent
Inclusion 2: Graley very gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--2 percent
Inclusion 4: Rubble land fragmental material--1 percent

Map Unit Setting

Landscape position: Mountains
Carstump--Landform: Mountains; geomorphic position: backslope
Linkup--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Carstump--Landform: Mountains; geomorphic position: backslope; position on slope: lower part
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: backslope

Major Component Description

Carstump Series
Elevation: 5,500 to 7,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Linkup Series
Elevation: 5,500 to 7,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Carstump Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Carstump: Bluegrass, bottlebrush squirreltail, cheatgrass
Linkup: Bluegrass, bottlebrush squirreltail

Carstump: Bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: None
Inclusion 2: Idaho fescue, antelope bitterbrush
Inclusion 3: Basin wildrye, bluegrass
Inclusion 4: None

Ecological Site

Carstump: 025XY014NV
Linkup: 025XY018NV
Carstump: 025XY014NV
Inclusion 1: None
Inclusion 2: 025XY012NV
Inclusion 3: 025XY003NV
Inclusion 4: None

1691--Pequop-Rock outcrop-Rubble land association

Composition

Major Components

Pequop gravelly loam, 30 to 50 percent slopes--40 percent
Rock outcrop--25 percent
Rubble land fragmental material, 30 to 50 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Graley very gravelly loam, 30 to 75 percent slopes--10 percent

Map Unit Setting

Landscape position: Hills
Pequop--Landform: Hills; geomorphic position: backslope; aspect: north
Rock outcrop--Landform: Hills; geomorphic position: backslope
Rubble land--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: north

Major Component Description

Pequop Series

Elevation: 5,000 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area

Elevation: 5,000 to 6,500 feet
Drainage class: Excessively drained

Rubble land Miscellaneous Area

Elevation: 5,000 to 6,500 feet
Surface layer texture: Fragmental material
Drainage class: Excessively drained

Dominant Present Vegetation

Pequop: Idaho fescue, bluegrass
Rock outcrop: None
Rubble land: None
Inclusion 1: Idaho fescue, bluegrass

Ecological Site

Pequop: 025XY012NV
Rubble land: None
Rock outcrop: None
Inclusion 1: 025XY012NV

1700--Cotant-Quarz-Ninemile association

Composition

Major Components

Cotant gravelly clay loam, 15 to 50 percent slopes--40 percent
Quarz very gravelly loam, 30 to 50 percent slopes--30 percent
Ninemile very cobbly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--5 percent
Inclusion 2: Pachic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 3: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--3 percent
Inclusion 4: Hapgood very gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Cotant--Landform: Hills; geomorphic position: summit; position on slope: lower part
Quarz--Landform: Hills; geomorphic position: backslope; aspect: south
Ninemile--Landform: Hills; geomorphic position: backslope; position on slope: upper part
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Hills; geomorphic position: backslope; position on slope: upper; shape of slope: concave

Major Component Description

Cotant Series

Elevation: 5,800 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Quarz Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Ninemile Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Cotant: Bluegrass, bottlebrush squirreltail
Quarz: Antelope bitterbrush, basin wildrye, bluebunch wheatgrass
Ninemile: Bluegrass, bottlebrush squirreltail
Inclusion 1: Alpine timothy
Inclusion 2: Idaho fescue, bluegrass
Inclusion 3: Basin wildrye, bluegrass
Inclusion 4: Idaho fescue, mountain brome

Ecological Site
Cotant: 025XY017NV
Quarz: 025XY009NV
Ninemile: 025XY017NV
Inclusion 1: 025XY006NV
Inclusion 2: 025XY012NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY004NV

1702--Cotant-McIvey-Blitzen association

Composition
Major Components
Cotant gravelly clay loam, 4 to 15 percent slopes--45 percent
McIvey cobbly loam, 4 to 15 percent slopes--30 percent
Blitzen very gravelly clay loam, 15 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Donna gravelly loam, 4 to 15 percent slopes--4 percent
Inclusion 2: Gochea gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Pachic Argixerolls, fine, montmorillonitic, frigid very gravelly loam--3 percent

Map Unit Setting
Landscape position: Hills
Cotant--Landform: Hills; geomorphic position: summit
McIvey--Landform: Hills; geomorphic position: backslope; aspect: north
Blitzen--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north

Major Component Description
Cotant Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

McIvey Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 15 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Blitzen Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 13 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation
Cotant: Bluegrass, bottlebrush squirreltail
McIvey: Idaho fescue, antelope bitterbrush
Blitzen: Basin wildrye, bluebunch wheatgrass
Inclusion 1: Bluegrass, bottlebrush squirreltail
Inclusion 2: Bluegrass, bottlebrush squirreltail
Inclusion 3: Bluegrass, bottlebrush squirreltail

Ecological Site
Cotant: 025XY017NV
McIvey: 025XY012NV
Blitzen: 025XY009NV
Inclusion 1: 025XY018NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY014NV

1703--Cotant-Lerrow-Bullump association

Composition

Major Components

Cotant gravelly clay loam, 15 to 50 percent slopes--45 percent
Lerrow cobbly loam, 15 to 50 percent slopes--25 percent
Bullump very gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Graley very cobbly loam, 15 to 30 percent slopes--5 percent
Inclusion 2: Typic Argixerolls, fine-loamy, mixed, frigid very gravelly loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Hills
Cotant--Landform: Hills; geomorphic position: summit; shape of slope: convex
Lerrow--Landform: Hills; geomorphic position: backslope; aspect: south
Bullump--Landform: Hills; geomorphic position: backslope; position on slope: upper; shape of slope: concave
Inclusion 1--Landform: Hills; geomorphic position: shoulder
Inclusion 2--Landform: Hills; geomorphic position: footslope; aspect: north
Inclusion 3--Landform: Hills; geomorphic position: summit

Major Component Description

Cotant Series

Elevation: 6,200 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Lerrow Series

Elevation: 6,200 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Bullump Series

Elevation: 6,200 to 6,700 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 75 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Lerrow: Big sagebrush, bluebunch wheatgrass, cheatgrass
Bullump: Idaho fescue, basin wildrye, bluebunch wheatgrass, mountain brome
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: Idaho fescue, basin big sagebrush
Inclusion 3: None

Ecological Site

Cotant: 025XY017NV
Lerrow: 025XY009NV
Bullump: 025XY016NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY027NV
Inclusion 3: None

1711--Reluctan-Ninemile-Cleavage association

Composition

Major Components

Reluctan cobbly loam, 15 to 30 percent slopes--35 percent
Ninemile cobbly loam, 4 to 15 percent slopes--30 percent
Cleavage gravelly loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Hackwood silt loam, 4 to 15 percent slopes--3 percent
Inclusion 2: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent
Inclusion 3: Welch silt loam, 0 to 2 percent slopes, frequently flooded--2 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--2 percent

Map Unit Setting

Landscape position: Mountains
Reluctan--Landform: Mountains; geomorphic position: backslope; aspect: north
Ninemile--Landform: Mountains; geomorphic position: summit; position on slope: lower part
Cleavage--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Reluctan Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series
Elevation: 6,000 to 7,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Cleavage Series
Elevation: 6,500 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Reluctan: Bluegrass, bottlebrush squirreltail, mountain big sagebrush, rabbitbrush
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Mountain brome, quaking aspen, slender wheatgrass
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Rush, sedge, tufted hairgrass, willow
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Reluctan: 025XY012NV
Ninemile: 025XY017NV
Cleavage: 025XY024NV
Inclusion 1: 025XY065NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY005NV
Inclusion 4: 025XY006NV

1712--Reluctan-Sumine-Cleavage association

Composition

Major Components
Reluctan cobbly loam, 15 to 50 percent slopes--55 percent
Sumine very gravelly loam, 30 to 50 percent slopes--15 percent
Cleavage very gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions
Inclusion 1: Hapgood very gravelly loam, 15 to 50 percent slopes--8 percent
Inclusion 2: Tweener very cobbly sandy loam, 15 to 50 percent slopes--3 percent
Inclusion 3: Tusel gravelly loam, 15 to 50 percent slopes--2 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, frequently flooded--2 percent

Map Unit Setting

Landscape position: Hills
Reluctan--Landform: Hills; geomorphic position: backslope; shape of slope: plane; aspect: north
Sumine--Landform: Hills; geomorphic position: backslope; aspect: south
Cleavage--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Inclusion 3--Landform: Hills; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 4--Landform: Drainageways

Major Component Description

Reluctan Series
Elevation: 6,400 to 6,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Sumine Series
Elevation: 6,400 to 6,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Cleavage Series
Elevation: 6,500 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Reluctan: Bluegrass, bottlebrush squirreltail, mountain big sagebrush, rabbitbrush
Sumine: Antelope bitterbrush, cheatgrass, mountain big sagebrush
Cleavage: Idaho fescue, low sagebrush
Inclusion 1: Idaho fescue, mountain brome, snowberry
Inclusion 2: Idaho fescue, antelope bitterbrush, bluegrass
Inclusion 3: Idaho fescue, mountain big sagebrush
Inclusion 4: Rush, sedge, tufted hairgrass, willow

Ecological Site

Reluctan: 025XY012NV
Sumine: 025XY009NV
Cleavage: 025XY017NV
Inclusion 1: 025XY004NV
Inclusion 2: 025XY007NV
Inclusion 3: 025XY010NV
Inclusion 4: 025XY005NV

1713--Reluctan-Erakatak-Rugar association

Composition

Major Components

Reluctan gravelly loam, 30 to 50 percent slopes--35 percent
Erakatak gravelly loam, 30 to 50 percent slopes--30 percent
Rugar loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--6 percent
Inclusion 2: Aridic Argixerolls gravelly loam, 8 to 30 percent slopes--3 percent
Inclusion 3: Hapgood very gravelly loam, 30 to 75 percent slopes--3 percent
Inclusion 4: Sumine very gravelly loam, 30 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains
Reluctan--Landform: Mountains; geomorphic position: footslope; position on slope: lower; shape of slope: convex
Erakatak--Landform: Mountains; geomorphic position: backslope; aspect: south
Rugar--Landform: Mountains; geomorphic position: footslope; shape of slope: concave
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Mountains; geomorphic position: footslope
Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: backslope; aspect: south

Major Component Description

Reluctan Series

Elevation: 6,300 to 7,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Erakatak Series

Elevation: 6,300 to 7,500 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rugar Series

Elevation: 6,300 to 7,500 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Dominant Present Vegetation

Reluctan: Bluegrass, bottlebrush squirreltail, mountain big sagebrush, rabbitbrush
Erakatak: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Rugar: Basin wildrye, bottlebrush squirreltail, mulesear wyethia, slender wheatgrass
Inclusion 1: Nevada bluegrass, alpine timothy
Inclusion 2: Idaho fescue, basin big sagebrush
Inclusion 3: Idaho fescue, mountain brome, snowberry
Inclusion 4: Big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Reluctan: 025XY012NV
Erakatak: 025XY016NV
Rugar: 025XY047NV
Inclusion 1: 025XY006NV
Inclusion 2: 025XY027NV
Inclusion 3: 025XY004NV
Inclusion 4: 025XY009NV

1720--Quarz-Alyan-Ninemile association

Composition

Major Components

Quarz very gravelly loam, 15 to 50 percent slopes--35 percent

Alyan cobbly loam, 15 to 50 percent slopes--35 percent
Ninemile very cobbly loam, 15 to 30 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--5 percent

Map Unit Setting
Landscape position: Hills
Quarz--Landform: Hills; geomorphic position: backslope; aspect: south
Alyan--Landform: Hills; geomorphic position: backslope; aspect: north
Ninemile--Landform: Hills; geomorphic position: summit; position on slope: upper; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: summit

Major Component Description
Quarz Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Alyan Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Quarz: Antelope bitterbrush, basin wildrye, big sagebrush, bluebunch wheatgrass
Alyan: Idaho fescue, bluegrass, mountain big sagebrush
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: None

Ecological Site
Quarz: 025XY009NV
Alyan: 025XY012NV
Ninemile: 025XY017NV
Inclusion 1: None

1725--Quarz-Cleavage-Loncan association

Composition
Major Components
Quarz very stony loam, 15 to 50 percent slopes--35 percent
Cleavage extremely gravelly loam, 15 to 50 percent slopes--25 percent
Loncan very gravelly loam, 15 to 50 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--7 percent
Inclusion 2: Typic Argixerolls, fine, montmorillonitic, frigid very gravelly loam--5 percent
Inclusion 3: Crooked Creek gravelly silty clay loam, 0 to 2 percent slopes, occasionally flooded--3 percent

Map Unit Setting
Landscape position: Mountains
Quarz--Landform: Mountains; geomorphic position: backslope; aspect: south
Cleavage--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Loncan--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: backslope
Inclusion 3--Landform: Drainageways

Major Component Description
Quarz Series
Elevation: 6,200 to 7,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Cleavage Series
Elevation: 6,500 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Loncan Series
Elevation: 6,200 to 7,500 feet

Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Quarz: Antelope bitterbrush, basin wildrye, big sagebrush, bluebunch wheatgrass
Cleavage: Idaho fescue, low sagebrush
Loncan: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Idaho fescue, mountain big sagebrush
Inclusion 3: Nevada bluegrass, alpine timothy, sedge

Ecological Site

Quarz: 025XY009NV
Cleavage: 025XY024NV
Loncan: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY012NV
Inclusion 3: 025XY006NV

1726--Quarz-Ninemile-Pequop association

Composition

Major Components

Quarz very gravelly loam, 15 to 30 percent slopes--35 percent
Ninemile gravelly loam, 15 to 30 percent slopes--35 percent
Pequop gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--5 percent
Inclusion 2: Shively loam, 30 to 50 percent slopes--5 percent

Map Unit Setting

Landscape position: Mountains
Quarz--Landform: Mountains; geomorphic position: backslope; aspect: south
Ninemile--Landform: Mountains; geomorphic position: backslope; aspect: south
Pequop--Landform: Mountains; geomorphic position: backslope; shape of slope: plane; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Major Component Description

Quarz Series

Elevation: 5,300 to 6,300 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series

Elevation: 5,300 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Pequop Series

Elevation: 5,300 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Quarz: Antelope bitterbrush, basin wildrye, big sagebrush, bluebunch wheatgrass
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Pequop: Idaho fescue, bluegrass, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Idaho fescue, mountain big sagebrush

Ecological Site

Quarz: 025XY009NV
Ninemile: 025XY017NV
Pequop: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY010NV

1730--Graley-Erakatak-Chen association

Composition

Major Components

Graley very gravelly loam, 30 to 50 percent slopes--40 percent
Erakatak very gravelly loam, 15 to 50 percent slopes--30 percent
Chen very gravelly loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Argic Pachic Cryoborolls, clayey-skeletal, montmorillonitic gravelly loam, 15 to 30 percent slopes--10 percent
Inclusion 2: Pachic Palexerolls, fine, montmorillonitic, frigid gravelly loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills
Graley--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Erakatak--Landform: Hills; geomorphic position: backslope; aspect: south
Chen--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: plane; aspect: north

Major Component Description

Graley Series
Elevation: 6,000 to 7,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Erakatak Series
Elevation: 6,000 to 7,200 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Chen Series
Elevation: 6,000 to 7,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Erakatak: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, mountain brome, snowberry
Inclusion 2: Idaho fescue, bluegrass, low sagebrush

Ecological Site

Graley: 025XY012NV
Erakatak: 025XY016NV
Chen: 025XY017NV
Inclusion 1: 025XY004NV
Inclusion 2: 025XY017NV

1732--Graley-Quarz-Ninemile association

Composition

Major Components
Graley very stony loam, 30 to 50 percent slopes--40 percent
Quarz very gravelly loam, 30 to 50 percent slopes--30 percent
Ninemile very cobbly loam, 15 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--8 percent
Inclusion 2: Shively loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Cleavage extremely gravelly loam, 15 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains
Graley--Landform: Mountains; geomorphic position: backslope; shape of slope: plane; aspect: north
Quarz--Landform: Mountains; geomorphic position: backslope; aspect: south
Ninemile--Landform: Mountains; geomorphic position: summit; position on slope: lower part
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Major Component Description

Graley Series
Elevation: 5,700 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Quarz Series
Elevation: 5,700 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series
Elevation: 5,700 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained

Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Quarz: Antelope bitterbrush, basin wildrye, big sagebrush, bluebunch wheatgrass
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: None
Inclusion 2: Idaho fescue, mountain big sagebrush
Inclusion 3: Bluegrass, low sagebrush

Ecological Site

Graley: 025XY012NV
Quarz: 025XY009NV
Ninemile: 025XY017NV
Inclusion 1: None
Inclusion 2: 025XY010NV
Inclusion 3: 025XY024NV

1733--Graley-Loncan association

Composition

Major Components

Graley very stony loam, 15 to 50 percent slopes--55 percent
Loncan very gravelly loam, 30 to 50 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Quarz very gravelly loam, 15 to 50 percent slopes--9 percent
Inclusion 2: Ninemile gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Mountains
Graley--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Loncan--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: south
Inclusion 2--Landform: Mountains; geomorphic position: summit
Inclusion 3--Landform: Mountains; geomorphic position: backslope

Major Component Description

Graley Series

Elevation: 5,500 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Loncan Series

Elevation: 5,500 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Graley: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Loncan: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 3: None

Ecological Site

Graley: 025XY012NV
Loncan: 025XY012NV
Inclusion 1: 025XY009NV
Inclusion 2: 025XY017NV
Inclusion 3: None

1740--Erakatak-Cleavage-Hackwood association

Composition

Major Components

Erakatak very gravelly loam, 15 to 50 percent slopes--40 percent
Cleavage extremely gravelly loam, 4 to 15 percent slopes--30 percent
Hackwood silt loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Sumine very gravelly loam, 50 to 75 percent slopes--5 percent
Inclusion 2: Hapgood very gravelly loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 8 to 15 percent slopes--4 percent
Inclusion 4: Crooked Creek gravelly silty clay loam, 0 to 2 percent slopes, occasionally flooded--2 percent

Map Unit Setting

Landscape position: Mountains and foothills
Erakatak--Landform: Mountains; geomorphic position: backslope; aspect: south
Cleavage--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex

Hackwood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: south
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: plane; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: footslope
Inclusion 4--Landform: Drainageways

Major Component Description

Erakatak Series
Elevation: 6,000 to 7,800 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Cleavage Series
Elevation: 6,400 to 7,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Hackwood Series
Elevation: 6,000 to 7,800 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from sedimentary rocks

Dominant Present Vegetation

Erakatak: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Hackwood: Mountain brome, quaking aspen, slender wheatgrass
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Idaho fescue, mountain brome, snowberry
Inclusion 3: Idaho fescue, basin big sagebrush
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Erakatak: 025XY016NV
Cleavage: 025XY024NV
Hackwood: 025XY065NV
Inclusion 1: 025XY009NV
Inclusion 2: 025XY004NV
Inclusion 3: 025XY027NV
Inclusion 4: 025XY006NV

1741--Erakatak-Chen-Tusk association

Composition

Major Components
Erakatak very gravelly clay loam, 30 to 50 percent slopes--40 percent
Chen very gravelly sandy clay loam, 4 to 15 percent slopes--25 percent
Tusk gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions
Inclusion 1: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam--6 percent
Inclusion 2: Aridic Argixerolls, fine-loamy, mixed, frigid gravelly loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--2 percent

Map Unit Setting

Landscape position: Hills
Erakatak--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: south
Chen--Landform: Hills; geomorphic position: summit; shape of slope: convex
Tusk--Landform: Hills; geomorphic position: backslope; shape of slope: plane; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Erakatak Series
Elevation: 5,500 to 7,000 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Chen Series
Elevation: 5,500 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly sandy clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Tusk Series
Elevation: 5,500 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from mixed rocks

Dominant Present Vegetation
Erakatak: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Tusk: Cheatgrass, mountain big sagebrush, rabbitbrush, snowberry
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site
Erakatak: 025XY016NV
Chen: 025XY017NV
Tusk: 025XY004NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY012NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY006NV

1742--Erakatak-Rugar-Tusel association

Composition
Major Components
Erakatak gravelly loam, 15 to 50 percent slopes--40 percent
Rugar clay loam, 15 to 30 percent slopes--25 percent
Tusel very gravelly loam, 15 to 30 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Lithic Argixerolls, clayey-skeletal, mixed, frigid very gravelly loam, 8 to 30 percent slopes--7 percent
Inclusion 2: Graley very gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 3: Tusel gravelly loam, 8 to 15 percent slopes--2 percent
Inclusion 4: Typic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam--1 percent

Map Unit Setting
Landscape position: Hills
Erakatak--Landform: Hills; geomorphic position: backslope; aspect: south
Rugar--Landform: Hills; geomorphic position: footslope; shape of slope: concave
Tusel--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: south
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Inclusion 3--Landform: Hills; geomorphic position: shoulder; shape of slope: convex; aspect: north
Inclusion 4--Landform: Hills; geomorphic position: backslope; position on slope: lower part

Major Component Description
Erakatak Series
Elevation: 5,800 to 6,800 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Rugar Series
Elevation: 5,800 to 6,800 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Tusel Series
Elevation: 5,800 to 6,800 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Dominant Present Vegetation
Erakatak: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Rugar: Basin wildrye, mulesear wyethia, slender wheatgrass
Tusel: Mountain brome, snowberry
Inclusion 1: Idaho fescue, bluegrass, serviceberry
Inclusion 2: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 3: Idaho fescue, mountain big sagebrush
Inclusion 4: Idaho fescue, basin big sagebrush

Ecological Site
Erakatak: 025XY016NV
Rugar: 025XY047NV
Tusel: 025XY004NV
Inclusion 1: 025XY046NV
Inclusion 2: 025XY012NV
Inclusion 3: 025XY010NV

Inclusion 4: 025XY027NV

1744--Erakatak-Graley-Tusel association

Composition

Major Components

Erakatak very gravelly clay loam, 30 to 50 percent slopes--35 percent
Graley very gravelly loam, 15 to 50 percent slopes--30 percent
Tusel very gravelly loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 15 to 50 percent slopes--6 percent
Inclusion 2: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 15 to 50 percent slopes--4 percent
Inclusion 3: Rugar loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Lithic Xerorthents, loamy-skeletal, mixed, frigid very gravelly loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Erakatak--Landform: Hills; geomorphic position: backslope; aspect: south
Graley--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Tusel--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Inclusion 3--Landform: Hills; geomorphic position: footslope; position on slope: lower part; shape of slope: plane
Inclusion 4--Landform: Hills; geomorphic position: shoulder

Major Component Description

Erakatak Series

Elevation: 5,900 to 7,200 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Graley Series

Elevation: 5,900 to 7,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Tusel Series

Elevation: 5,900 to 7,200 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Dominant Present Vegetation

Erakatak: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Idaho fescue, bluegrass, serviceberry
Inclusion 3: Idaho fescue, mountain brome, wyethia
Inclusion 4: Idaho fescue, black sagebrush

Ecological Site

Erakatak: 025XY016NV
Graley: 025XY012NV
Tusel: 025XY004NV
Inclusion 1: 025XY009NV
Inclusion 2: 025XY046NV
Inclusion 3: 025XY047NV
Inclusion 4: 024XY042NV

1746--Booford-Cotant-Blitzen association

Composition

Major Components

Booford silt loam, 15 to 30 percent slopes--35 percent
Cotant gravelly clay loam, 15 to 30 percent slopes--35 percent
Blitzen gravelly clay loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Typic Argixerolls, fine, montmorillonitic, frigid very gravelly loam--6 percent
Inclusion 2: Tusel gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam--3 percent
Inclusion 4: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent

Map Unit Setting

Landscape position: Hills
Booford--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north

Cotant--Landform: Hills; geomorphic position: summit; shape of slope: convex
Blitzen--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 3--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 4--Landform: Drainageways

Major Component Description

Booford Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Cotant Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Blitzen Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 13 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Dominant Present Vegetation

Booford: Idaho fescue, mountain big sagebrush, wheatgrass
Cotant: Bluegrass, bottlebrush squirreltail
Blitzen: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: Idaho fescue, mountain big sagebrush
Inclusion 3: Idaho fescue, bluegrass, serviceberry
Inclusion 4: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Booford: 025XY012NV
Cotant: 025XY017NV
Blitzen: 025XY009NV
Inclusion 1: 025XY004NV
Inclusion 2: 025XY010NV
Inclusion 3: 025XY046NV
Inclusion 4: 025XY003NV

1800--Bregar, moderately steep-Bregar-Carstump association

Composition

Major Components
Bregar very gravelly loam, 15 to 30 percent slopes--45 percent
Bregar very gravelly loam, 4 to 15 percent slopes--25 percent
Carstump very cobbly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions
Inclusion 1: Rock outcrop--5 percent
Inclusion 2: Clementine silt loam, drained, 0 to 2 percent slopes--4 percent
Inclusion 3: Clementine silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains
Bregar--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Bregar--Landform: Mountains; geomorphic position: summit
Carstump--Landform: Mountains; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper part; shape of slope: convex
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Drainageways

Major Component Description

Bregar Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Bregar Series
Elevation: 6,200 to 7,500 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Carstump Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 11 inches

Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Bregar: Bluegrass, low sagebrush
Bregar: Bluegrass, low sagebrush
Carstump: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: None
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Rush, sedge, tufted hairgrass, willow

Ecological Site

Bregar: 025XY018NV
Bregar: 025XY018NV
Carstump: 025XY014NV
Inclusion 1: None
Inclusion 2: 025XY003NV
Inclusion 3: 025XY005NV

1802--Bregar-Ninemile-Pequop association

Composition

Major Components

Bregar very gravelly loam, eroded, 4 to 15 percent slopes--40 percent
Ninemile gravelly loam, 4 to 15 percent slopes--30 percent
Pequop gravelly loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--6 percent
Inclusion 2: Quarz very gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Welch silt loam, drained, 2 to 8 percent slopes, rarely flooded--2 percent
Inclusion 4: Tweener very cobbly loam, 15 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Bregar--Landform: Hills; geomorphic position: summit; aspect: south
Ninemile--Landform: Hills; geomorphic position: toeslope; shape of slope: convex; aspect: north
Pequop--Landform: Hills; geomorphic position: toeslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: upper part; shape of slope: convex
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Bregar Series

Elevation: 5,300 to 5,800 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series

Elevation: 5,300 to 5,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Pequop Series

Elevation: 5,300 to 5,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Bregar: Bluegrass, low sagebrush
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Pequop: Idaho fescue, bluegrass, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Big sagebrush, cheatgrass
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Idaho fescue, antelope bitterbrush, mountain big sagebrush

Ecological Site

Bregar: 025XY051NV
Ninemile: 025XY017NV
Pequop: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY009NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY007NV

1803--Bregar-Sumine-Rock outcrop association

Composition

Major Components

Bregar very gravelly sandy loam, eroded, 15 to 50 percent slopes--45 percent

Sumine very gravelly loam, 30 to 50 percent slopes--25 percent
Rock outcrop--15 percent
Contrasting Inclusions
Inclusion 1: Pernty very gravelly loam, 30 to 50 percent slopes--10 percent
Inclusion 2: Chen very gravelly loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills
Bregar--Landform: Hills; geomorphic position: summit; shape of slope: convex
Sumine--Landform: Hills; geomorphic position: backslope; shape of slope: plane; aspect: south
Rock outcrop--Landform: Hills; geomorphic position: backslope; position on slope: upper; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: plane; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: summit

Major Component Description

Bregar Series
Elevation: 5,400 to 6,600 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Sumine Series
Elevation: 5,400 to 6,600 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 5,400 to 6,600 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Bregar: Bluegrass, low sagebrush
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Rock outcrop: None
Inclusion 1: Idaho fescue, antelope bitterbrush
Inclusion 2: Bluegrass, low sagebrush

Ecological Site

Bregar: 025XY051NV
Sumine: 025XY009NV
Rock outcrop: None
Inclusion 1: 025XY012NV
Inclusion 2: 025XY017NV

1805--Bregar-Deseed-Linkup association

Composition

Major Components
Bregar extremely cobbly loam, 15 to 30 percent slopes--35 percent
Deseed gravelly loam, 8 to 15 percent slopes--25 percent
Linkup very cobbly loam, 8 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Lithic Xerollic Haplargids, loamy, mixed, frigid very gravelly loam, 4 to 15 percent slopes--7 percent
Inclusion 2: Xerollic Durargids, clayey, montmorillonitic, frigid, shallow gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Ratsow loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Bregar--Landform: Hills; geomorphic position: summit
Deseed--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: north
Linkup--Landform: Hills; geomorphic position: backslope; shape of slope: plane
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Hills; geomorphic position: backslope; position on slope: upper; shape of slope: convex
Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description

Bregar Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Deseed Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Linkup Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Bregar: Bluegrass, low sagebrush, rabbitbrush
Deseed: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Linkup: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Big sagebrush, bluegrass, cheatgrass
Inclusion 2: Bluegrass, low sagebrush
Inclusion 3: None
Inclusion 4: Big sagebrush, bluegrass, cheatgrass

Ecological Site

Bregar: 025XY022NV
Deseed: 025XY014NV
Linkup: 025XY018NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY018NV
Inclusion 3: None
Inclusion 4: 025XY014NV

1810--Shively-Ninemile-Hackwood association

Composition

Major Components

Shively loam, 30 to 50 percent slopes--35 percent
Ninemile very cobbly loam, 4 to 15 percent slopes--30 percent
Hackwood silt loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--10 percent
Inclusion 2: Tusk loam, 15 to 30 percent slopes--3 percent
Inclusion 3: Pachic Cryoborolls, fine-loamy, mixed very gravelly loam--1 percent
Inclusion 4: Rubble land fragmental material--1 percent

Map Unit Setting

Landscape position: Mountains
Shively--Landform: Mountains; geomorphic position: backslope; aspect: north
Ninemile--Landform: Mountains; geomorphic position: summit
Hackwood--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: backslope

Major Component Description

Shively Series
Elevation: 6,500 to 7,500 feet
Precipitation: About 16 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface rock fragments: 2 percent cobbles;
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Ninemile Series
Elevation: 6,500 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Hackwood Series
Elevation: 6,500 to 7,500 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from mixed rocks

Dominant Present Vegetation

Shively: Idaho fescue, basin wildrye, bluebunch wheatgrass, snowberry
Ninemile: Bluegrass, bottlebrush squirreltail, low sagebrush
Hackwood: Mountain brome, quaking aspen, slender wheatgrass
Inclusion 1: None
Inclusion 2: Mountain big sagebrush, snowberry
Inclusion 3: Mountain brome, quaking aspen, slender wheatgrass
Inclusion 4: None

Ecological Site

Shively: 025XY010NV
Ninemile: 025XY017NV
Hackwood: 025XY065NV
Inclusion 1: None
Inclusion 2: 025XY004NV
Inclusion 3: 025XY002NV
Inclusion 4: None

1830--Vanwyper, steep-Alyan-Vanwyper association

Composition

Major Components

Vanwyper gravelly loam, 15 to 50 percent slopes--50 percent
Alyan gravelly loam, 15 to 50 percent slopes--20 percent
Vanwyper gravelly loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Lithic Argixerolls, clayey-skeletal, montmorillonitic, mesic very gravelly loam--6 percent
Inclusion 2: Aridic Argixerolls, fine, montmorillonitic, mesic gravelly loam, 2 to 8 percent slopes--2 percent
Inclusion 3: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic gravelly loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Vanwyper--Landform: Hills; geomorphic position: backslope
Alyan--Landform: Hills; geomorphic position: backslope; aspect: north
Vanwyper--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position: backslope; aspect: south

Major Component Description

Vanwyper Series

Elevation: 5,500 to 6,500 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Alyan Series

Elevation: 5,500 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Vanwyper Series

Elevation: 5,500 to 6,500 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Vanwyper: Wyoming big sagebrush, bluegrass
Alyan: Bluegrass, mountain big sagebrush
Vanwyper: Wyoming big sagebrush, bluegrass
Inclusion 1: Bluegrass, low sagebrush
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Vanwyper: 025XY019NV
Alyan: 025XY014NV
Vanwyper: 025XY019NV
Inclusion 1: 025XY017NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY015NV

1831--Vanwyper, moderately steep-Trunk-Vanwyper association

Composition

Major Components

Vanwyper cobbly loam, 15 to 30 percent slopes--35 percent
Trunk gravelly loam, 30 to 50 percent slopes--30 percent
Vanwyper cobbly loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Lithic Haplargids, clayey-skeletal, montmorillonitic, mesic very gravelly loam--3 percent
Inclusion 2: Rubble land fragmental material--3 percent
Inclusion 3: Rock outcrop--2 percent
Inclusion 4: Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic gravelly loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Vanwyper--Landform: Mountains; geomorphic position: backslope
Trunk--Landform: Mountains; geomorphic position: backslope
Vanwyper--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Mountains; geomorphic position: backslope
Inclusion 2--Landform: Mountains; geomorphic position: backslope
Inclusion 3--Landform: Mountains; geomorphic position: summit

Inclusion 4--Landform: Mountains; geomorphic position: footslope

Major Component Description

Vanwyper Series
Elevation: 5,400 to 6,200 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Trunk Series
Elevation: 5,400 to 6,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Vanwyper Series
Elevation: 5,400 to 6,200 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Dominant Present Vegetation

Vanwyper: Wyoming big sagebrush, bluegrass
Trunk: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Vanwyper: Wyoming big sagebrush, bluegrass
Inclusion 1: Bluegrass, low sagebrush
Inclusion 2: None
Inclusion 3: None
Inclusion 4: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass

Ecological Site

Vanwyper: 025XY019NV
Trunk: 025XY019NV
Vanwyper: 025XY019NV
Inclusion 1: 025XY017NV
Inclusion 2: None
Inclusion 3: None
Inclusion 4: 025XY019NV

1832--Vanwyper-Trunk-Trunk, steep association

Composition

Major Components
Vanwyper very cobbly loam, 15 to 50 percent slopes--35 percent
Trunk cobbly clay loam, 4 to 15 percent slopes--25 percent
Trunk cobbly clay loam, 15 to 50 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--6 percent
Inclusion 2: Aridic Haploxerolls cobbly loam--3 percent
Inclusion 3: Xerollic Camborthids cobbly loam--3 percent
Inclusion 4: Typic Durorthids cobbly loam--3 percent

Map Unit Setting

Landscape position: Mountains
Vanwyper--Landform: Mountains; geomorphic position: backslope; aspect: south
Trunk--Landform: Mountains; geomorphic position: summit
Trunk--Landform: Mountains; geomorphic position: backslope
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains; geomorphic position: footslope

Major Component Description

Vanwyper Series
Elevation: 5,400 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Trunk Series
Elevation: 5,400 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from mixed rocks

Trunk Series
Elevation: 5,400 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly clay loam
Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from mixed rocks

Dominant Present Vegetation

Vanwyper: Wyoming big sagebrush
Trunk: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Trunk: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: None
Inclusion 2: Bluegrass, mountain big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye
Inclusion 4: Cheatgrass, shadscale

Ecological Site

Vanwyper: 025XY015NV
Trunk: 025XY019NV
Trunk: 025XY019NV
Inclusion 1: None
Inclusion 2: 025XY012NV
Inclusion 3: 025XY031NV
Inclusion 4: 024XY002NV

1833--Vanwyper-Rock outcrop-Trunk association

Composition

Major Components

Vanwyper very cobbly loam, 30 to 50 percent slopes--35 percent
Rock outcrop--30 percent
Trunk cobbly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Aridic Haploxerolls cobbly loam--5 percent
Inclusion 2: Xerollic Camborthids gravelly loam--5 percent
Inclusion 3: Rubble land fragmental material--5 percent

Map Unit Setting

Landscape position: Hills
Vanwyper--Landform: Hills; geomorphic position: backslope; aspect: south
Rock outcrop--Landform: Hills; geomorphic position: summit
Trunk--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description

Vanwyper Series
Elevation: 5,200 to 6,400 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 5,200 to 6,400 feet
Drainage class: Excessively drained

Trunk Series
Elevation: 5,200 to 6,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Vanwyper: Big sagebrush, bluebunch wheatgrass, cheatgrass
Rock outcrop: None
Trunk: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Bluegrass, mountain big sagebrush
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: None

Ecological Site

Vanwyper: 025XY015NV
Trunk: 025XY019NV
Rock outcrop: None
Inclusion 1: 025XY012NV
Inclusion 2: 025XY003NV
Inclusion 3: None

1852--Gumble-Tuffo-Hunnton association

Composition

Major Components

Gumble fine sandy loam, 4 to 15 percent slopes--40 percent
Tuffo fine sandy loam, 4 to 15 percent slopes--30 percent
Hunnton silt loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents, loamy, mixed, nonacid, mesic, shallow gravelly loam, 8 to 15 percent slopes--3 percent
Inclusion 2: Gumble very gravelly sandy loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Gumble--Landform: Fan remnants; geomorphic position: backslope
Tuffo--Landform: Fan remnants; geomorphic position: backslope
Hunnton--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; aspect: south

Major Component Description

Gumble Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Tuffo Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Fine sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hunnton Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Gumble: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
Tuffo: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Indian ricegrass, Wyoming big sagebrush
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass

Ecological Site

Gumble: 025XY019NV
Tuffo: 025XY019NV
Hunnton: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY015NV

1853--Gumble-Tuffo-Rock outcrop association

Composition

Major Components
Gumble very gravelly sandy loam, 30 to 50 percent slopes--50 percent
Tuffo gravelly sandy loam, 30 to 50 percent slopes--25 percent
Rock outcrop--15 percent
Contrasting Inclusions
Inclusion 1: Hunnton silt loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Durargidic Argixerolls, fine-loamy, mixed, mesic gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 3: Tuffo fine sandy loam, 8 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Gumble--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Tuffo--Landform: Fan remnants; geomorphic position: backslope
Rock outcrop--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: footslope; aspect: north
Inclusion 3--Landform: Fan remnants; geomorphic position: shoulder; aspect: north

Major Component Description

Gumble Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Tuffo Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Residuum derived from tuffaceous rocks

Rock outcrop Miscellaneous Area
Elevation: 5,200 to 5,600 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Gumble: Wyoming big sagebrush, bluebunch wheatgrass, cheatgrass
Tuffo: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
Rock outcrop: None
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Idaho fescue, basin big sagebrush

Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Gumble: 025XY015NV
Tuffo: 025XY015NV
Rock outcrop: None
Inclusion 1: 025XY019NV
Inclusion 2: 025XY027NV
Inclusion 3: 025XY019NV

1854--Gumble-Chen association

Composition

Major Components

Gumble very gravelly sandy loam, 30 to 50 percent slopes--45 percent
Chen very gravelly loam, 4 to 15 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Quarz very gravelly loam, 30 to 50 percent slopes--6 percent
Inclusion 2: Wieland very gravelly loam, 2 to 8 percent slopes--5 percent
Inclusion 3: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--3 percent
Inclusion 4: Xerollic Camborthids, coarse-loamy, mixed, frigid gravelly loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills
Gumble--Landform: Hills; geomorphic position: backslope; aspect: south
Chen--Landform: Hills; geomorphic position: summit; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Fan remnants; geomorphic position: summit
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Gumble Series

Elevation: 5,800 to 6,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Chen Series

Elevation: 5,800 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Gumble: Big sagebrush, bluebunch wheatgrass, cheatgrass
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 3: Basin big sagebrush, basin wildrye
Inclusion 4: Indian ricegrass, big sagebrush, needleandthread, rabbitbrush

Ecological Site

Gumble: 025XY015NV
Chen: 025XY017NV
Inclusion 1: 025XY009NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY003NV
Inclusion 4: 024XY017NV

1855--Gumble-Puett variant-Xeric Torriorthents association

Composition

Major *Components*

Gumble gravelly sandy loam, 30 to 50 percent slopes--55 percent
Puett Variant gravelly loam, 30 to 50 percent slopes--15 percent
Xeric Torriorthents gravelly fine sandy loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Vanwyper gravelly loam, 8 to 15 percent slopes--10 percent
Inclusion 2: Typic Haplargids, fine, montmorillonitic, mesic very gravelly loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Xeric Torriorthents, loamy-skeletal, mixed, nonacid, mesic gravelly loam, 0 to 4 percent slopes --1 percent

Map Unit Setting

Landscape position: Hills
Gumble--Landform: Hills; geomorphic position: backslope; aspect: south
Puett Variant--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Xeric Torriorthents--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Drainageways

Major Component Description

Gumble Series
Elevation: 4,500 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Puett Variant Variant
Elevation: 4,500 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Xeric Torriorthents Soils
Elevation: 4,500 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface rock fragments: 3 percent cobbles; 40 percent gravel
Surface layer texture: Gravelly fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Gumble: Big sagebrush, bluebunch wheatgrass
Puett Variant: Cheatgrass, shadscale
Xeric Torriorthents: Wyoming big sagebrush, cheatgrass, shadscale
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Bottlebrush squirreltail, rabbitbrush, shadscale
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Gumble: 025XY015NV
Puett Variant: 024XY002NV
Xeric Torriorthents: 024XY020NV
Inclusion 1: 025XY019NV
Inclusion 2: 024XY025NV
Inclusion 3: 025XY019NV

1870--Chen-Graley-Quarz association

Composition

Major Components
Chen very gravelly loam, 15 to 50 percent slopes--40 percent
Graley very gravelly loam, 15 to 50 percent slopes--30 percent
Quarz very gravelly loam, 30 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Arcia silty clay loam, 15 to 50 percent slopes--8 percent
Inclusion 2: Graley very stony loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Rock outcrop--1 percent
Inclusion 4: Hapgood very gravelly loam, 15 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills
Chen--Landform: Hills; geomorphic position: summit; shape of slope: convex
Graley--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: north
Quarz--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Hills; geomorphic position: summit
Inclusion 4--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north

Major Component Description

Chen Series
Elevation: 6,200 to 6,600 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Graley Series
Elevation: 6,200 to 6,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Quarz Series
Elevation: 6,200 to 6,600 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Quarz: Antelope bitterbrush, basin wildrye, big sagebrush, bluebunch wheatgrass
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: Antelope bitterbrush, mountain big sagebrush
Inclusion 3: None
Inclusion 4: Mountain brome, snowberry

Ecological Site

Chen: 025XY017NV
Graley: 025XY012NV
Quarz: 025XY009NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY012NV
Inclusion 3: None
Inclusion 4: 025XY004NV

1871--Chen-Cotant-Graley association

Composition

Major Components

Chen very gravelly loam, 4 to 15 percent slopes--40 percent
Cotant very gravelly loam, 4 to 15 percent slopes--35 percent
Graley very gravelly loam, 8 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: McIvey gravelly loam, 8 to 15 percent slopes--5 percent
Inclusion 2: Welch silt loam, 2 to 8 percent slopes, frequently flooded--3 percent
Inclusion 3: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Hills
Chen--Landform: Hills; geomorphic position: summit; shape of slope: convex
Cotant--Landform: Hills; geomorphic position: shoulder
Graley--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position: summit

Major Component Description

Chen Series

Elevation: 6,200 to 6,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Cotant Series

Elevation: 6,200 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Graley Series

Elevation: 6,200 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 2: Rush, sedge, willow
Inclusion 3: None

Ecological Site

Chen: 025XY017NV
Cotant: 025XY017NV
Graley: 025XY012NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY005NV
Inclusion 3: None

1872--Chen-Sumine-Tusel association

Composition

Major Components

Chen very gravelly loam, 30 to 50 percent slopes--40 percent
Sumine very gravelly loam, 30 to 50 percent slopes--30 percent
Tusel very gravelly loam, 30 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--6 percent
Inclusion 2: Cleavage extremely gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 3: Argic Pachic Cryoborolls, fine, montmorillonitic gravelly loam, 15 to 50 percent slopes--2 percent

Inclusion 4: Tusel gravelly loam, 30 to 75 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
Chen--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Tusel--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope
Inclusion 2--Landform: Mountains; geomorphic position: summit
Inclusion 3--Landform: Mountains; geomorphic position: footslope; shape of slope: concave; aspect: north
Inclusion 4--Landform: Mountains; geomorphic position: backslope; aspect: north

Major Component Description

Chen Series
Elevation: 6,100 to 7,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Sumine Series
Elevation: 6,100 to 7,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Tusel Series
Elevation: 6,100 to 7,200 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Inclusion 1: None
Inclusion 2: Low sagebrush
Inclusion 3: Mountain brome, snowberry
Inclusion 4: Mountain big sagebrush

Ecological Site

Chen: 025XY017NV
Sumine: 025XY009NV
Tusel: 025XY004NV
Inclusion 1: None
Inclusion 2: 025XY024NV
Inclusion 3: 025XY004NV
Inclusion 4: 025XY010NV

1874--Chen-Quarz-Arcia association

Composition

Major Components
Chen very gravelly loam, 15 to 50 percent slopes--35 percent
Quarz gravelly clay loam, 30 to 50 percent slopes--30 percent
Arcia silt loam, 30 to 50 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Cleavage extremely gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 2: Bregar extremely gravelly loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Tusk gravelly loam, 15 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains
Chen--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Quarz--Landform: Mountains; geomorphic position: backslope; aspect: south
Arcia--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: shoulder
Inclusion 3--Landform: Mountains; geomorphic position: backslope
Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave; aspect: north

Major Component Description

Chen Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Quarz Series
Elevation: 5,600 to 6,400 feet

Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Arcia Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Quarz: Antelope bitterbrush, basin wildrye, big sagebrush, bluebunch wheatgrass
Arcia: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Low sagebrush
Inclusion 2: Low sagebrush
Inclusion 3: None
Inclusion 4: Mountain brome, snowberry

Ecological Site

Chen: 025XY017NV
Quarz: 025XY009NV
Arcia: 025XY012NV
Inclusion 1: 025XY024NV
Inclusion 2: 025XY022NV
Inclusion 3: None
Inclusion 4: 025XY004NV

1875--Chen-Bregar-Ramires association

Composition

Major Components

Chen very gravelly loam, 4 to 15 percent slopes--50 percent
Bregar extremely gravelly loam, 4 to 15 percent slopes--20 percent
Ramires clay loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Ninemile very cobbly loam, 2 to 8 percent slopes--7 percent
Inclusion 2: Rock outcrop--3 percent
Inclusion 3: Alyan gravelly clay loam, 4 to 15 percent slopes--4 percent
Inclusion 4: Crooked Creek silty clay loam, 2 to 4 percent slopes, frequently flooded--1 percent

Map Unit Setting

Landscape position: Hills
Chen--Landform: Hills; geomorphic position: summit
Bregar--Landform: Hills; geomorphic position: shoulder
Ramires--Landform: Hills; geomorphic position: toeslope; shape of slope: concave
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: shoulder
Inclusion 3--Landform: Hills; geomorphic position: shoulder; aspect: north
Inclusion 4--Landform: Drainageways

Major Component Description

Chen Series
Elevation: 5,400 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Bregar Series
Elevation: 5,400 to 6,200 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Ramires Series
Elevation: 5,400 to 6,200 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Bregar: Bluegrass, low sagebrush, rabbitbrush
Ramires: Basin wildrye, big sagebrush, bluebunch wheatgrass, rabbitbrush
Inclusion 1: Low sagebrush
Inclusion 2: None
Inclusion 3: Idaho fescue, basin big sagebrush
Inclusion 4: Rush, sedge

Ecological Site

Chen: 025XY017NV
Bregar: 025XY022NV
Ramires: 025XY014NV
Inclusion 1: 025XY017NV
Inclusion 2: None
Inclusion 3: 025XY027NV
Inclusion 4: 025XY005NV

1876--Chen-Chen, steep-Arcia association

Composition

Major Components

Chen very gravelly loam, 4 to 15 percent slopes--55 percent
Chen very gravelly loam, 15 to 50 percent slopes--20 percent
Arcia silt loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Bregar extremely gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Rock outcrop--3 percent
Inclusion 3: Crooked Creek silty clay loam, 0 to 2 percent slopes, frequently flooded--1 percent
Inclusion 4: Crooked Creek silty clay loam, drained, 0 to 2 percent slopes, rarely flooded--1 percent

Map Unit Setting

Landscape position: Hills
Chen--Landform: Hills; geomorphic position: summit; shape of slope: convex
Chen--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Arcia--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Chen Series

Elevation: 5,400 to 5,600 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Chen Series

Elevation: 5,400 to 5,600 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Arcia Series

Elevation: 5,400 to 5,600 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Chen: Bluegrass, low sagebrush
Arcia: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Low sagebrush
Inclusion 2: None
Inclusion 3: Rush, sedge, willow
Inclusion 4: Basin big sagebrush, basin wildrye

Ecological Site

Chen: 025XY017NV
Chen: 025XY017NV
Arcia: 025XY012NV
Inclusion 1: 025XY022NV
Inclusion 2: None
Inclusion 3: 025XY005NV
Inclusion 4: 025XY003NV

1877--Chen-Bregar-Loncan association

Composition

Major Components

Chen very cobbly loam, 15 to 30 percent slopes--45 percent
Bregar very gravelly sandy loam, 4 to 15 percent slopes--25 percent
Loncan very gravelly loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--9 percent
Inclusion 2: Fluvaquentic Haploxerolls, fine-loamy, mixed, frigid silt loam--3 percent
Inclusion 3: Cleavage extremely gravelly loam, 8 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Hills
Chen--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Bregar--Landform: Hills; geomorphic position: summit
Loncan--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: backslope
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position: summit

Major Component Description

Chen Series

Elevation: 6,200 to 7,100 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Bregar Series
Elevation: 6,200 to 7,100 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Loncan Series
Elevation: 6,200 to 7,100 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Bregar: Bottlebrush squirreltail, low sagebrush
Loncan: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Rush, sedge, tufted hairgrass, willow
Inclusion 3: Bluegrass, low sagebrush

Ecological Site
Chen: 025XY017NV
Bregar: 025XY051NV
Loncan: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY005NV
Inclusion 3: 025XY024NV

1880--Chen-Blitzen-Pequop association

Composition
Major Components
Chen very gravelly loam, 15 to 50 percent slopes--40 percent
Blitzen very gravelly loam, 15 to 50 percent slopes--30 percent
Pequop gravelly loam, 15 to 50 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--2 percent
Inclusion 2: Chen very gravelly loam, 4 to 15 percent slopes--2 percent
Inclusion 3: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--1 percent

Map Unit Setting
Landscape position: Mountains
Chen--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex
Blitzen--Landform: Mountains; geomorphic position: backslope; aspect: south
Pequop--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope
Inclusion 2--Landform: Mountains; geomorphic position: summit
Inclusion 3--Landform: Drainageways

Major Component Description
Chen Series
Elevation: 6,000 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Blitzen Series
Elevation: 5,600 to 6,200 feet
Precipitation: About 13 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Pequop Series
Elevation: 5,600 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Blitzen: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Pequop: Idaho fescue, bluegrass, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Bluegrass, low sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site
Chen: 025XY017NV
Blitzen: 025XY009NV
Pequop: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY017NV

Inclusion 3: 025XY003NV

1881--Chen-Blitzen-Loncan association

Composition

Major Components

Chen very gravelly loam, 15 to 50 percent slopes--35 percent
Blitzen gravelly clay loam, 15 to 50 percent slopes--30 percent
Loncan very gravelly loam, 15 to 50 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--5 percent
Inclusion 2: Shively loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Welch silt loam, drained, 2 to 8 percent slopes, rarely flooded--1 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--1 percent

Map Unit Setting

Landscape position: Mountains and foothills
Chen--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex
Blitzen--Landform: Mountains; geomorphic position: backslope; aspect: south
Loncan--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: backslope
Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave; aspect: north
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Chen Series

Elevation: 5,700 to 6,300 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Blitzen Series

Elevation: 5,700 to 6,300 feet
Precipitation: About 13 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Loncan Series

Elevation: 5,700 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Chen: Low sagebrush
Blitzen: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Loncan: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Idaho fescue, mountain big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Chen: 025XY017NV
Blitzen: 025XY009NV
Loncan: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY010NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY006NV

1888--Chen-Pie Creek-Alyan association

Composition

Major Components

Chen cobbly loam, 15 to 30 percent slopes--40 percent
Pie Creek very cobbly loam, 15 to 30 percent slopes--25 percent
Alyan gravelly loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Aridic Calcic Argixerolls, fine, montmorillonitic, frigid gravelly loam--7 percent
Inclusion 2: Rock outcrop--3 percent
Inclusion 3: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent
Inclusion 4: Crooked Creek silty clay loam, 0 to 2 percent slopes, frequently flooded--2 percent

Map Unit Setting

Landscape position: Hills
Chen--Landform: Hills; geomorphic position: summit
Pie Creek--Landform: Hills; geomorphic position: toeslope
Alyan--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south

Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Chen Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Pie Creek Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Alyan Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Pie Creek: Bluegrass, bottlebrush squirreltail, low sagebrush
Alyan: Big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: None
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: Rush, sedge, tufted hairgrass, willow

Ecological Site

Chen: 025XY017NV
Pie Creek: 025XY018NV
Alyan: 025XY014NV
Inclusion 1: 025XY014NV
Inclusion 2: None
Inclusion 3: 025XY003NV
Inclusion 4: 025XY005NV

1889--Chen-Sumine association

Composition

Major Components
Chen very gravelly loam, 15 to 50 percent slopes--60 percent
Sumine very gravelly loam, 15 to 50 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Arcia silty clay loam, 15 to 50 percent slopes--5 percent
Inclusion 2: Pachic Haploxerolls very gravelly loam, 15 to 50 percent slopes--4 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Cleavage extremely gravelly loam--3 percent

Map Unit Setting

Landscape position: Mountains
Chen--Landform: Mountains; geomorphic position: summit; shape of slope: convex
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: summit
Inclusion 4--Landform: Mountains; geomorphic position: summit; position on slope: upper part

Major Component Description

Chen Series
Elevation: 5,400 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Sumine Series
Elevation: 5,400 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush

Inclusion 2: Basin wildrye, mountain big sagebrush
Inclusion 3: None
Inclusion 4: Bluegrass, low sagebrush

Ecological Site

Chen: 025XY017NV
Sumine: 025XY009NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY029NV
Inclusion 3: None
Inclusion 4: 025XY024NV

1910--Mahala-Ramires association

Composition

Major Components

Mahala silt loam, 4 to 15 percent slopes--55 percent
Ramires clay loam, 4 to 15 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Aridic Durixerolls, fine, montmorillonitic, mesic gravelly loam--5 percent
Inclusion 2: Xerollic Durargids, clayey, montmorillonitic, mesic, shallow gravelly loam, 2 to 8 percent slopes--5 percent
Inclusion 3: Rock outcrop--5 percent

Map Unit Setting

Landscape position: Hills
Mahala--Landform: Hills; geomorphic position: summit; shape of slope: concave
Ramires--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: summit; shape of slope: concave
Inclusion 2--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description

Mahala Series

Elevation: 5,400 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Ramires Series

Elevation: 5,400 to 5,600 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Clay loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Mahala: Bluegrass, bottlebrush squirreltail, low sagebrush
Ramires: Basin wildrye, big sagebrush, bluebunch wheatgrass, rabbitbrush
Inclusion 1: Big sagebrush, bottlebrush squirreltail, wheatgrass
Inclusion 2: Bluegrass, low sagebrush
Inclusion 3: None

Ecological Site

Mahala: 025XY018NV
Ramires: 025XY014NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY018NV
Inclusion 3: None

1920--Lerrow-Chen-Cotant association

Composition

Major Components

Lerrow cobbly loam, 15 to 50 percent slopes--40 percent
Chen very cobbly loam, 15 to 30 percent slopes--30 percent
Cotant cobbly loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Sumine very gravelly loam, 15 to 50 percent slopes--5 percent
Inclusion 2: Typic Argixerolls, fine-loamy, mixed, frigid very gravelly loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Tweener very cobbly sandy loam, 4 to 15 percent slopes--4 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Hills
Lerrow--Landform: Hills; geomorphic position: backslope; shape of slope: convex; aspect: south
Chen--Landform: Hills; geomorphic position: backslope; position on slope: upper; shape of slope: convex
Cotant--Landform: Hills; geomorphic position: backslope; position on slope: lower; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Lerrow Series

Elevation: 6,000 to 6,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees

Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Chen Series
Elevation: 6,400 to 6,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Cotant Series
Elevation: 6,000 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Lerrow: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Chen: Bluegrass, bottlebrush squirreltail, low sagebrush
Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue
Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass
Inclusion 4: None

Ecological Site
Lerrow: 025XY009NV
Chen: 025XY017NV
Cotant: 025XY017NV
Inclusion 1: 025XY009NV
Inclusion 2: 025XY027NV
Inclusion 3: 025XY007NV
Inclusion 4: None

1921--Lerrow-Quarz-Rugar association

Composition
Major Components
Lerrow gravelly loam, 15 to 50 percent slopes--35 percent
Quarz very gravelly loam, 15 to 50 percent slopes--30 percent
Rugar loam, 15 to 30 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Chen very gravelly loam, 4 to 15 percent slopes--10 percent
Inclusion 2: Aridic Argixerolls, fine, montmorillonitic, frigid gravelly loam, 15 to 30 percent slopes--2 percent
Inclusion 3: Reluctan gravelly loam, 15 to 50 percent slopes--2 percent
Inclusion 4: Crooked Creek gravelly silty clay loam, 0 to 2 percent slopes--1 percent

Map Unit Setting
Landscape position: Hills
Lerrow--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Quarz--Landform: Hills; geomorphic position: backslope; aspect: south
Rugar--Landform: Hills; geomorphic position: footslope; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 4--Landform: Drainageways

Major Component Description
Lerrow Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Quarz Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface rock fragments: 5 percent cobbles; 50 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Rugar Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 16 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Dominant Present Vegetation
Lerrow: Idaho fescue, Nevada bluegrass, big sagebrush, cheatgrass

Quarz: Antelope bitterbrush, basin wildrye, big sagebrush, wheatgrass
Rugar: Basin wildrye, bottlebrush squirreltail, mulesear wyethia, slender wheatgrass
Inclusion 1: Bluegrass, low sagebrush
Inclusion 2: Idaho fescue
Inclusion 3: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Lerrow: 025XY027NV
Quarz: 025XY009NV
Rugar: 025XY047NV
Inclusion 1: 025XY017NV
Inclusion 2: 025XY027NV
Inclusion 3: 025XY012NV
Inclusion 4: 025XY006NV

1931--Tweener-Cleavage-Reluctan association

Composition

Major Components

Tweener very cobbly sandy loam, 15 to 30 percent slopes--45 percent
Cleavage very gravelly loam, 15 to 30 percent slopes--25 percent
Reluctan cobbly loam, 15 to 50 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--3 percent
Inclusion 2: Gumble very gravelly sandy loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Tweener--Landform: Hills; geomorphic position: backslope
Cleavage--Landform: Hills; geomorphic position: summit
Reluctan--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south

Major Component Description

Tweener Series

Elevation: 5,600 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Cleavage Series

Elevation: 5,600 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Reluctan Series

Elevation: 5,600 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Tweener: Antelope bitterbrush, bluegrass, cheatgrass, mountain big sagebrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Reluctan: Bluegrass, bottlebrush squirreltail, mountain big sagebrush, rabbitbrush
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Tweener: 025XY007NV
Cleavage: 025XY017NV
Reluctan: 025XY012NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY015NV

1932--Tweener-Sumine-Cleavage association

Composition

Major Components

Tweener very gravelly sandy loam, 15 to 50 percent slopes--30 percent
Sumine very gravelly loam, 15 to 50 percent slopes--30 percent
Cleavage very gravelly loam, 15 to 50 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Hapgood very gravelly loam, 30 to 75 percent slopes--5 percent
Inclusion 2: Tusel gravelly loam, 50 to 75 percent slopes--5 percent
Inclusion 3: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--3 percent
Inclusion 4: Welch silt loam, 0 to 2 percent slopes, occasionally flooded--2 percent

Map Unit Setting

Landscape position: Mountains and foothills
Tweener--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south
Cleavage--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Tweener Series
Elevation: 6,300 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Sumine Series
Elevation: 6,300 to 7,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Cleavage Series
Elevation: 6,300 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Tweener: Antelope bitterbrush, bluegrass, cheatgrass, mountain big sagebrush
Sumine: Antelope bitterbrush, bluebunch wheatgrass, cheatgrass, mountain big sagebrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, mountain brome, snowberry
Inclusion 2: Mountain big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye
Inclusion 4: Nevada bluegrass

Ecological Site

Tweener: 025XY007NV
Sumine: 025XY009NV
Cleavage: 025XY017NV
Inclusion 1: 025XY004NV
Inclusion 2: 025XY010NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY006NV

1933--Tweener-Pequop-Cleavage association

Composition

Major Components
Tweener very cobbly sandy loam, 15 to 30 percent slopes--55 percent
Pequop gravelly loam, 15 to 50 percent slopes--15 percent
Cleavage very gravelly loam, 4 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Gumble very gravelly sandy loam, 15 to 50 percent slopes--7 percent
Inclusion 2: Typic Argixerolls, fine-loamy, mixed, frigid very gravelly loam, 4 to 15 percent slopes--6 percent
Inclusion 3: Bregar very gravelly sandy loam, 4 to 15 percent slopes--1 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Hills
Tweener--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Pequop--Landform: Hills; geomorphic position: backslope; aspect: north
Cleavage--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Hills; geomorphic position: summit
Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description

Tweener Series
Elevation: 6,000 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Pequop Series
Elevation: 6,000 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam

Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Cleavage Series
Elevation: 6,000 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Tweener: Antelope bitterbrush, bluegrass, cheatgrass, mountain big sagebrush
Pequop: Idaho fescue, bluegrass, mountain big sagebrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 2: Idaho fescue, basin big sagebrush
Inclusion 3: Low sagebrush
Inclusion 4: None

Ecological Site
Tweener: 025XY007NV
Pequop: 025XY012NV
Cleavage: 025XY017NV
Inclusion 1: 025XY015NV
Inclusion 2: 025XY027NV
Inclusion 3: 025XY051NV
Inclusion 4: None

1950--McIvey-McIvey, very cobbly-Tusel association

Composition
Major Components
McIvey gravelly silt loam, 15 to 30 percent slopes--35 percent
McIvey very cobbly silt loam, 15 to 50 percent slopes--35 percent
Tusel very gravelly loam, 30 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Entic Cryumbrepts, loamy-skeletal, mixed very gravelly loam, 30 to 50 percent slopes--10 percent
Inclusion 2: Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 15 to 50 percent slopes--3 percent
Inclusion 3: Aridic Argixerolls, clayey-skeletal, montmorillonitic, frigid gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting
Landscape position: Hills
McIvey--Landform: Hills; geomorphic position: summit
McIvey--Landform: Hills; geomorphic position: summit
Tusel--Landform: Hills; geomorphic position: backslope; shape of slope: concave
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description
McIvey Series
Elevation: 6,200 to 7,200 feet
Precipitation: About 15 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from quartzite

McIvey Series
Elevation: 6,200 to 7,200 feet
Precipitation: About 15 inches
Air temperature: About 43 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly silt loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from quartzite

Tusel Series
Elevation: 6,200 to 7,200 feet
Precipitation: About 18 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from quartzite

Dominant Present Vegetation
McIvey: Idaho fescue, big sagebrush, mountain brome, snowberry
McIvey: Idaho fescue, big sagebrush, mountain brome, snowberry
Tusel: Idaho fescue, mountain brome, slender wheatgrass, snowberry
Inclusion 1: Letterman needlegrass, quaking aspen
Inclusion 2: Basin big sagebrush, bluebunch wheatgrass
Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass

Ecological Site
McIvey: 025XY004NV
McIvey: 025XY004NV
Tusel: 025XY004NV
Inclusion 1: 025XY002NV
Inclusion 2: 025XY009NV

Inclusion 3: 025XY007NV

1980--Thwoop-Trunk-Pequop association

Composition

Major Components

Thwoop gravelly silt loam, 8 to 15 percent slopes--40 percent
Trunk gravelly loam, 8 to 15 percent slopes--25 percent
Pequop gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--7 percent
Inclusion 2: Chen very gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Bregar very gravelly loam, 4 to 15 percent slopes--2 percent
Inclusion 4: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--1 percent

Map Unit Setting

Landscape position: Mountains
Thwoop--Landform: Mountains; geomorphic position: summit; shape of slope: convex; aspect: south
Trunk--Landform: Mountains; geomorphic position: footslope; position on slope: lower; aspect: south
Pequop--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: summit
Inclusion 2--Landform: Mountains; geomorphic position: summit
Inclusion 3--Landform: Mountains; geomorphic position: shoulder; aspect: south
Inclusion 4--Landform: Drainageways

Major Component Description

Thwoop Series

Elevation: 5,200 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly silt loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Trunk Series

Elevation: 5,200 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Pequop Series

Elevation: 5,200 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Thwoop: Thurber needlegrass, basin wildrye, big sagebrush, bluegrass
Trunk: Wyoming big sagebrush, bluegrass, cheatgrass
Pequop: Idaho fescue, bluegrass, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Bluegrass, low sagebrush
Inclusion 3: Low sagebrush
Inclusion 4: Basin big sagebrush

Ecological Site

Thwoop: 025XY014NV
Trunk: 025XY019NV
Pequop: 025XY012NV
Inclusion 1: None
Inclusion 2: 025XY017NV
Inclusion 3: 025XY018NV
Inclusion 4: 025XY003NV

2000--Alyan-Cotant-Akler association

Composition

Major Components

Alyan cobbly loam, 15 to 50 percent slopes--40 percent
Cotant cobbly loam, 15 to 50 percent slopes--30 percent
Akler loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pattani clay, 8 to 15 percent slopes--10 percent
Inclusion 2: Rock outcrop--3 percent
Inclusion 3: Welch silt loam, 2 to 4 percent slopes, frequently flooded--1 percent
Inclusion 4: Welch silt loam, drained, 2 to 4 percent slopes, rarely flooded--1 percent

Map Unit Setting

Landscape position: Hills
Alyan--Landform: Hills; geomorphic position: backslope; shape of slope: concave; aspect: north
Cotant--Landform: Hills; geomorphic position: backslope
Akler--Landform: Hills; geomorphic position: toeslope
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Alyan Series
Elevation: 5,400 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Cotant Series
Elevation: 5,400 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Akler Series
Elevation: 6,200 to 6,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Alyan: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Cotant: Bluegrass, bottlebrush squirreltail, low sagebrush
Akler: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Basin wildrye, big sagebrush, rabbitbrush
Inclusion 2: None
Inclusion 3: Rush, sedge, willow
Inclusion 4: Basin big sagebrush

Ecological Site

Alyan: 025XY012NV
Cotant: 025XY017NV
Akler: 025XY018NV
Inclusion 1: 025XY013NV
Inclusion 2: None
Inclusion 3: 025XY005NV
Inclusion 4: 025XY003NV

2001--Alyan, steep-Bregar-Alyan association

Composition

Major Components
Alyan gravelly loam, 30 to 50 percent slopes--35 percent
Bregar very gravelly loam, 30 to 50 percent slopes--30 percent
Alyan gravelly loam, 4 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Rubble land fragmental material--7 percent
Inclusion 2: Shively loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Cleavage extremely gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--1 percent

Map Unit Setting

Landscape position: Mountains
Alyan--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
Bregar--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
Alyan--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
Inclusion 1--Landform: Mountains; geomorphic position: backslope
Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Mountains; geomorphic position: summit
Inclusion 4--Landform: Drainageways

Major Component Description

Alyan Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Bregar Series
Elevation: 6,000 to 7,550 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Alyan Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Alyan: Bluebunch wheatgrass, bottlebrush squirreltail, cheatgrass, mountain big sagebrush

Bregar: Bluegrass, low sagebrush
Alyan: Bluebunch wheatgrass, bottlebrush squirreltail, cheatgrass, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Idaho fescue, mountain big sagebrush
Inclusion 3: Bluegrass, low sagebrush
Inclusion 4: Basin big sagebrush

Ecological Site

Alyan: 025XY014NV
Bregar: 025XY018NV
Alyan: 025XY014NV
Inclusion 1: None
Inclusion 2: 025XY010NV
Inclusion 3: 025XY024NV
Inclusion 4: 025XY003NV

2002--Alyan, moderately steep-Alyan-Quarz association

Composition

Major Components

Alyan gravelly clay loam, 15 to 30 percent slopes--35 percent
Alyan gravelly clay loam, 4 to 15 percent slopes--25 percent
Quarz very gravelly loam, 15 to 30 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Ninemile gravelly loam, 4 to 15 percent slopes--8 percent
Inclusion 2: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--4 percent
Inclusion 3: Reluctan gravelly loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Lithic Xerollic Haplargids, loamy-skeletal, mixed, frigid very gravelly loam--1 percent

Map Unit Setting

Landscape position: Hills
Alyan--Landform: Hills; geomorphic position: backslope; aspect: north
Alyan--Landform: Hills; geomorphic position: backslope; position on slope: upper; aspect: north
Quarz--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Hills; geomorphic position: summit; shape of slope: convex
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position: backslope
Inclusion 4--Landform: Hills; geomorphic position: backslope; aspect: south

Major Component Description

Alyan Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Alyan Series
Elevation: 5,800 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Quarz Series
Elevation: 5,600 to 6000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Alyan: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush, rabbitbrush
Alyan: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush, rabbitbrush
Quarz: Antelope bitterbrush, basin wildrye, big sagebrush, bluebunch wheatgrass
Inclusion 1: Bluegrass, low sagebrush
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 3: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Big sagebrush

Ecological Site

Alyan: 025XY027NV
Alyan: 025XY027NV
Quarz: 025XY009NV
Inclusion 1: 025XY017NV
Inclusion 2: 025XY003NV
Inclusion 3: 025XY012NV
Inclusion 4: 025XY015NV

2003--Alyan-Deepeek-Susie Creek association

Composition

Major Components

Alyan very gravelly loam, 15 to 30 percent slopes--35 percent
Deepeek very cobbly loam, 8 to 15 percent slopes--25 percent
Susie Creek very fine sandy loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions
Inclusion 1: Bartome very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 2: Bilbo very gravelly very fine sandy loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Haploxerollic Durargids, loamy-skeletal, mixed, mesic gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting
Landscape position: Hills
Alyan--Landform: Hills; geomorphic position: backslope; position on slope: upper part
Deepeek--Landform: Hills; geomorphic position: backslope
Susie Creek--Landform: Hills; geomorphic position: footslope
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Hills; geomorphic position: shoulder; aspect: south
Inclusion 4--Landform: Hills

Major Component Description
Alyan Series
Elevation: 5,100 to 5,700 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Deepeek Series
Elevation: 5,100 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Susie Creek Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Alyan: Big sagebrush, bottlebrush squirreltail, cheatgrass
Deepeek: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Susie Creek: Basin big sagebrush, bluebunch wheatgrass, bluegrass, rabbitbrush
Inclusion 1: Wyoming big sagebrush, cheatgrass, squirreltail
Inclusion 2: Big sagebrush, cheatgrass
Inclusion 3: Big sagebrush, cheatgrass
Inclusion 4: None

Ecological Site
Alyan: 025XY014NV
Deepeek: 025XY019NV
Susie Creek: 025XY014NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY015NV
Inclusion 3: 025XY015NV
Inclusion 4: None

2004--Alyan, cobbly loam-Ninemile-Alyan association

Composition
Major Components
Alyan cobbly loam, 15 to 50 percent slopes--35 percent
Ninemile gravelly loam, 4 to 15 percent slopes--30 percent
Alyan gravelly loam, 4 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Lithic Haploxerolls, loamy-skeletal, mixed, frigid very gravelly loam--7 percent
Inclusion 2: Welch silt loam, 2 to 8 percent slopes, frequently flooded--1 percent
Inclusion 3: Welch silt loam, drained, 2 to 8 percent slopes, rarely flooded--1 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting
Landscape position: Mountains
Alyan--Landform: Mountains; geomorphic position: backslope; aspect: north
Ninemile--Landform: Mountains; geomorphic position: summit
Alyan--Landform: Mountains; geomorphic position: summit; aspect: north
Inclusion 1--Landform: Mountains; geomorphic position: shoulder
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Mountains

Major Component Description
Alyan Series
Elevation: 5,400 to 6,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Cobbly loam

Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Ninemile Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Alyan Series
Elevation: 5,700 to 6,400 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation
Alyan: Idaho fescue, bluebunch wheatgrass
Ninemile: Bluegrass, low sagebrush
Alyan: Big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Rush, sedge, willow
Inclusion 3: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 4: None

Ecological Site
Alyan: 025XY012NV
Ninemile: 025XY017NV
Alyan: 025XY014NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY005NV
Inclusion 3: 025XY003NV
Inclusion 4: None

2005--Alyan-Graley-Rock outcrop association

Composition
Major Components
Alyan gravelly loam, 4 to 15 percent slopes--50 percent
Graley very stony loam, 30 to 50 percent slopes--25 percent
Rock outcrop--15 percent

Contrasting Inclusions
Inclusion 1: Puett gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Welch silt loam, drained, 0 to 2 percent slopes, rarely flooded--5 percent

Map Unit Setting
Landscape position: Mountains
Alyan--Landform: Mountains; geomorphic position: summit; position on slope: upper part
Graley--Landform: Mountains; geomorphic position: backslope
Rock outcrop--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Drainageways

Major Component Description
Alyan Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Graley Series
Elevation: 6,000 to 7,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from quartzite

Rock outcrop Miscellaneous Area
Elevation: 6,000 to 7,500 feet
Drainage class: Excessively drained

Dominant Present Vegetation
Alyan: Big sagebrush, bottlebrush squirreltail, cheatgrass
Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Rock outcrop: None
Inclusion 1: Indian ricegrass, Wyoming big sagebrush, cheatgrass, rabbitbrush
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site
Alyan: 025XY014NV
Graley: 025XY012NV
Rock outcrop: None
Inclusion 1: 025XY025NV
Inclusion 2: 025XY003NV

2171--Deseed-Reluctan-Cleavage association

Composition

Major Components

Deseed gravelly loam, 15 to 30 percent slopes--45 percent
Reluctan gravelly loam, 15 to 30 percent slopes--25 percent
Cleavage very gravelly loam, 4 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Chen very cobbly loam, 4 to 15 percent slopes--6 percent
Inclusion 2: Carstump gravelly loam, 4 to 15 percent slopes--4 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Rubble land fragmental material--2 percent

Map Unit Setting

Landscape position: Mountains
Deseed--Landform: Mountains; geomorphic position: backslope
Reluctan--Landform: Mountains; geomorphic position: shoulder
Cleavage--Landform: Mountains; geomorphic position: summit
Inclusion 1--Landform: Mountains; geomorphic position: shoulder
Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
Inclusion 3--Landform: Mountains; geomorphic position: backslope
Inclusion 4--Landform: Mountains; geomorphic position: backslope

Major Component Description

Deseed Series

Elevation: 5,600 to 7,100 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Reluctan Series

Elevation: 5,600 to 7,100 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Cleavage Series

Elevation: 5,600 to 7,100 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Deseed: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Reluctan: Bluegrass, bottlebrush squirreltail, mountain big sagebrush, rabbitbrush
Cleavage: Idaho fescue, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Bluegrass, low sagebrush
Inclusion 2: Big sagebrush
Inclusion 3: None
Inclusion 4: None

Ecological Site

Deseed: 025XY014NV
Reluctan: 025XY012NV
Cleavage: 025XY017NV
Inclusion 1: 025XY017NV
Inclusion 2: 025XY014NV
Inclusion 3: None
Inclusion 4: None

2173--Deseed-Quarz association

Composition

Major Components

Deseed gravelly loam, 15 to 30 percent slopes--55 percent
Quarz very cobbly loam, 4 to 8 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--7 percent
Inclusion 2: Xerollic Haplargids, loamy-skeletal, mixed, frigid gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Rubble land fragmental material--2 percent
Inclusion 4: Reluctan gravelly loam, 15 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills
Deseed--Landform: Hills; geomorphic position: backslope
Quarz--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope
Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Hills; geomorphic position: backslope
Inclusion 4--Landform: Hills; geomorphic position: backslope; aspect: northeast

Major Component Description

Deseed Series

Elevation: 5,100 to 6,300 feet

Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Quarz Series
Elevation: 5,700 to 6,300 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Deseed: Big sagebrush, bluegrass
Quarz: Big sagebrush
Inclusion 1: None
Inclusion 2: Big sagebrush
Inclusion 3: None
Inclusion 4: Bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Deseed: 025XY014NV
Quarz: 025XY014NV
Inclusion 1: None
Inclusion 2: 025XY014NV
Inclusion 3: None
Inclusion 4: 025XY012NV

2205--Coltroop-Snowmore association

Composition

Major Components
Coltroop very fine sandy loam, 0 to 2 percent slopes--50 percent
Snowmore very fine sandy loam, 2 to 4 percent slopes --35 percent
Contrasting Inclusions
Inclusion 1: Linkup gravelly clay loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Olac cobbly loam, 4 to 8 percent slopes--4 percent
Inclusion 3: Clurde very fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Clurde Variant very gravelly sandy loam, 0 to 7 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Coltroop--Landform: Plateaus; geomorphic position: summit
Snowmore--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Plateaus; geomorphic position: toeslope
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Coltroop Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Snowmore Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Coltroop: Big sagebrush, bottlebrush squirreltail
Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Bluegrass, low sagebrush
Inclusion 2: Bluegrass, low sagebrush
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Coltroop: 025XY019NV
Snowmore: 025XY019NV
Inclusion 1: 025XY018NV
Inclusion 2: 025XY018NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

2206--Coltroop-Vanwyper association

Composition

Major Components
Coltroop cobbly very fine sandy loam, 0 to 2 percent slopes--55 percent
Vanwyper very stony loam, 0 to 2 percent slopes--30 percent
Contrasting Inclusions
Inclusion 1: Zevadez very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Chiara cobbly silt loam, 2 to 4 percent slopes--5 percent

Inclusion 3: Rock outcrop--5 percent

Map Unit Setting

Landscape position: Plateaus
Coltroop--Landform: Plateaus; geomorphic position: summit
Vanwyper--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: footslope
Inclusion 2--Landform: Plateaus; geomorphic position: toeslope
Inclusion 3--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Coltroop Variant
Elevation: 5,200 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Vanwyper Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Coltroop: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Vanwyper: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 3: None

Ecological Site

Coltroop: 025XY019NV
Vanwyper: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: None

2310--Bulake-Deunah-Bulake, very cobbly association

Composition

Major Components
Bulake gravelly loam, 2 to 8 percent slopes--45 percent
Deunah loam, 2 to 4 percent slopes--20 percent
Bulake very cobbly very fine sandy loam, 2 to 8 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Hatpeak stony loam, 4 to 15 percent slopes--7 percent
Inclusion 2: Rock outcrop--4 percent
Inclusion 3: Rubble land fragmental material--2 percent
Inclusion 4: Durargidic Argixerolls, fine-loamy, mixed, frigid gravelly loam, 15 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills
Bulake--Landform: Hills; geomorphic position: backslope
Deunah--Landform: Hills; geomorphic position: summit
Bulake--Landform: Hills; geomorphic position: toeslope
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Hills; geomorphic position: backslope
Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Bulake Series
Elevation: 5,300 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Deunah Series
Elevation: 5,300 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Bulake Series
Elevation: 5,300 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Bulake: Bluegrass, bottlebrush squirreltail, low sagebrush

Deunah: Idaho fescue, alkali sagebrush, bluebunch wheatgrass
Bulake: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, basin big sagebrush
Inclusion 2: None
Inclusion 3: None
Inclusion 4: Idaho fescue, basin big sagebrush

Ecological Site

Bulake: 025XY017NV
Deunah: 025XY017NV
Bulake: 025XY017NV
Inclusion 1: 025XY027NV
Inclusion 2: None
Inclusion 3: None
Inclusion 4: 025XY027NV

2311--Bulake-Hatpeak-Petan association

Composition

Major Components

Bulake very cobbly very fine sandy loam, 2 to 8 percent slopes--55 percent
Hatpeak loam, 2 to 8 percent slopes--15 percent
Petan very stony loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: McIvey cobbly loam, 15 to 50 percent slopes--5 percent
Inclusion 2: Cumulic Haplaquolls, loamy-skeletal, mixed, frigid silt loam--5 percent
Inclusion 3: Bilbo very gravelly very fine sandy loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Gumble very gravelly sandy loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Bulake--Landform: Plateaus; geomorphic position: summit; shape of slope: plane
Hatpeak--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Petan--Landform: Plateaus; geomorphic position: summit; shape of slope: plane
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; shape of slope: convex; aspect: south

Major Component Description

Bulake Series

Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Hatpeak Series

Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Petan Series

Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Bulake: Idaho fescue, bluegrass, low sagebrush
Hatpeak: Idaho fescue, basin big sagebrush, bluebunch wheatgrass
Petan: Bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Idaho fescue, mountain big sagebrush
Inclusion 2: Nevada bluegrass, alpine timothy
Inclusion 3: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 4: Big sagebrush, bluebunch wheatgrass, cheatgrass

Ecological Site

Bulake: 025XY017NV
Hatpeak: 025XY027NV
Petan: 025XY022NV
Inclusion 1: 025XY012NV
Inclusion 2: 025XY006NV
Inclusion 3: 025XY015NV
Inclusion 4: 025XY015NV

2505--Buffaran-Zevadez association

Composition

Major Components

Buffaran very fine sandy loam, 0 to 4 percent slopes--50 percent
Zevadez very fine sandy loam, 2 to 4 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Haploxerollic Durargids, fine, montmorillonitic, mesic gravelly loam, 0 to 4 percent slopes--6 percent

Inclusion 2: Xerollic Camborthids, loamy-skeletal, mixed, mesic gravelly loam, 4 to 8 percent slopes--5 percent
Inclusion 3: Puett gravelly loam, 8 to 15 percent slopes--2 percent
Inclusion 4: Xerollic Haplargids, loamy-skeletal, mixed, mesic gravelly loam--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Buffaran--Landform: Fan remnants; geomorphic position: toeslope
Zevadez--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; aspect: south

Major Component Description

Buffaran Series
Elevation: 5,200 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Zevadez Series
Elevation: 5,200 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Buffaran: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Indian ricegrass, Wyoming big sagebrush
Inclusion 4: Big sagebrush, cheatgrass

Ecological Site

Buffaran: 025XY019NV
Zevadez: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY025NV
Inclusion 4: 025XY015NV

2511--Bilbo-Alley-Deepeek association

Composition

Major Components
Bilbo extremely stony sandy loam, 30 to 50 percent slopes--35 percent
Alley very stony loam, 50 to 70 percent slopes--25 percent
Deepeek very cobbly loam, 30 to 50 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--5 percent
Inclusion 2: Rubble land fragmental material--5 percent
Inclusion 3: Durixerollic Haplargids, clayey-skeletal, montmorillonitic, mesic very cobbly loam, 15 to 30 percent slopes--4 percent
Inclusion 4: Puett gravelly loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Bilbo--Landform: Plateaus; geomorphic position: backslope; position on slope: lower part
Alley--Landform: Plateaus; geomorphic position: backslope; position on slope: upper part
Deepeek--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: toeslope
Inclusion 4--Landform: Canyons; geomorphic position: shoulder

Major Component Description

Bilbo Series
Elevation: 4,800 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Extremely stony sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Alley Series
Elevation: 5,000 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Deepeek Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Dominant Present Vegetation

Bilbo: Big sagebrush, bluebunch wheatgrass, cheatgrass
Alley: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Deepeek: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 1: None
Inclusion 2: None
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Indian ricegrass, Wyoming big sagebrush

Ecological Site

Bilbo: 025XY015NV
Alley: 025XY019NV
Deepeek: 025XY015NV
Inclusion 1: None
Inclusion 2: None
Inclusion 3: 025XY019NV
Inclusion 4: 025XY025NV

2514--Bilbo-Susie Creek-Buffaran association

Composition

Major Components

Bilbo very gravelly very fine sandy loam, 15 to 30 percent slopes--35 percent
Susie Creek very fine sandy loam, 4 to 15 percent slopes--30 percent
Buffaran very fine sandy loam, 2 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Alyan very gravelly very fine sandy loam, 15 to 50 percent slopes--5 percent
Inclusion 2: Ramires silt loam, 8 to 15 percent slopes--5 percent
Inclusion 3: Zevadez gravelly loam, 2 to 4 percent slopes--4 percent
Inclusion 4: Puett gravelly loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Bilbo--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Susie Creek--Landform: Fan remnants; geomorphic position: backslope; aspect: north
Buffaran--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane
Inclusion 3--Landform: Fan remnants; geomorphic position: toeslope
Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex; aspect: south

Major Component Description

Bilbo Series
Elevation: 5,100 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very gravelly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Susie Creek Series
Elevation: 5,100 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Buffaran Series
Elevation: 5,100 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Bilbo: Bluebunch wheatgrass, bluegrass, bottlebrush squirreltail, cheatgrass
Susie Creek: Basin big sagebrush, bluebunch wheatgrass, bluegrass, rabbitbrush
Buffaran: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, bottlebrush squirreltail
Inclusion 2: Big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Indian ricegrass, Wyoming big sagebrush

Ecological Site

Bilbo: 025XY015NV
Susie Creek: 025XY014NV
Buffaran: 025XY019NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY014NV

Inclusion 3: 025XY019NV
Inclusion 4: 025XY025NV

2521--Dewar-Chiara-Chiara, very cobbly association

Composition

Major Components

Dewar very cobbly very fine sandy loam, 8 to 15 percent slopes--55 percent
Chiara very fine sandy loam, 2 to 4 percent slopes--15 percent
Chiara very cobbly very fine sandy loam, 4 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Coltroop cobbly very fine sandy loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Xerollic Durargids, fine, montmorillonitic, mesic gravelly loam, 4 to 8 percent slopes--6 percent
Inclusion 3: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Dewar--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper part
Chiara--Landform: Fan remnants; geomorphic position: backslope; position on slope: lower; shape of slope: concave
Chiara--Landform: Fan remnants; geomorphic position: footslope
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: toeslope
Inclusion 3--Landform: Hills

Major Component Description

Dewar Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Dewar: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: None

Ecological Site

Dewar: 025XY019NV
Chiara: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: None

2522--Dewar-Sodhouse association

Composition

Major Components

Dewar very cobbly very fine sandy loam, 4 to 8 percent slopes--55 percent
Sodhouse cobbly silt loam, 2 to 4 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Dacker very cobbly sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 2: Clurde very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 3: Relley silt loam, 0 to 2 percent slopes, frequently flooded--3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Dewar--Landform: Fan remnants; geomorphic position: backslope
Sodhouse--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Dewar Series
Elevation: 5,100 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Sodhouse Series
Elevation: 5,100 to 5,300 feet
Precipitation: About 8 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Dewar: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Sodhouse: Bottlebrush squirreltail, winterfat, winterfat
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Indian ricegrass, shadscale
Inclusion 4: None

Ecological Site

Dewar: 023XY006NV
Sodhouse: 024XY059NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 024XY012NV
Inclusion 4: None

2531--Clurde Variant-Clurde-Rock outcrop association

Composition

Major Components
Clurde Variant loam, 0 to 2 percent slopes, occasionally flooded--50 percent
Clurde very fine sandy loam, 0 to 2 percent slopes--20 percent
Rock outcrop--15 percent
Contrasting Inclusions
Inclusion 1: Xerollic Haplargids, fine, montmorillonitic, mesic gravelly loam, 0 to 4 percent slopes--7 percent
Inclusion 2: Durixerollic Camborthids, sandy-skeletal, mixed, mesic fine sandy loam, 0 to 4 percent slopes--3 percent
Inclusion 3: Durixerollic Camborthids, coarse-loamy, mixed, mesic fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Wieland loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Clurde Variant--Landform: Inset fans
Clurde--Landform: Fan remnants; geomorphic position: toeslope
Rock outcrop--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: toeslope

Major Component Description

Clurde Variant
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Clurde Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Rock outcrop Miscellaneous Area
Elevation: 5,100 to 5,500 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Clurde Variant: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Rock outcrop: None
Inclusion 1: Bluebunch wheatgrass, bluegrass
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Clurde Variant: 025XY019NV
Clurde: 025XY019NV
Rock outcrop: None
Inclusion 1: 025XY050NV

Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

2541--Kelk very fine sandy loam, occasionally flooded, 0 to 2 percent slopes

Composition

Major Components
Kelk very fine sandy loam, 0 to 2 percent slopes, occasionally flooded--85 percent
Contrasting Inclusions
Inclusion 1: Clementine silt loam, drained, 0 to 2 percent slopes--8 percent
Inclusion 2: Clurde very fine sandy loam, 0 to 2 percent slopes--7 percent

Map Unit Setting

Landscape position: Fan piedmonts
Kelk--Landform: Inset fans
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Inset fans

Major Component Description

Kelk Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Kelk: Thurber needlegrass, Wyoming big sagebrush, basin big sagebrush
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Basin big sagebrush, basin wildrye, bluegrass

Ecological Site

Kelk: 024XY006NV
Inclusion 1: 025XY003NV
Inclusion 2: 025XY019NV

2545--Kelk-Clurde association

Composition

Major Components
Kelk very fine sandy loam, 0 to 2 percent slopes--60 percent
Clurde very fine sandy loam, 0 to 2 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Durixerollic Camborthids, coarse-loamy, mixed, mesic fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Kelk very fine sandy loam, 0 to 2 percent slopes, occasionally flooded--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Kelk--Landform: Inset fans
Clurde--Landform: Inset fans
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Inset fans

Major Component Description

Kelk Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Clurde Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Kelk: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass, rabbitbrush
Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Basin big sagebrush, basin wildrye, rabbitbrush

Ecological Site

Kelk: 025XY019NV
Clurde: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 024XY006NV

2555--Piline silty clay loam

Composition

Major Components
Piline silty clay loam, 0 to 2 percent slopes--85 percent

Contrasting Inclusions
Inclusion 1: McCleary silt loam, occasionally flooded--10 percent
Inclusion 2: McCleary cobbly sandy loam, rarely flooded--5 percent

Map Unit Setting
Landscape position: Bolsons
Piline--Landform: Lake plains
Inclusion 1--Landform: Lake plains; shape of slope: concave
Inclusion 2--Landform: Alluvial fans; geomorphic position: summit; shape of slope: convex

Major Component Description
Piline Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Silty clay loam
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation
Piline: Bluegrass, bottlebrush squirreltail, mat muhly
Inclusion 1: Mat muhly, povertyweed
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site
Piline: 025XY049NV
Inclusion 1: 025XY048NV
Inclusion 2: 025XY019NV

2560--McCleary silt loam, occasionally flooded

Composition
Major Components
McCleary silt loam, 0 to 2 percent slopes, occasionally flooded--85 percent
Contrasting Inclusions
Inclusion 1: McCleary very fine sandy loam, overwash, rarely flooded--10 percent
Inclusion 2: Piline silty clay loam, frequently flooded--3 percent
Inclusion 3: McCleary cobbly silt loam, rarely flooded--2 percent

Map Unit Setting
Landscape position: Bolsons
McCleary--Landform: Lake plains; shape of slope: concave
Inclusion 1--Landform: Lake plains; shape of slope: convex
Inclusion 2--Landform: Lake plains; position on slope: lower part; shape of slope: concave
Inclusion 3--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex

Major Component Description
McCleary Series
Elevation: 5,300 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation
McCleary: Silver sagebrush
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Bluegrass, mat muhly, povertyweed
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site
McCleary: 025XY048NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY049NV
Inclusion 3: 025XY019NV

2561--McCleary cobbly silt loam, drained, rarely flooded

Composition
Major Components
McCleary cobbly silt loam, 0 to 2 percent slopes, rarely flooded--85 percent
Contrasting Inclusions
Inclusion 1: McCleary silt loam, occasionally flooded--10 percent
Inclusion 2: Chiara very fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting
Landscape position: Intermontane basins
McCleary--Landform: Fan skirts
Inclusion 1--Landform: Lake plains; shape of slope: convex
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex

Major Component Description
McCleary Series
Elevation: 5,300 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly silt loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

McCleary: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 1: Mat muhly, povertyweed
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

McCleary: 025XY019NV
Inclusion 1: 025XY048NV
Inclusion 2: 025XY019NV

2571--Chiara-Chiara, cobbly-Chiara, very cobbly association

Composition

Major Components

Chiara very fine sandy loam, 0 to 2 percent slopes--40 percent
Chiara cobbly silt loam, 2 to 4 percent slopes--30 percent
Chiara very cobbly very fine sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Shalake very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Xerollic Haplargids, fine, montmorillonitic, mesic gravelly loam--5 percent
Inclusion 3: Coltroop cobbly very fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Chiara--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper part
Chiara--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Chiara--Landform: Fan remnants; geomorphic position: footslope; position on slope: lower part
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 2--Landform: Fan remnants; geomorphic position: toeslope
Inclusion 3--Landform: Hills; geomorphic position: summit

Major Component Description

Chiara Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Cobbly silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Chiara: 025XY019NV
Chiara: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2572--Chiara-Chiara, moderately eroded association

Composition

Major Components

Chiara very fine sandy loam, 0 to 2 percent slopes--70 percent
Chiara silt loam, moderately eroded, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Shalake very fine sandy loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam--4 percent
Inclusion 3: Dacker very fine sandy loam, 2 to 4 percent slopes--3 percent
Inclusion 4: Xerollic Haplargids, fine, montmorillonitic, mesic gravelly loam--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Chiara--Landform: Fan remnants; geomorphic position: summit
Chiara--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Hills; geomorphic position: backslope
Inclusion 4--Landform: Drainageways

Major Component Description

Chiara Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush
Inclusion 3: Wyoming big sagebrush
Inclusion 4: Bluebunch wheatgrass

Ecological Site

Chiara: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY050NV

2573--Chiara, very cobbly-Chiara association

Composition

Major Components
Chiara very cobbly very fine sandy loam, 4 to 15 percent slopes--45 percent
Chiara cobbly silt loam, 2 to 4 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Shalake very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 2: Xerollic Haplargids, fine, montmorillonitic, mesic extremely cobbly loam, 0 to 4 percent slopes --5 percent
Inclusion 3: Coltroop cobbly very fine sandy loam, 2 to 8 percent slopes--3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Chiara--Landform: Fan remnants; geomorphic position: backslope
Chiara--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: backslope
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position: summit
Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description

Chiara Series
Elevation: 5,000 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Cobbly silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Bluebunch wheatgrass, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: None

Ecological Site

Chiara: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY050NV
Inclusion 3: 025XY019NV
Inclusion 4: None

2575--Chiara-Dacker-Shalake association

Composition

Major Components

Chiara very fine sandy loam, 0 to 2 percent slopes--40 percent
Dacker very fine sandy loam, 2 to 4 percent slopes--25 percent
Shalake very fine sandy loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Clurde very fine sandy loam, 0 to 2 percent slopes--10 percent
Inclusion 2: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 3: Xerollic Haplargids, fine, montmorillontic, mesic extremely cobbly loam, 0 to 4 percent slopes --2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Chiara--Landform: Fan remnants; geomorphic position: summit
Dacker--Landform: Fan remnants; geomorphic position: backslope
Shalake--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: toeslope

Major Component Description

Chiara Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dacker Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Shalake Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Dacker: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Shalake: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Bluebunch wheatgrass, bottlebrush squirreltail

Ecological Site

Chiara: 025XY019NV
Dacker: 025XY019NV
Shalake: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY050NV

2577--Chiara-Orovada association

Composition

Major Components

Chiara very fine sandy loam, 2 to 8 percent slopes--50 percent
Orovada very fine sandy loam, 2 to 8 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Chiara very cobbly sandy loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Xeric Torripsamments, mixed, mesic fine sand, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Chiara--Landform: Fan remnants; geomorphic position: summit
Orovada--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Chiara Series
Elevation: 4,500 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Orovada Series
Elevation: 4,500 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Orovada: Thurber needlegrass, Wyoming big sagebrush, rabbitbrush
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Basin big sagebrush

Ecological Site

Chiara: 024XY005NV
Orovada: 024XY020NV
Inclusion 1: 024XY005NV
Inclusion 2: 024XY001NV

2600--Shalake-Chiara-Shalake, gently sloping association

Composition

Major Components
Shalake very fine sandy loam, 0 to 2 percent slopes--35 percent
Chiara very fine sandy loam, 0 to 2 percent slopes--25 percent
Shalake very fine sandy loam, 2 to 4 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Clurde very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Xerollic Haplargids, fine, montmorillonitic, mesic extremely cobbly loam, 0 to 4 percent slopes --5 percent
Inclusion 3: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 4 percent slopes--3 percent
Inclusion 4: Zevadez very fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Shalake--Landform: Fan remnants; geomorphic position: summit
Chiara--Landform: Fan remnants; geomorphic position: summit
Shalake--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Fan remnants; geomorphic position: summit
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description

Shalake Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Chiara Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Shalake Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Shalake: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Shalake: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Bluebunch wheatgrass
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Shalake: 025XY019NV
Chiara: 025XY019NV
Shalake: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY050NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

2611--Dacker-Hunnton association

Composition

Major Components

Dacker silt loam, 2 to 4 percent slopes--55 percent
Hunnton silt loam, 2 to 4 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Wieland loam, 2 to 4 percent slopes--7 percent
Inclusion 2: Bartome very fine sandy loam, 2 to 4 percent slopes--7 percent
Inclusion 3: Chiara very fine sandy loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Dacker--Landform: Fan remnants; geomorphic position: summit
Hunnton--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants
Inclusion 2--Landform: Fan remnants; geomorphic position: summit
Inclusion 3--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex

Major Component Description

Dacker Series

Elevation: 5,200 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hunnton Series

Elevation: 5,200 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Dacker: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Dacker: 025XY019NV
Hunnton: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2612--Dacker-Zevadez association

Composition

Major Components

Dacker very fine sandy loam, 0 to 2 percent slopes--55 percent
Zevadez very fine sandy loam, 2 to 4 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Clurde very fine sandy loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Chiara very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
Dacker--Landform: Fan remnants; geomorphic position: summit
Zevadez--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Inset fans; geomorphic position: footslope
Inclusion 2--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Inclusion 3--Landform: Inset fans

Major Component Description

Dacker Series

Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Zevadez Series

Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees

Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Dacker: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush
Inclusion 3: Wyoming big sagebrush

Ecological Site

Dacker: 025XY019NV
Zevadez: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2615--Dacker-Chiara association

Composition

Major Components

Dacker very fine sandy loam, 2 to 4 percent slopes--50 percent
Chiara very fine sandy loam, 0 to 2 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Clurde very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Shalake very fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 4: Xerollic Haplargids, fine, montmorillonitic, mesic extremely cobbly loam, 0 to 4 percent slopes --1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Dacker--Landform: Fan remnants; geomorphic position: backslope
Chiara--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: summit
Inclusion 4--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave

Major Component Description

Dacker Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Dacker: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush
Inclusion 3: Wyoming big sagebrush
Inclusion 4: Bluebunch wheatgrass, bottlebrush squirreltail

Ecological Site

Dacker: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY050NV

2621--Gochea-Susie Creek-Carstump association

Composition

Major Components

Gochea gravelly loam, 4 to 8 percent slopes--35 percent
Susie Creek loam, 4 to 15 percent slopes--25 percent
Carstump very cobbly loam, 15 to 30 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Haploxerollic Durargids, fine, montmorillonitic, frigid gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 2: Handy very cobbly loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Rubble land fragmental material--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Gochea--Landform: Fan remnants; geomorphic position: summit

Susie Creek--Landform: Hills; geomorphic position: backslope
Carstump--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: backslope
Inclusion 2--Landform: Hills; geomorphic position: backslope; position on slope: lower part
Inclusion 3--Landform: Hills; geomorphic position: summit
Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Gochea Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Susie Creek Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Carstump Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Gochea: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Susie Creek: Basin big sagebrush, bluebunch wheatgrass, bluegrass, rabbitbrush
Carstump: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush
Inclusion 3: None
Inclusion 4: None

Ecological Site

Gochea: 025XY014NV
Susie Creek: 025XY014NV
Carstump: 025XY014NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY019NV
Inclusion 3: None
Inclusion 4: None

2641--Olac-Snowmore association

Composition

Major Components
Olac very stony loam, 4 to 15 percent slopes--70 percent
Snowmore very fine sandy loam, 2 to 4 percent slopes --15 percent
Contrasting Inclusions
Inclusion 1: Coltroop very cobbly fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Chiara very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Rubble land fragmental material--3 percent
Inclusion 4: Xerollic Haplargids, fine, montmorillonitic, mesic extremely cobbly loam, 0 to 4 percent slopes --2 percent

Map Unit Setting

Landscape position: Hills
Olac--Landform: Hills; geomorphic position: footslope
Snowmore--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: shoulder
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Hills; geomorphic position: backslope
Inclusion 4--Landform: Drainageways

Major Component Description

Olac Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Snowmore Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Olac: Bluebunch wheatgrass, bluegrass, bottlebrush squirreltail, low sagebrush

Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush
Inclusion 3: None
Inclusion 4: Bluebunch wheatgrass

Ecological Site

Olac: 025XY018NV
Snowmore: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: None
Inclusion 4: 025XY050NV

2650--Wieland-Bartome-Zevadez assocation

Composition

Major Components

Wieland gravelly loam, 8 to 15 percent slopes--45 percent
Bartome very fine sandy loam, 0 to 2 percent slopes--25 percent
Zevadez very fine sandy loam, 4 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Dacker very fine sandy loam, 2 to 4 percent slopes--7 percent
Inclusion 2: Haploxerollic Durargids, fine-loamy, mixed, mesic gravelly loam, 2 to 4 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
Wieland--Landform: Fan remnants; geomorphic position: backslope
Bartome--Landform: Fan remnants; geomorphic position: summit
Zevadez--Landform: Fan remnants; geomorphic position: footslope
Inclusion 1--Landform: Fan remnants; geomorphic position: toeslope
Inclusion 2--Landform: Fan remnants; geomorphic position: shoulder; shape of slope: convex

Major Component Description

Wieland Series

Elevation: 4,800 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Bartome Series

Elevation: 4,800 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Zevadez Series

Elevation: 4,800 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Bartome: Bluegrass, cheatgrass
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush

Ecological Site

Wieland: 025XY019NV
Bartome: 025XY019NV
Zevadez: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV

2651--Wieland-Buffaran association

Composition

Major Components

Wieland loam, 8 to 15 percent slopes--45 percent
Buffaran very fine sandy loam, 0 to 2 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Zevadez very fine sandy loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Haploxerollic Durargids, fine, montmorillonitic, mesic gravelly loam, 2 to 4 percent slopes--5 percent
Inclusion 3: Puett gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Wieland--Landform: Fan remnants; geomorphic position: backslope
Buffaran--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: toeslope

Inclusion 2--Landform: Fan remnants; geomorphic position: shoulder; shape of slope: convex
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper; shape of slope: convex
Inclusion 4--Landform: Pediments; geomorphic position: backslope

Major Component Description

Wieland Series
Elevation: 5,000 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Buffaran Series
Elevation: 5,000 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Buffaran: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush
Inclusion 3: Wyoming big sagebrush
Inclusion 4: None

Ecological Site

Wieland: 025XY019NV
Buffaran: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY025NV
Inclusion 4: None

2652--Wieland-Dacker-Zevadez association

Composition

Major Components
Wieland loam, 2 to 4 percent slopes--30 percent
Dacker silt loam, 2 to 4 percent slopes--30 percent
Zevadez very fine sandy loam, 2 to 4 percent slopes--25 percent

Contrasting Inclusions
Inclusion 1: Hunnton silt loam, 4 to 8 percent slopes--6 percent
Inclusion 2: Olac cobbly loam, 4 to 8 percent slopes--4 percent
Inclusion 3: Aridic Haploxerolls, fine-silty, mixed, mesic silt loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Buffaran very fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Wieland--Landform: Fan remnants; geomorphic position: toeslope
Dacker--Landform: Fan remnants; geomorphic position: summit
Zevadez--Landform: Fan remnants; geomorphic position: summit; position on slope: lower part
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope
Inclusion 2--Landform: Fan remnants; geomorphic position: footslope; shape of slope: concave
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Wieland Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dacker Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Zevadez Series
Elevation: 5,200 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Dacker: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Zevadez: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass

Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Low sagebrush
Inclusion 3: Big sagebrush
Inclusion 4: Wyoming big sagebrush

Ecological Site

Wieland: 025XY019NV
Dacker: 025XY019NV
Zevadez: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY018NV
Inclusion 3: 025XY014NV
Inclusion 4: 025XY019NV

2655--Wieland-Gumble-Bilbo association

Composition

Major Components

Wieland loam, 4 to 15 percent slopes--40 percent
Gumble gravelly sandy loam, 15 to 30 percent slopes--25 percent
Bilbo gravelly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Hunnton loam, 2 to 8 percent slopes--10 percent
Inclusion 2: Gumble very gravelly sandy loam, 30 to 50 percent slopes--2 percent
Inclusion 3: Durargidic Argixerolls, fine-loamy, mixed, mesic gravelly loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Aridic Argixerolls, fine-loamy, mixed, mesic gravelly loam, 15 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Wieland--Landform: Fan remnants; geomorphic position: summit
Gumble--Landform: Fan remnants; geomorphic position: backslope
Bilbo--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope
Inclusion 4--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Wieland Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Gumble Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Bilbo Series

Elevation: 5,200 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Gumble: Wyoming big sagebrush, bluebunch wheatgrass
Bilbo: Wyoming big sagebrush, bluebunch wheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Big sagebrush, cheatgrass
Inclusion 3: Basin big sagebrush
Inclusion 4: Big sagebrush

Ecological Site

Wieland: 025XY019NV
Gumble: 025XY019NV
Bilbo: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY015NV
Inclusion 3: 025XY027NV
Inclusion 4: 025XY014NV

2656--Wieland-Hunnton-Thwoop association

Composition

Major Components

Wieland loam, 2 to 4 percent slopes--35 percent
Hunnton silt loam, 2 to 4 percent slopes--30 percent
Thwoop gravelly silt loam, 4 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Vanwyper gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Xerollic Haplargids, fine, montmorillonitic, mesic gravelly loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Pachic Haploxerolls, loamy-skeletal, mixed, mesic very gravelly loam, 4 to 8 percent slopes--3 percent
Inclusion 4: Xerollic Camborthids, fine-loamy, mixed, mesic gravelly loam, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Wieland--Landform: Fan remnants; geomorphic position: summit
Hunnton--Landform: Fan remnants; geomorphic position: summit
Thwoop--Landform: Fan remnants; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Hills
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: concave
Inclusion 3--Landform: Hills; position on slope: upper; shape of slope: concave
Inclusion 4--Landform: Inset fans

Major Component Description

Wieland Series
Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hunnton Series
Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Thwoop Series
Elevation: 5,100 to 5,400 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly silt loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Hunnton: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Thwoop: Thurber needlegrass, basin wildrye, big sagebrush, bluegrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Basin big sagebrush
Inclusion 4: Wyoming big sagebrush

Ecological Site

Wieland: 025XY019NV
Hunnton: 025XY019NV
Thwoop: 025XY014NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY003NV
Inclusion 4: 025XY019NV

2658--Wieland very gravelly loam, 15 to 30 percent slopes

Composition

Major Components
Wieland very gravelly loam, 15 to 30 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Durixerollic Camborthids, loamy-skeletal, mixed, mesic fine sandy loam, 8 to 15 percent slopes--5 percent
Inclusion 2: Zevadez very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Durixerollic Haplargids, fine, montmorillonitic, mesic very gravelly loam, 8 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Wieland--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: toeslope
Inclusion 2--Landform: Fan remnants; geomorphic position: summit
Inclusion 3--Landform: Fan remnants; geomorphic position: shoulder

Major Component Description

Wieland Series
Elevation: 4,800 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail

Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush

Ecological Site

Wieland: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2666--Puett-Orovada association

Composition

Major Components

Puett fine sandy loam, 15 to 30 percent slopes--65 percent
Orovada very fine sandy loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Orovada loam, 0 to 2 percent slopes--10 percent

Map Unit Setting

Landscape position: Fan piedmonts
Puett--Landform: Fan remnants; geomorphic position: backslope
Orovada--Landform: Fan remnants; geomorphic position: toeslope
Inclusion 1--Landform: Inset fans

Major Component Description

Puett Series

Elevation: 5,000 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Orovada Series

Elevation: 5,000 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Puett: Wyoming big sagebrush, bluegrass, rabbitbrush
Orovada: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Puett: 025XY025NV
Orovada: 024XY020NV
Inclusion 1: 024XY005NV

2667--Puett-Rock outcrop-Clurde association

Composition

Major Components

Puett gravelly loam, 30 to 50 percent slopes--50 percent
Rock outcrop--20 percent
Clurde very fine sandy loam, 4 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Chiara very fine sandy loam, 8 to 15 percent slopes--5 percent
Inclusion 2: Alley gravelly loam, 8 to 15 percent slopes--5 percent
Inclusion 3: Yuko sandy loam, 15 to 30 percent slopes --5 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Puett--Landform: Hills; geomorphic position: backslope; position on slope: upper part
Rock outcrop--Landform: Hills; geomorphic position: summit
Clurde--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: footslope
Inclusion 3--Landform: Hills; geomorphic position: backslope; position on slope: lower; aspect: south

Major Component Description

Puett Series

Elevation: 5,100 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Rock outcrop Miscellaneous Area

Elevation: 5,100 to 5,700 feet
Drainage class: Excessively drained

Clurde Series

Elevation: 5,100 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Puett: Wyoming big sagebrush, bluegrass, rabbitbrush
Rock outcrop: None
Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush

Ecological Site

Puett: 025XY025NV
Clurde: 025XY019NV
Rock outcrop: None
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2668--Puett-Yuko-Zevadez association

Composition

Major Components

Puett gravelly loam, 30 to 50 percent slopes--45 percent
Yuko sandy loam, 15 to 30 percent slopes--25 percent
Zevadez very fine sandy loam, 4 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Chime gravelly loam, 8 to 15 percent slopes--5 percent
Inclusion 2: Xeric Torriorthents, loamy-skeletal, mixed, nonacid, mesic gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Rock outcrop--3 percent
Inclusion 4: Chiara very fine sandy loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Puett--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper part
Yuko--Landform: Fan remnants; geomorphic position: backslope; position on slope: lower part
Zevadez--Landform: Fan remnants; geomorphic position: footslope
Inclusion 1--Landform: Fan remnants; geomorphic position: footslope
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope
Inclusion 4--Landform: Fan remnants; geomorphic position: shoulder

Major Component Description

Puett Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Yuko Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Zevadez Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Puett: Wyoming big sagebrush, bluegrass, rabbitbrush
Yuko: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: None
Inclusion 4: Wyoming big sagebrush

Ecological Site

Puett: 025XY025NV
Yuko: 025XY019NV
Zevadez: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: None
Inclusion 4: 025XY019NV

2710--Ramires-Bartome-Bilbo association

Composition

Major Components

Ramires silt loam, 8 to 15 percent slopes--35 percent
Bartome very fine sandy loam, 2 to 4 percent slopes--30 percent
Bilbo very gravelly very fine sandy loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Buffaran very fine sandy loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Alyan very gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Clurde very fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Ramires--Landform: Pediments; geomorphic position: backslope; aspect: north
Bartome--Landform: Fan remnants; geomorphic position: summit
Bilbo--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Inclusion 3--Landform: Inset fans

Major Component Description

Ramires Series
Elevation: 5,100 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Bartome Series
Elevation: 5,100 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Bilbo Series
Elevation: 5,100 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very gravelly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Ramires: Basin wildrye, big sagebrush, bluebunch wheatgrass, rabbitbrush
Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Bilbo: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush

Ecological Site

Ramires: 025XY014NV
Bartome: 025XY019NV
Bilbo: 025XY015NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY019NV

2711--Ramires-Bilbo-Buffaran association

Composition

Major Components
Ramires silt loam, 8 to 15 percent slopes--35 percent
Bilbo very gravelly very fine sandy loam, 30 to 50 percent slopes--30 percent
Buffaran very fine sandy loam, 2 to 8 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Alyan very gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Hatpeak loam, 8 to 15 percent slopes--5 percent
Inclusion 3: Bartome very fine sandy loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Ramires--Landform: Pediments; geomorphic position: backslope; position on slope: lower; aspect: north
Bilbo--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper; aspect: south
Buffaran--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: upper part
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Hills; geomorphic position: shoulder

Major Component Description

Ramires Series
Elevation: 5,700 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Bilbo Series
Elevation: 5,700 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very gravelly very fine sandy loam

Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Buffaran Series
Elevation: 5,700 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Ramires: Basin wildrye, big sagebrush, bluebunch wheatgrass, rabbitbrush
Bilbo: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Buffaran: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, bottlebrush squirreltail
Inclusion 2: Idaho fescue, basin big sagebrush
Inclusion 3: Wyoming big sagebrush

Ecological Site

Ramires: 025XY014NV
Bilbo: 025XY015NV
Buffaran: 025XY019NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY027NV
Inclusion 3: 025XY019NV

2741--Wilsor-Wilsor, moderately steep association

Composition

Major Components
Wilsor loam, 4 to 15 percent slopes--55 percent
Wilsor loam, 15 to 30 percent slopes--30 percent
Contrasting Inclusions
Inclusion 1: Xeric Torriorthents, loamy, mixed, nonacid, frigid, shallow gravelly loam, 15 to 30 percent slopes--10 percent
Inclusion 2: Ratsow loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Hills
Wilsor--Landform: Hills; geomorphic position: summit
Wilsor--Landform: Hills; geomorphic position: shoulder
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description

Wilsor Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Wilsor Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Wilsor: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wilsor: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Indian ricegrass, Wyoming big sagebrush
Inclusion 2: Big sagebrush, bottlebrush squirreltail
Inclusion 3: None

Ecological Site

Wilsor: 025XY019NV
Wilsor: 025XY019NV
Inclusion 1: 025XY025NV
Inclusion 2: 025XY014NV
Inclusion 3: None

2751--Yuko-Chime-Clurde association

Composition

Major Components
Yuko sandy loam, 8 to 15 percent slopes--35 percent
Chime gravelly loam, 8 to 15 percent slopes--30 percent
Clurde very fine sandy loam, 2 to 4 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Zevadez very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Chiara very fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Durixerollic Haplargids, fine, montmorillonitic, mesic gravelly loam, 8 to 15 percent slopes--3 percent
Inclusion 4: Zevadez gravelly loam, 4 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Yuko--Landform: Pediments; geomorphic position: backslope
Chime--Landform: Pediments; geomorphic position: backslope
Clurde--Landform: Fan remnants; geomorphic position: footslope
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: summit
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope
Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave

Major Component Description

Yuko Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Chime Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from sedimentary rocks

Clurde Series
Elevation: 5,200 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Yuko: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chime: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush
Inclusion 4: Wyoming big sagebrush

Ecological Site

Yuko: 025XY019NV
Chime: 025XY019NV
Clurde: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

2775--Zevadez-Bartome-Wieland association

Composition

Major Components
Zevadez very fine sandy loam, 2 to 8 percent slopes--35 percent
Bartome very fine sandy loam, 2 to 4 percent slopes--30 percent
Wieland loam, 2 to 4 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Buffaran very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Kelk very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Haploxerollic Durargids, fine, montmorillonitic, mesic gravelly loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Zevadez--Landform: Fan remnants; geomorphic position: backslope
Bartome--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex
Wieland--Landform: Fan remnants; geomorphic position: toeslope; shape of slope: concave
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: shoulder; shape of slope: convex

Major Component Description

Zevadez Series
Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Bartome Series
Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wieland Series
Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush

Ecological Site
Zevadez: 025XY019NV
Bartome: 025XY019NV
Wieland: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2776--Zevadez-Chiara association

Composition
Major Components
Zevadez very fine sandy loam, 0 to 2 percent slopes--45 percent
Chiara very fine sandy loam, 2 to 4 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 4 percent slopes--5 percent
Inclusion 2: Buffaran very fine sandy loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Dacker very fine sandy loam, 2 to 4 percent slopes--4 percent
Inclusion 4: Wieland very fine sandy loam, 2 to 4 percent slopes--2 percent

Map Unit Setting
Landscape position: Fan piedmonts
Zevadez--Landform: Fan remnants; geomorphic position: summit
Chiara--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper part
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Fan remnants; geomorphic position: summit
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; position on slope: lower part
Inclusion 4--Landform: Fan remnants; geomorphic position: toeslope

Major Component Description
Zevadez Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush
Inclusion 4: Wyoming big sagebrush

Ecological Site
Zevadez: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

2777--Zevadez-Wieland-Clurde association

Composition
Major Components
Zevadez very fine sandy loam, 0 to 2 percent slopes--45 percent
Wieland loam, 0 to 2 percent slopes--25 percent
Clurde very fine sandy loam, 0 to 2 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: McCleary sandy loam, 0 to 2 percent slopes, occasionally flooded--5 percent

Inclusion 2: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: McCleary very fine sandy loam, overwash, 0 to 2 percent slopes, occasionally flooded--5 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Zevadez--Landform: Fan remnants; geomorphic position: summit
Wieland--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Clurde--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Lake plains
Inclusion 3--Landform: Inset fans

Major Component Description

Zevadez Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wieland Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Clurde Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Mat muhly, silver sagebrush
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Silver sagebrush

Ecological Site

Zevadez: 025XY019NV
Wieland: 025XY019NV
Clurde: 025XY019NV
Inclusion 1: 025XY048NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY048NV

2778--Zevadez-Yuko-Kelk association

Composition

Major Components
Zevadez very fine sandy loam, 0 to 2 percent slopes--45 percent
Yuko sandy loam, 4 to 15 percent slopes--25 percent
Kelk very fine sandy loam, 0 to 2 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Chime gravelly loam, 4 to 15 percent slopes--7 percent
Inclusion 2: Clurde very fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 3: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Chiara very fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Zevadez--Landform: Fan remnants; geomorphic position: summit
Yuko--Landform: Pediments; geomorphic position: shoulder; aspect: south
Kelk--Landform: Inset fans
Inclusion 1--Landform: Hills; geomorphic position: backslope
Inclusion 2--Landform: Hills; geomorphic position: footslope
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Zevadez Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Yuko Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees

Frost-free season: About 110 days
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Kelk Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Yuko: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Kelk: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site
Zevadez: 025XY019NV
Yuko: 025XY019NV
Kelk: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY019NV

2780--Snowmore, cobbly-Snowmore association

Composition
Major Components
Snowmore cobbly fine sandy loam, 2 to 4 percent slopes--60 percent
Snowmore very fine sandy loam, 0 to 2 percent slopes --25 percent
Contrasting Inclusions
Inclusion 1: Coltroop very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Troughs cobbly loam, 4 to 8 percent slopes--5 percent
Inclusion 3: Olac gravelly loam, 4 to 15 percent slopes --3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting
Landscape position: Plateaus
Snowmore--Landform: Plateaus; geomorphic position: backslope
Snowmore--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Inclusion 4--Landform: Plateaus; geomorphic position: summit

Major Component Description
Snowmore Series
Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Snowmore Series
Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Low sagebrush
Inclusion 4: None

Ecological Site
Snowmore: 025XY019NV
Snowmore: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY018NV
Inclusion 4: None

2781--Snowmore, cobbly-Snowmore, very cobbly-Snowmore association

Composition

Major Components

Snowmore cobbly fine sandy loam, 2 to 4 percent slopes--40 percent
Snowmore very cobbly loam, 4 to 8 percent slopes--30 percent
Snowmore very fine sandy loam, 0 to 2 percent slopes --15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--7 percent
Inclusion 2: Troughs cobbly loam, 4 to 8 percent slopes--5 percent
Inclusion 3: Coltroop very fine sandy loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Snowmore--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Snowmore--Landform: Plateaus; geomorphic position: backslope; shape of slope: convex
Snowmore--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: summit; shape of slope: convex

Major Component Description

Snowmore Series

Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Snowmore Series

Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Snowmore Series

Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: None
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush

Ecological Site

Snowmore: 025XY019NV
Snowmore: 025XY019NV
Snowmore: 025XY019NV
Inclusion 1: None
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2782--Snowmore-Zevadez-Snowmore, cobbly association

Composition

Major Components

Snowmore very fine sandy loam, 0 to 2 percent slopes --50 percent
Zevadez very fine sandy loam, 0 to 2 percent slopes--20 percent
Snowmore cobbly fine sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Coltroop very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Wieland very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Troughs cobbly loam, 4 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Plateaus
Snowmore--Landform: Plateaus; geomorphic position: summit
Zevadez--Landform: Plateaus; geomorphic position: footslope
Snowmore--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: footslope; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Snowmore Series

Elevation: 5,100 to 5,400 feet

Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Zevadez Series
Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Snowmore Series
Elevation: 5,100 to 5,400 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Cobbly fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush

Ecological Site
Snowmore: 025XY019NV
Zevadez: 025XY019NV
Snowmore: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2783--Snowmore-Willhill association

Composition
Major Components
Snowmore very fine sandy loam, 2 to 8 percent slopes --50 percent
Willhill gravelly loam, 4 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Midraw gravelly loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Olac cobbly loam, 4 to 8 percent slopes--5 percent
Inclusion 3: Lithic Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic extremely cobbly loam, 0 to 4 percent slopes--3 percent
Inclusion 4: Clurde very fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting
Landscape position: Plateaus
Snowmore--Landform: Plateaus; geomorphic position: summit
Willhill--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper part
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Drainageways

Major Component Description
Snowmore Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Willhill Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 11 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation
Snowmore: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Willhill: Wyoming big sagebrush, bluebunch wheatgrass, bluegrass, bottlebrush squirreltail
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Low sagebrush
Inclusion 3: Bluebunch wheatgrass, bottlebrush squirreltail
Inclusion 4: Wyoming big sagebrush

Ecological Site
Snowmore: 025XY019NV
Willhill: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY018NV
Inclusion 3: 025XY050NV
Inclusion 4: 025XY019NV

2790--Old Camp-Troughs-Olac association

Composition

Major Components

Old Camp extremely stony loam, 15 to 30 percent slopes--45 percent
Troughs gravelly loam, 2 to 4 percent slopes--25 percent
Olac very stony loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Snowmore very fine sandy loam, 2 to 4 percent slopes--7 percent
Inclusion 2: Rock outcrop--3 percent

Map Unit Setting

Landscape position: Plateaus
Old Camp--Landform: Plateaus; geomorphic position: backslope
Troughs--Landform: Plateaus; geomorphic position: summit
Olac--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: summit

Major Component Description

Old Camp Series

Elevation: 5,300 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Troughs Series

Elevation: 5,300 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Olac Series

Elevation: 5,300 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Old Camp: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Troughs: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Olac: Bluebunch wheatgrass, bluegrass, bottlebrush squirreltail, low sagebrush
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: None

Ecological Site

Old Camp: 025XY019NV
Troughs: 025XY019NV
Olac: 025XY018NV
Inclusion 1: 025XY019NV
Inclusion 2: None

2801--Bartome-Alley-Clurde association

Composition

Major Components

Bartome very fine sandy loam, 2 to 4 percent slopes--40 percent
Alley gravelly loam, 15 to 30 percent slopes--30 percent
Clurde very fine sandy loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Chime gravelly loam, 8 to 15 percent slopes--5 percent
Inclusion 2: Wieland gravelly loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Yuko sandy loam, 8 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Bartome--Landform: Fan remnants; geomorphic position: summit
Alley--Landform: Fan remnants; geomorphic position: backslope
Clurde--Landform: Fan remnants; geomorphic position: toeslope
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; position on slope: lower part
Inclusion 2--Landform: Fan remnants; geomorphic position: footslope
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; aspect: south

Major Component Description

Bartome Series

Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Alley Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Clurde Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Alley: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Clurde: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush

Ecological Site

Bartome: 025XY019NV
Alley: 025XY019NV
Clurde: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2802--Bartome-Buffaran association

Composition

Major Components
Bartome very fine sandy loam, 2 to 4 percent slopes--50 percent
Buffaran very fine sandy loam, 0 to 2 percent slopes--35 percent

Contrasting Inclusions
Inclusion 1: Zevadez very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 2: Susie Creek very fine sandy loam, 4 to 8 percent slopes--5 percent
Inclusion 3: Dacker very fine sandy loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Bartome--Landform: Fan remnants; geomorphic position: backslope
Buffaran--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: footslope
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description

Bartome Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Buffaran Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Buffaran: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush

Ecological Site

Bartome: 025XY019NV
Buffaran: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY019NV

2803--Bartome-Buffaran-Ramires association

Composition

Major Components
Bartome very fine sandy loam, 2 to 4 percent slopes--30 percent
Buffaran very fine sandy loam, 0 to 2 percent slopes--30 percent
Ramires silt loam, 8 to 15 percent slopes--25 percent

Contrasting Inclusions
Inclusion 1: Dacker very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 2: Bilbo very gravelly very fine sandy loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Aridic Argixerolls, fine-loamy, mixed, frigid gravelly loam, 8 to 15 percent slopes--5 percent

Map Unit Setting
Landscape position: Fan piedmonts
Bartome--Landform: Fan remnants; geomorphic position: backslope
Buffaran--Landform: Fan remnants; geomorphic position: summit
Ramires--Landform: Pediments; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope
Inclusion 3--Landform: Fan remnants; geomorphic position: shoulder; aspect: north

Major Component Description
Bartome Series
Elevation: 5,100 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Buffaran Series
Elevation: 5,100 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Ramires Series
Elevation: 5,100 to 5,700 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Buffaran: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Ramires: Basin wildrye, big sagebrush, bluebunch wheatgrass, rabbitbrush
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site
Bartome: 025XY019NV
Buffaran: 025XY019NV
Ramires: 025XY014NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY015NV
Inclusion 3: 025XY027NV

2804--Bartome-Chiara association

Composition
Major Components
Bartome very fine sandy loam, 0 to 2 percent slopes--50 percent
Chiara very fine sandy loam, 2 to 4 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Buffaran very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Dacker very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 3: Xerollic Haplargids, fine, montmorillonitic, mesic extremely cobbly loam, 0 to 4 percent slopes--3 percent
Inclusion 4: Zevadez very fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting
Landscape position: Fan piedmonts
Bartome--Landform: Fan remnants; geomorphic position: summit
Chiara--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: footslope

Major Component Description
Bartome Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Bluebunch wheatgrass
Inclusion 4: Wyoming big sagebrush

Ecological Site

Bartome: 025XY019NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY050NV
Inclusion 4: 025XY019NV

2805--Bartome very fine sandy loam, 0 to 2 percent slopes

Composition

Major Components

Bartome very fine sandy loam, 0 to 2 percent slopes--85 percent

Contrasting Inclusions

Inclusion 1: Dacker very fine sandy loam, 0 to 2 percent slopes--10 percent
Inclusion 2: Wieland very fine sandy loam, 4 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Bartome--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 2--Landform: Fan remnants; geomorphic position: toeslope

Major Component Description

Bartome Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Bartome: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV

2807--Bartome-Coltroop-Zevadez association

Composition

Major Components

Bartome very fine sandy loam, 0 to 2 percent slopes--40 percent
Coltroop very fine sandy loam, 2 to 4 percent slopes--25 percent
Zevadez gravelly loam, 2 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Vanwyper extremely stony loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Shalake very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 3: Lithic Xerollic Camborthids, loamy, mixed, mesic very gravelly loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Bartome--Landform: Fan remnants; geomorphic position: summit
Coltroop--Landform: Pediments; geomorphic position: shoulder
Zevadez--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: footslope
Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Hills; geomorphic position: toeslope

Major Component Description

Bartome Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Coltroop Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Zevadez Series
Elevation: 5,100 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation
Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Coltroop: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Zevadez: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site
Bartome: 025XY019NV
Coltroop: 025XY019NV
Zevadez: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV

2808--Bartome-Susie Creek-Wieland association

Composition
Major Components
Bartome very fine sandy loam, 2 to 4 percent slopes--40 percent
Susie Creek very fine sandy loam, 2 to 4 percent slopes--25 percent
Wieland very fine sandy loam, 4 to 8 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Buffaran very fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Ramires silt loam, 8 to 15 percent slopes--5 percent
Inclusion 3: Dacker very fine sandy loam, 2 to 4 percent slopes--5 percent

Map Unit Setting
Landscape position: Hills and intermontane basins
Bartome--Landform: Fan remnants; geomorphic position: summit
Susie Creek--Landform: Pediments; geomorphic position: footslope; aspect: north
Wieland--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Fan remnants; geomorphic position: shoulder

Major Component Description
Bartome Series
Elevation: 5,100 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Susie Creek Series
Elevation: 5,100 to 5,600 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Wieland Series
Elevation: 5,100 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation
Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Susie Creek: Basin big sagebrush, bluebunch wheatgrass, bluegrass, rabbitbrush
Wieland: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Big sagebrush, bottlebrush squirreltail, cheatgrass

Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Bartome: 025XY019NV
Susie Creek: 025XY014NV
Wieland: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY019NV

2809--Bartome-Dacker association

Composition

Major Components

Bartome silt loam, 0 to 2 percent slopes--45 percent
Dacker silt loam, 2 to 8 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Hunnton silt loam, 2 to 4 percent slopes--6 percent
Inclusion 2: Wieland very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 3: Chiara very fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Xerollic Haplargids, fine, montmorillonitic, mesic extremely stony loam, 0 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Bartome--Landform: Fan remnants; geomorphic position: summit
Dacker--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope
Inclusion 3--Landform: Fan remnants; geomorphic position: summit
Inclusion 4--Landform: Inset fans; geomorphic position: footslope; shape of slope: concave

Major Component Description

Bartome Series

Elevation: 5,200 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dacker Series

Elevation: 5,200 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Bartome: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Dacker: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 2: Big sagebrush, bottlebrush squirreltail, cheatgrass
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Bottlebrush squirreltail

Ecological Site

Bartome: 025XY019NV
Dacker: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY050NV

2820--Alley-Vanwyper-Rock outcrop association

Composition

Major Components

Alley very stony loam, 8 to 15 percent slopes--45 percent
Vanwyper very stony loam, 8 to 15 percent slopes--25 percent
Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Xeric Torrifluvents, sandy, mixed, mesic loamy sand, 0 to 2 percent slopes--5 percent
Inclusion 2: Aridic Argixerolls, fine-loamy, mixed, mesic gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Puett gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 4: Rubble land fragmental material--2 percent

Map Unit Setting

Landscape position: Plateaus
Alley--Landform: Plateaus; geomorphic position: backslope
Vanwyper--Landform: Plateaus; geomorphic position: backslope
Rock outcrop--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 4--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Alley Series
Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Vanwyper Series
Elevation: 4,800 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 4,800 to 5,600 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Alley: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Vanwyper: Wyoming big sagebrush, bottlebrush squirreltail, cheatgrass
Rock outcrop: None
Inclusion 1: Basin big sagebrush, basin wildrye, rabbitbrush
Inclusion 2: Big sagebrush, bluebunch wheatgrass, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush
Inclusion 4: None

Ecological Site

Alley: 025XY019NV
Vanwyper: 025XY019NV
Rock outcrop: None
Inclusion 1: 024XY006NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY025NV
Inclusion 4: None

2822--Alley-Rock outcrop-Rubble land association

Composition

Major Components
Alley very stony loam, 50 to 75 percent slopes--45 percent
Rock outcrop--25 percent
Rubble land fragmental material--20 percent
Contrasting Inclusions
Inclusion 1: Alley cobbly fine sandy loam, 30 to 50 percent slopes--10 percent

Map Unit Setting

Landscape position: Hills
Alley--Landform: Hills; geomorphic position: backslope
Rock outcrop--Landform: Hills; geomorphic position: summit
Rubble land--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: footslope

Major Component Description

Alley Series
Elevation: 4,900 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 4,900 to 5,700 feet
Drainage class: Excessively drained

Rubble land Miscellaneous Area
Elevation: 4,900 to 5,500 feet
Surface layer texture: Fragmental material
Drainage class: Excessively drained

Dominant Present Vegetation

Alley: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Rock outcrop: None
Rubble land: None
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Alley: 025XY019NV
Rubble land: None
Rock outcrop: None
Inclusion 1: 025XY019NV

3000--Handy-Wilsor-Deseed association

Composition

Major Components
Handy loam, 15 to 30 percent slopes--40 percent
Wilsor loam, 4 to 8 percent slopes--25 percent
Deseed gravelly loam, 4 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Xerollic Haplargids, fine-loamy, mixed, frigid gravelly loam, 30 to 50 percent slopes--7 percent
Inclusion 2: Rock outcrop--5 percent
Inclusion 3: Lithic Xerollic Haplargids, loamy, mixed, frigid very gravelly loam, 4 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Hills
Handy--Landform: Hills; geomorphic position: backslope; aspect: north
Wilsor--Landform: Hills; geomorphic position: footslope
Deseed--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Hills; geomorphic position: summit
Inclusion 3--Landform: Hills; geomorphic position: summit

Major Component Description

Handy Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Wilsor Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Deseed Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Handy: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Wilsor: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Deseed: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, cheatgrass
Inclusion 2: None
Inclusion 3: Big sagebrush, bottlebrush squirreltail

Ecological Site

Handy: 025XY014NV
Wilsor: 025XY019NV
Deseed: 025XY014NV
Inclusion 1: 025XY015NV
Inclusion 2: None
Inclusion 3: 025XY014NV

3010--Relley-Kelk association

Composition

Major Components

Relley silt loam, 0 to 2 percent slopes, frequently flooded--65 percent
Kelk very fine sandy loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Zevadez very fine sandy loam, 0 to 2 percent slopes--10 percent
Inclusion 2: Dacker very fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
Relley--Landform: Inset fans
Kelk--Landform: Inset fans
Inclusion 1--Landform: Hills; geomorphic position: footslope
Inclusion 2--Landform: Hills; geomorphic position: backslope

Major Component Description

Relley Series
Elevation: 5,100 to 5,200 feet
Precipitation: About 8 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Kelk Series
Elevation: 5,100 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Relley: Bottlebrush squirreltail
Kelk: Indian ricegrass, Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Relley: 024XY012NV
Kelk: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV

3020--Sodhouse-Chiara association

Composition

Major Components

Sodhouse silt loam, 0 to 2 percent slopes--50 percent
Chiara silt loam, 2 to 4 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Dacker very fine sandy loam, 2 to 4 percent slopes--6 percent
Inclusion 2: Shalake very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 3: Clurde very fine sandy loam, 0 to 2 percent slopes--2 percent
Inclusion 4: Typic Calciorthids, fine-loamy, mixed, mesic very gravelly loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Sodhouse--Landform: Fan remnants; geomorphic position: summit
Chiara--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope
Inclusion 2--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Sodhouse Series

Elevation: 5,100 to 5,300 feet
Precipitation: About 8 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,100 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Sodhouse: Bottlebrush squirreltail, winterfat, winterfat
Chiara: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush
Inclusion 4: Shadscale

Ecological Site

Sodhouse: 024XY059NV
Chiara: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 024XY002NV

3030--Deepeek-Alley association

Composition

Major Components

Deepeek very cobbly loam, 8 to 15 percent slopes--45 percent
Alley very cobbly very fine sandy loam, 15 to 30 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Haploxerollic Durargids, loamy-skeletal, mixed, mesic gravelly loam, 15 to 30 percent slopes--9 percent
Inclusion 2: Wieland cobbly loam, 2 to 8 percent slopes--2 percent
Inclusion 3: Durixerollic Haplargids, clayey-skeletal, montmorillonitic, mesic very cobbly loam, 4 to 8 percent slopes--2 percent
Inclusion 4: Puett gravelly loam, 8 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Deepeek--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper part
Alley--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 1--Landform: Fan remnants; geomorphic position: backslope
Inclusion 2--Landform: Fan remnants; geomorphic position: toeslope; position on slope: lower part
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper part
Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex; aspect: south

Major Component Description

Deepeek Series

Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 105 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Alley Series

Elevation: 4,800 to 5,600 feet
Precipitation: About 9 inches

Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Very cobbly very fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Deepeek: Wyoming big sagebrush
Alley: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Big sagebrush, cheatgrass
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Wyoming big sagebrush
Inclusion 4: Wyoming big sagebrush

Ecological Site

Deepeek: 025XY019NV
Alley: 025XY019NV
Inclusion 1: 025XY015NV
Inclusion 2: 025XY019NV
Inclusion 3: 025XY019NV
Inclusion 4: 025XY025NV

3100--Ratsow-Quarz-Susie Creek association

Composition

Major Components

Ratsow loam, 4 to 15 percent slopes--50 percent
Quarz very cobbly loam, 4 to 8 percent slopes--20 percent
Susie Creek loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Lithic Argixerolls, loamy, mixed, frigid very gravelly loam, 4 to 8 percent slopes--5 percent
Inclusion 2: Xerollic Durargids, clayey-skeletal, montmorillonitic, frigid, shallow gravelly loam, 8 to 15 percent slopes--5 percent
Inclusion 3: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Hills
Ratsow--Landform: Hills; geomorphic position: backslope
Quarz--Landform: Hills; geomorphic position: summit
Susie Creek--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: summit
Inclusion 2--Landform: Hills; geomorphic position: backslope; position on slope: upper part
Inclusion 3--Landform: Hills; geomorphic position: backslope
Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Ratsow Series

Elevation: 5,400 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Quarz Series

Elevation: 5,400 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Susie Creek Series

Elevation: 5,400 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Ratsow: Big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Quarz: Bottlebrush squirreltail
Susie Creek: Basin big sagebrush, bluebunch wheatgrass, bluegrass, rabbitbrush
Inclusion 1: Big sagebrush, bottlebrush squirreltail
Inclusion 2: Big sagebrush, bottlebrush squirreltail
Inclusion 3: Mountain big sagebrush
Inclusion 4: None

Ecological Site

Ratsow: 025XY014NV
Quarz: 025XY014NV
Susie Creek: 025XY014NV
Inclusion 1: 025XY014NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY012NV
Inclusion 4: None

3510--Midraw-Troughs-Midraw, strongly sloping association

Composition

Major Components

Midraw gravelly loam, 2 to 8 percent slopes--35 percent
Troughs gravelly loam, 8 to 15 percent slopes--30 percent

Midraw gravelly loam, 8 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Chiara very fine sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 2: Ratsow loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Linkup very cobbly loam, 8 to 15 percent slopes--5 percent

Map Unit Setting
Landscape position: Plateaus
Midraw--Landform: Plateaus; geomorphic position: summit
Troughs--Landform: Plateaus; geomorphic position: backslope
Midraw--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: footslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; shape of slope: convex; aspect: north

Major Component Description
Midraw Series
Elevation: 5,300 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Troughs Series
Elevation: 5,300 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Midraw Series
Elevation: 5,300 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Midraw: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Troughs: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Midraw: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail, cheatgrass
Inclusion 1: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 2: Big sagebrush, bottlebrush squirreltail
Inclusion 3: Low sagebrush

Ecological Site
Midraw: 025XY019NV
Troughs: 025XY019NV
Midraw: 025XY019NV
Inclusion 1: 025XY019NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY018NV

3710--Petan-Bulake-Rock outcrop association

Composition
Major Components
Petan extremely stony loam, 4 to 15 percent slopes--50 percent
Bulake gravelly loam, 2 to 8 percent slopes--20 percent
Rock outcrop--15 percent
Contrasting Inclusions
Inclusion 1: Deunah silt loam, 2 to 4 percent slopes--10 percent
Inclusion 2: Hatpeak loam, 2 to 4 percent slopes--3 percent
Inclusion 3: Rubble land fragmental material--2 percent

Map Unit Setting
Landscape position: Hills
Petan--Landform: Hills; geomorphic position: backslope
Bulake--Landform: Hills; geomorphic position: toeslope
Rock outcrop--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: upper part
Inclusion 2--Landform: Hills; geomorphic position: backslope
Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description
Petan Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Bulake Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Gravelly loam

Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 5,300 to 5,700 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Petan: Bluegrass, bottlebrush squirreltail, low sagebrush
Bulake: Bluegrass, bottlebrush squirreltail, low sagebrush
Rock outcrop: None
Inclusion 1: Low sagebrush
Inclusion 2: Idaho fescue, basin big sagebrush
Inclusion 3: None

Ecological Site

Petan: 025XY022NV
Bulake: 025XY017NV
Rock outcrop: None
Inclusion 1: 025XY017NV
Inclusion 2: 025XY027NV
Inclusion 3: None

3715--Petan-Deunah-Hatpeak association

Composition

Major Components
Petan very cobbly loam, 4 to 8 percent slopes--35 percent
Deunah silt loam, 2 to 4 percent slopes--30 percent
Hatpeak loam, 2 to 4 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Typic Durixerolls, fine-loamy, mixed, frigid silt loam, 2 to 4 percent slopes--5 percent
Inclusion 2: Rubble land fragmental material--5 percent
Inclusion 3: Bulake gravelly loam, 2 to 8 percent slopes--3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Plateaus
Petan--Landform: Plateaus; geomorphic position: summit
Deunah--Landform: Plateaus; geomorphic position: shoulder
Hatpeak--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: lower part
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: summit; position on slope: upper part
Inclusion 4--Landform: Plateaus

Major Component Description

Petan Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Deunah Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Hatpeak Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Petan: Low sagebrush
Deunah: Idaho fescue, alkali sagebrush, bluebunch wheatgrass
Hatpeak: Idaho fescue, basin big sagebrush, bluebunch wheatgrass
Inclusion 1: Basin big sagebrush
Inclusion 2: None
Inclusion 3: Low sagebrush
Inclusion 4: None

Ecological Site

Petan: 025XY022NV
Deunah: 025XY017NV
Hatpeak: 025XY027NV
Inclusion 1: 025XY027NV
Inclusion 2: None
Inclusion 3: 025XY017NV
Inclusion 4: None

3721--Hatpeak-Deunah association

Composition

Major Components
Hatpeak loam, 2 to 4 percent slopes--55 percent
Deunah silt loam, 2 to 4 percent slopes--30 percent
Contrasting Inclusions
Inclusion 1: Typic Durixerolls, fine-loamy, mixed, frigid gravelly loam, 2 to 4 percent slopes--10 percent

Inclusion 2: Petan very cobbly loam, 4 to 8 percent slopes--3 percent
Inclusion 3: Bulake gravelly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Hatpeak--Landform: Plateaus; geomorphic position: backslope
Deunah--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: lower part
Inclusion 2--Landform: Plateaus; geomorphic position: summit
Inclusion 3--Landform: Plateaus; geomorphic position: summit; position on slope: upper part

Major Component Description

Hatpeak Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Deunah Series
Elevation: 5,300 to 5,700 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Hatpeak: Idaho fescue, basin big sagebrush, bluebunch wheatgrass
Deunah: Idaho fescue, alkali sagebrush, bluebunch wheatgrass
Inclusion 1: Basin big sagebrush
Inclusion 2: Low sagebrush
Inclusion 3: Low sagebrush

Ecological Site

Hatpeak: 025XY027NV
Deunah: 025XY017NV
Inclusion 1: 025XY027NV
Inclusion 2: 025XY022NV
Inclusion 3: 025XY017NV

3722--Hatpeak-Hatpeak, moderately steep association

Composition

Major Components
Hatpeak loam, 2 to 8 percent slopes--70 percent
Hatpeak loam, 8 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Typic Argixerolls, fine, montmorillonitic, frigid very gravelly loam--7 percent
Inclusion 2: Gumble very gravelly very fine sandy loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Bilbo very gravelly very fine sandy loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Crooked Creek silty clay loam, drained, 0 to 2 percent slopes, rarely flooded--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Hatpeak--Landform: Fan remnants; geomorphic position: summit
Hatpeak--Landform: Fan remnants; geomorphic position: backslope
Inclusion 1--Landform: Fan remnants; geomorphic position: toeslope; shape of slope: concave; aspect: north
Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex; aspect: south
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; aspect: south
Inclusion 4--Landform: Flood plains

Major Component Description

Hatpeak Series
Elevation: 5,200 to 5,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Hatpeak Series
Elevation: 5,200 to 5,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Hatpeak: Idaho fescue, basin big sagebrush, bluebunch wheatgrass
Hatpeak: Idaho fescue, basin big sagebrush, bluebunch wheatgrass
Inclusion 1: Idaho fescue, basin big sagebrush

Inclusion 2: Big sagebrush, bluebunch wheatgrass, cheatgrass
Inclusion 3: Big sagebrush, cheatgrass
Inclusion 4: Basin big sagebrush, basin wildrye

Ecological Site

Hatpeak: 025XY027NV
Hatpeak: 025XY027NV
Inclusion 1: 025XY027NV
Inclusion 2: 025XY015NV
Inclusion 3: 025XY015NV
Inclusion 4: 025XY003NV

W--Water

Composition

Major Components
Water--100 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Water--Landform: Depressions

Major Component Description

Water Miscellaneous Area
Elevation: 5,500 to 8,000 feet

Dominant Present Vegetation

Water: None

Ecological Site

Water: None

Prime Farmland

Prime Farmland and Other Important Farmland

In this section, prime farmland and other important farmland are defined. The map units in the survey area that are considered prime farmland are listed under "Prime Farmland Map Units" at the end of this section.

Prime Farmland

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to food, seed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods. An adequate moisture supply and a sufficiently long growing season are required. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources, and farming these soils results in the least damage to the environment.

Prime farmland soils may presently be used as cropland, pasture, woodland, or for other purposes. They are used for food and fiber or are available for these uses. Urban or built-up land and water areas cannot be considered prime farmland. Urban or built-up land is any contiguous unit of land 10 acres or more in size that is used for such purposes as housing, industrial, and commercial sites, sites for institutions or public buildings, small parks, golf courses, cemeteries, railroad yards, airports, sanitary landfills, sewage treatment plants, and water-control structures.

Prime farmland soils commonly receive an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable, and the level of acidity or alkalinity and the content of salts and sodium are acceptable. The soils have few, if any, rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods, and they are not frequently flooded during the growing season or are protected from flooding. Slopes range mainly from 0 to 6 percent.

Soils that have a high water table, are subject to flooding, or are droughty may qualify as prime farmland where these limitations are overcome by drainage measures, flood control, or irrigation. Onsite evaluation is necessary to determine the effectiveness of corrective measures. More information about the criteria for prime farmland can be obtained at the local office of the Natural Resources Conservation Service.

A recent trend in land use has been the conversion of prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on lands that are less productive than prime farmland.

About 80,629 acres, or nearly 4.2 percent of the survey area, would meet the requirements for prime farmland if an adequate and dependable supply of irrigation water were available.

The map units in the survey area that meet the requirements for prime farmland are listed under "Prime Farmland Map Units." On some soils included in the list, measures that overcome limitations are needed. The location of each map unit is shown on the detailed soil maps at the back of this publication. This list does not constitute a recommendation for a particular land use.

Unique Farmland

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops. It has the special combination of soil qualities, location, growing season, and moisture supply needed for the economic production of sustained high yields of a specific high-quality crop when treated and managed by acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, and vegetables.

Unique farmland is used for a specific high-value food or fiber crop; has an adequate supply of available moisture for the specific crop because of stored moisture, precipitation, or irrigation; and has a combination of soil qualities, growing season, temperature, humidity, air drainage, elevation, aspect, and other factors, such as nearness to markets, that favor the production of a specific food or fiber crop.

Lists of unique farmland are developed as needed in cooperation with conservation districts and other entities. There are presently no soils recognized as unique farmland in Nevada.

Additional Farmland of Statewide Importance

Some areas other than areas of prime and unique farmland are of statewide importance in the production of food, feed, fiber, forage, and oilseed crops. The criteria used in defining and delineating these areas are determined by the appropriate State agency or agencies. Generally, additional farmland of statewide importance includes areas that nearly meet the criteria for prime farmland and that economically produce high yields of crops when treated and managed by acceptable farming methods. Some areas can produce as high a yield as areas of prime farmland if conditions are favorable. In some states, additional farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

Nevada has designated any farmland that is irrigated to be of statewide importance.

Prime Farmland Map Units

The following map units are prime farmland where irrigated with an adequate and dependable water supply:

161 Sonoma silt loam, drained, 0 to 2 percent slopes
1135 Clementine-Clurde association
1155 Clurde very fine sandy loam, 0 to 2 percent slopes
2541 Kelk very fine sandy loam, occasionally flooded, 0 to 2 percent slopes
2545 Kelk-Clurde association
2611 Dacker-Hunnton association
2612 Dacker-Zevadez association
2652 Wieland-Dacker-Zevadez association
2777 Zevadez-Wieland-Clurde association

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories. 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, "Classification of the Soils," in Part II of this Publication shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Eleven 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, 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; 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 Argixeroll. *(Argi, meaning presence of argillic horizon, plus xeroll, the suborder of the Mollisols that have a xeric moisture regime).*

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic 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 known kind of soil. 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 class, mineral content, temperature regime, thickness of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is loamy-skeletal, mixed, frigid, Typic Argixerolls.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series.

Taxonomic Units and Their Morphology

In this section, each taxonomic unit recognized in the survey area is described. The descriptions are arranged in alphabetical order.

Characteristics of the soil and the material in which it formed are identified for each unit. A pedon, a small three-dimensional area of soil, that is typical of the unit in the survey area is described. The detailed description of each soil horizon follow standards in the "Soil Survey Manual" *(18)*. Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" *(20)*. Unless otherwise stated, colors in the descriptions are for dry soil. Following the pedon description is the range of important characteristics of the soils in the unit.

The map units of each taxonomic unit are described in the section "Detailed Soil Map Units."

Akler Series

The Akler series consists of shallow, well drained soils that formed in residuum from tuff. Akler soils are on hills and mountains. Slopes are 4 to 15 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid, shallow Xerollic Haplargids

Typical pedon: Akler loam, 4 to 15 percent slopes, is located in an area of map unit 308. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; weak medium platy structure; slightly hard, very friable, sticky and

plastic; many very fine and fine, few medium and coarse roots; common very fine vesicular pores and few very fine tubular pores; 5 percent pebbles and 5 percent cobbles; neutral (pH 7.0); abrupt wavy boundary. (1 to 6 inches thick)

Bt1--4 to 12 inches; brown (10YR 5/3) clay, brown (10YR 4/3) moist; strong coarse prismatic structure; very hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; many stress surfaces along faces of peds; 5 percent pebbles; neutral (pH 7.2); clear wavy boundary. (6 to 14 inches thick)

Bt2--12 to 16 inches; light yellowish brown (10YR 6/4) clay, yellowish brown (10YR 5/4) moist; weak coarse prismatic structure parting to strong coarse subangular blocky; very hard, friable, very sticky and very plastic; few very fine and fine roots; moderate very fine tubular pores; many stress surfaces along faces of peds; 5 percent pebbles; mildly alkaline (pH 7.6); clear wavy boundary. (0 to 6 inches thick)

Bt3--16 to 18 inches; light yellowish brown (10YR 6/4) clay, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; hard, friable, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; many stress surfaces along faces of peds; 5 percent pebbles; mildly alkaline (pH 7.6); clear wavy boundary. (0 to 4 inches thick)

Cr--18 inches; fractured weathered tuff; few moderately thick clay films, few fine, irregularly shaped filaments and threads of lime along fracture planes, and few fine and medium roots along fracture planes.

Type location: Elko County, Nevada; approximately 6 miles southeast of Willow Creek Reservoir; about 600 feet east and 400 feet south of the northwest corner of section 19, T. 38 N., R. 48 E.; 40 degrees, 09 minutes, 47 seconds north latitude, 116 degrees, 35 minutes, 12 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in the winter and spring, dry mid June through October
Soil temperature: 44 to 47 degrees F.
Depth to paralithic contact: 14 to 20 inches.
Reaction: Neutral or mildly alkaline
Control section:
Clay content--50 to 60 percent.
Rock fragments--0 to 15 percent, mainly pebbles, some pedons near rock outcrops have cobbles in their profile.

A horizon:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.

Bt horizons:
Hue--2.5Y or 10YR.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--2 through 4.

Cr horizon:
Clay films--Common in upper horizon along fracture planes.

Alley Series

The Alley series consists of very deep, well drained soils that formed in loess over alluvium and colluvium from andesite, basalt and tuff with some influence from loess. Alley soils are on side slopes and shoulders of plateaus, hills and fan piedmont remnants. Slopes are 8 to 75 percent. The mean annual precipitation is about 9 inches and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Durixerollic Haplargids

Typical pedon: Alley very stony loam, 15 to 30 percent slopes, is located in an area of map unit 235. (Colors are for dry soil unless otherwise noted.) The surface is covered with approximately 15 percent pebbles, 10 percent cobbles and 10 percent stones.

A1--0 to 3 inches; pale brown (10YR 6/3) very stony loam, brown (10YR 4/3) moist; moderate very thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine vesicular pores; 15 percent pebbles, 10 percent cobbles and 10 percent stones; neutral (pH 7.2); clear smooth boundary. (2 to 8 inches thick)

A2--3 to 7 inches; pale brown (10YR 6/3) very stony loam, brown (10YR 4/3) moist; moderate very thick platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine vesicular pores; 15 percent pebbles, 10 percent cobbles and 10 percent stones; neutral (pH 7.2); clear smooth boundary. (0 to 5 inches thick)

Bt1--7 to 11 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine, common fine and medium roots; common very fine tubular pores; few thin clay films on faces of peds and lining pores; 15 percent pebbles, 5 percent cobbles; mildly alkaline (pH 7.8); clear smooth boundary.

Bt2--11 to 20 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, sticky and slightly plastic; common very fine and few fine roots;

common very fine tubular pores; common thin clay films on faces of peds and lining pores; 20 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (4 to 9 inches thick)

Bqk1--20 to 28 inches; very pale brown (10YR 7/4) gravelly fine sandy loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; hard, firm and brittle when moist, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; continuously brittle matrix; slightly effervescent, lime is disseminated; 30 percent pebbles; moderately alkaline (pH 8.4); clear smooth boundary. (6 to 10 inches thick)

Bqk2--28 to 40 inches; very pale brown (10YR 7/4) gravelly fine sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, firm and brittle moist, slightly sticky and nonplastic; few very fine roots; common very fine tubular pores; continuous brittle matrix; strongly effervescent, lime is disseminated; 25 percent pebbles, 10 percent cobbles; moderately alkaline (pH 8.2); clear smooth boundary. (0 to 14 inches thick)

2Bk--40 to 60 inches; light gray (10YR 7/2) very cobbly fine sandy loam, grayish brown (10YR 5/2) very cobbly fine sandy loam, grayish brown (10YR 5/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; strongly effervescent; 25 percent pebbles; 15 percent cobbles; strongly alkaline (pH 8.6); (15 to 30 inches thick)

Type location: Elko County, Nevada; approximately 1.5 miles south of Rock Creek Ranch; about 200 feet north and 1,600 feet east of the southwest corner of section 25, T. 37 N., R. 46 E.; 41 degrees, 02 minutes, 57 seconds north latitude, 116 degrees, 44 minutes, 02 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in the winter and spring months, dry summer and fall
Soil temperature: 47 to 52 degrees F.
Depth to continuous brittle matrix: 16 to 30 inches.
Depth to carbonates: 16 to 22 inches.
Other features: Few to many, fine to coarse lime segregations are common in most pedons where depth to the Bqk horizon is greater than 22 inches.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.
Other features--When mixed, the upper 7 inches has color values greater than 5.5 dry and 3.5 moist.

Bt horizons:
Value--5 or 6 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Gravelly loam, gravelly clay loam or gravelly sandy clay loam.
Clay content--20 to 30 percent.
Rock fragments--15 to 30 percent, mainly pebbles.
Structure--Weak or moderate, fine to coarse subangular blocky.
Reaction--Mildly alkaline or moderately alkaline.

Bqk horizons:
Value--6 through 8 dry, 4 through 6 moist.
Chroma--1 through 4.
Texture--Gravelly fine sandy loam, gravelly sandy loam, or cobbly fine sandy loam.
Rock fragments--15 to 35 percent, mainly pebbles or cobbles.
Consistence--Hard or very hard.
Reaction--Moderately alkaline or strongly alkaline.
Silica cementation--Few thin, or very thin discontinuous silica laminae are common in some pedons. Some pedons commonly have durinodes in a friable matrix below the continuously brittle matrix.

2Bk horizon (when present):
Rock fragments--40 to 60 percent, when mixed, mostly pebbles and cobbles, few stones in some pedons.

Alyan Series

The Alyan series consists of moderately deep, well drained soils that formed in residuum and colluvium from igneous rocks and siliceous tuff. Alyan soils are on hills, mountains and plateaus. Slopes are 4 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Aridic Argixerolls

Typical pedon: Alyan gravelly loam, 30 to 50 percent slopes, located in an area of map unit 2001. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine through coarse subangular blocky structure; soft, very friable, sticky and plastic; many very fine and fine, few medium roots; many very fine tubular and irregular pores; 25 percent pebbles; neutral (pH 7.0); abrupt smooth boundary. (1 to 5 inches thick)

A2--2 to 9 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure; soft, very friable, sticky and plastic; few very fine and fine roots; many very fine, few fine and medium

tubular pores; 25 percent pebbles; neutral (pH 7.2); clear wavy boundary. (3 to 12 inches thick)
Bt1--9 to 16 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, firm, very sticky and very plastic; few very fine and fine roots; many very fine through medium tubular pores; common thin clay films bridging sand grains and as colloid stains on pebbles; 10 percent pebbles; neutral (pH 7.2); clear wavy boundary. (3 to 8 inches thick)
Bt2--16 to 28 inches; yellowish brown (10YR 5/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; very hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine through medium tubular pores; many thin and common moderately thick clay films on faces of peds, lining pores, bridging sand grains and as colloid stains on pebbles; 30 percent pebbles; neutral (pH 7.2); clear wavy boundary. (4 to 18 inches thick)
Bt3--28 to 32 inches; light yellowish brown (10YR 6/4) very gravelly clay, yellowish brown (10YR 5/4) moist; massive; very hard, firm, very sticky and very plastic; few very fine roots; common very fine and fine tubular pores; common thick clay films bridging sand grains and as colloid stains on pebbles; 40 percent pebbles; neutral (pH 7.2). (0 to 5 inches thick)
R--32 inches; siliceous tuff.

Type location: Elko County, Nevada; approximately 1 mile east of Midas; about 600 feet west and 1,200 feet north of the southeast corner section 21, T. 39 N., R. 46 E.; 41 degrees, 14 minutes, 25 seconds north latitude, 116 degrees, 46 minutes, 44 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from mid June to mid October
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 8 to 18 inches thick, and commonly includes the upper part of the argillic horizon.
Depth to bedrock: 20 to 40 inches.
Thickness of the A & Bt horizons: 20 to 40 inches.
Control section:
Clay content--40 to 55 percent.
Rock fragments--Average 15 to 35 percent, mainly pebbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 through 7 dry, 3 through 5 moist, with darker value common only in the upper subhorizon.
Chroma--2 through 4.
Texture--Clay or gravelly clay with thin subhorizons of very gravelly clay overlying the bedrock common in most pedons. Thin gravelly clay loam subhorizons are common in some pedons.
Structure--Subangular blocky or is massive.
Consistence--Friable or firm, moist; sticky or very sticky and plastic or very plastic, wet.
Reaction--Neutral or mildly alkaline.

Arcia Series

The Arcia series consists of moderately deep, well drained soils that formed in colluvium from tuff and basalt. The Arcia soils are on side slopes of hills and mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Pachic Argixerolls

Typical pedon: Arcia gravelly silt loam, 15 to 30 percent slopes is located in an area of map unit 1876. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; slightly hard, very friable, sticky and slightly plastic; many very fine and fine roots; common very fine interstitial pores; 5 percent pebbles; neutral (pH 7.0); clear wavy boundary. (1 to 12 inches thick)
A2--2 to 6 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; hard, very friable, very sticky and plastic; many very fine, common fine and few medium roots; common very fine tubular and interstitial pores; 5 percent pebbles; neutral (pH 7.0); clear wavy boundary. (2 to 8 inches thick)
A3--6 to 15 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, very friable, very sticky and plastic; common very fine and fine, few medium roots; many very fine tubular pores; 5 percent pebbles; neutral (pH 7.0); clear wavy boundary. (0 to 9 inches thick)
Bt1--15 to 21 inches; grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate coarse subangular blocky structure; hard, friable, very sticky and very plastic; common very fine and fine, few medium roots; many very fine tubular pores; few thin clay films bridging sand grains and as colloidal stains on coarse fragments;

10 percent pebbles; neutral (pH 7.0); abrupt wavy boundary. (5 to 10 inches thick)
Bt2--21 to 27 inches; yellowish brown (10YR 5/4) gravelly clay, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; very hard, firm, very sticky and very plastic; few very fine and fine roots; many very fine and few fine tubular pores; continuous moderately thick clay films on faces of peds and as colloidal stains on coarse fragments; 20 percent pebbles; neutral (pH 7.2); clear wavy boundary. (6 to 20 inches thick)
Bt3--27 to 33 inches; yellowish brown (10YR 5/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, very sticky and very plastic; few very fine and fine roots; many very fine and few fine tubular pores; common moderately thick clay films on faces of peds, lining pores and as colloidal stains on coarse fragments; 20 percent pebbles; neutral (pH 7.2); clear wavy boundary. (0 to 8 inches thick)
Bt4--33 to 39 inches; yellowish brown (10YR 5/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; massive; hard, friable, sticky and plastic; few very fine roots; many very fine and few fine tubular pores; 25 percent pebbles; neutral (pH 7.2); abrupt smooth boundary. (0 to 8 inches thick)
R--39 inches; hard, rhyolite.

Type location: Elko County, Nevada; about 3 miles south of Deep Creek Reservoir; 530 feet north and 1,320 feet west of the southwest corner of section 7, T. 42 N., R. 51 E.; 41 degrees, 32 minutes, 50 seconds north latitude, 116 degrees, 17 minutes, 42 seconds west longitude.

Range in Characteristics

Soil moisture: Moist winter and spring, dry mid July through early October
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 20 to 30 inches; includes the upper argillic horizon.
Solum thickness and depth to bedrock: 30 to 40 inches.
Control section:
Clay content--Averages 35 to 50 percent.
Rock fragments--Averages 5 to 20 percent, mainly pebbles with some cobbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 through 3.

Bt1 horizon:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 through 3.
Texture--Clay loam or gravelly clay loam.
Clay content--30 to 40 percent.
Rock fragments--0 to 30 percent, mainly pebbles.

Lower Bt subhorizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 through 4 with lower chroma typically in the upper subhorizons.
Clay content--40 to 60 percent.
Rock fragments--Average 5 to 35 percent mainly pebbles and cobbles.
Texture--Clay, gravelly clay, cobbly clay. It is common to find a very cobbly clay with 35 to 50 percent rock fragments in most pedons immediately above the lithic contact.

Bartome Series

The Bartome series consists of shallow over a duripan, well drained soils that formed in alluvium from mixed sources with a thin loess cap. Bartome soils are on fan piedmont remnants. Slopes are 0 to 4 percent. Mean annual precipitation is about 9 inches and mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durargids

Typical pedon: Bartome very fine sandy loam, 0 to 2 percent slopes, is located in an area of map unit 2807. (Colors are for dry soil unless otherwise noted.)
A1--0 to 2 inches; pale brown (10YR 6/3) very fine sandy loam, brown (10YR 4/3) moist; moderate coarse and very coarse platy structure; slightly hard, very friable, slightly sticky and nonplastic; common fine and few very fine roots; common coarse and many medium vesicular pores; mildly alkaline (pH 7.8); clear smooth boundary. (1 to 3 inches thick)
A2--2 to 5 inches; pale brown (10YR 6/3) very fine sandy loam, brown (10YR 4/3) moist; weak fine platy structure; soft, very friable, slightly sticky and nonplastic; common fine and very fine roots; few medium and common fine vesicular pores; mildly alkaline (pH 7.8); clear wavy boundary. (1 to 4 inches thick)
A3--5 to 7 inches; yellowish brown (10YR 5/4) silt loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; few medium and common fine roots; few medium and common fine tubular pores; moderately alkaline (pH 8.0); clear wavy boundary. (0 to 4 inches thick)
Bt--7 to 11 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; moderate medium and coarse subangular blocky structure; slightly hard, firm, sticky and plastic; few medium and fine roots; few medium and fine tubular pores; few thin clay films on peds, common moderately thick clay films lining pores; moderately alkaline (pH 8.2); gradual wavy boundary. (4 to 7 inches thick)
Bqk--11 to 14 inches; pale brown (10YR 6/3) silty clay loam, yellowish brown (10YR 5/4) moist; strong

coarse and very coarse platy structure; hard, firm, sticky and plastic; few fine roots; few fine tubular pores; 5 percent pebbles; 15 percent brittle durinodes; few fine soft masses of lime, strongly alkaline (pH 8.6); gradual wavy boundary. (0 to 8 inches thick)

Bqkm1--14 to 24 inches; very pale brown (10YR 7/3) fractured indurated duripan, light yellowish brown (10YR 6/4) moist; strong coarse platy structure; very hard, extremely firm; few fine roots; few fine tubular pores; 35 percent brittle durinodes in the matrix between fractures; common, fine lime in soft masses and seams; strongly effervescent; strongly alkaline (pH 9.0); clear smooth boundary. (1 to 10 inches thick)

Bqkm2--24 to 28 inches; very pale brown (10YR 7/3) indurated duripan, light yellowish brown (10YR 6/4) moist; massive; extremely hard, extremely firm; continuous silica laminae are 1/2 to 2 millimeters thick; violently effervescent; very strongly alkaline (pH 9.2); clear wavy boundary. (4 to 17 inches thick)

Bqkm3--28 to 42 inches; very pale brown (10YR 7/3) strongly cemented duripan, light yellowish brown (10YR 6/4) moist; massive; very hard, extremely firm; 25 percent brittle durinodes; violently effervescent; moderately alkaline (pH 8.4)

Type location: Owyhee Desert, Elko County, Nevada; in an unsectionized area, about 3,000 feet north and 1,800 feet west of the Desert Ranch; 41 degrees, 44 minutes, 9 seconds north latitude, 116 degrees, 33 minutes, 25 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry in summer and early autumn
Soil temperature: 47 to 51 degrees F.
Depth to base of Bt horizon: 10 to 14 inches.
Reaction: Neutral to strongly alkaline in solum.
Depth to indurated duripan: 14 to 20 inches.
Depth to bedrock: Greater than 60 inches.
Control section:
Clay content--18 to 26 percent.
Rock fragments--0 to 15 percent, mainly pebbles.

A horizons:
Value--5 or 6 dry; 4 or 5 moist.
Chroma--2 through 4.

Bt horizon:
Value--5 or 6 dry, 4 or 5 moist.
Chroma--3 or 4.
Clay content--27 to 35 percent.
Structure--Weak or moderate, fine, medium or coarse subangular blocky.
Consistence--Friable or firm moist.

Bqk horizons (when present):
Value--6 or 7 dry, 4 through 6 moist.
Chroma--3 or 4.
Texture--Silt loam, loam, silty clay loam, sandy loam.
Rock fragments--5 to 25 percent.
Consistence--Slightly hard or hard dry, friable or firm moist, slightly sticky or sticky and slightly plastic or plastic wet.

Bilbo Series

The Bilbo series consists of very deep, well drained soils that formed in alluvium from mixed rock sources. Bilbo soils occur on side slopes of fan piedmont remnants and plateaus. Slopes are 4 to 50 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Xerollic Haplargids

Typical pedon: Bilbo very gravelly very fine sandy loam, 15 to 50 percent slopes, is located in map unit 2514. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 10 percent cobbles and 30 percent pebbles.

A1--0 to 3 inches; pale brown (10YR 6/3) very gravelly very fine sandy loam, dark brown (10YR 3/3) moist; weak thick platy structure; soft, very friable, nonsticky and nonplastic; common fine and very fine vesicular pores; common fine and very fine roots; 10 percent cobbles, 30 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary. (2 to 4 inches thick)

A2--3 to 5 inches; pale brown (10YR 6/3) very gravelly very fine sandy loam, dark brown (10Yr 3/3) moist; weak medium platy structure; soft, very friable, nonsticky and nonplastic; common fine and very fine, few medium roots; common fine and very fine vesicular and few medium tubular pores; 10 percent cobbles, 25 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary. (2 to 4 inches thick)

Bt1--5 to 10 inches; brown (10YR 5/3) very gravelly sandy clay, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, firm, sticky and plastic; common fine, few very fine roots; common fine, few very fine interstitial pores; common thin clay films on faces of peds and as bridges; 15 percent cobbles, 40 percent pebbles; mildly alkaline (pH 7.6); gradual wavy boundary. (0 to 6 inches thick)

Bt2--10 to 20 inches; yellowish brown (10YR 5/4) very gravelly sandy clay, dark yellowish brown (10YR 4/4) moist; moderate fine prismatic parting to moderate fine subangular blocky structure; hard, very firm, very sticky and very plastic; common fine roots; common fine interstitial pores; common

moderately thick clay films on faces of peds and as bridges; 15 percent cobbles, 30 percent pebbles; mildly alkaline (pH 7.8); gradual wavy boundary. (6 to 12 inches thick)

Bt3--20 to 32 inches; yellowish brown (10YR 5/4) very gravelly sandy clay, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, sticky and plastic; few fine roots; few fine pores; common thin clay films on faces of peds and as bridges; 15 percent cobbles, 35 percent pebbles; mildly alkaline (pH 7.8); gradual wavy boundary. (4 to 12 inches thick)

Bt4--32 to 40 inches; light yellowish brown (10YR 6/4) very gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; hard, firm, sticky and plastic; few fine roots; few fine interstitial pores; few thin clay films lining pores and as bridges; 15 percent cobbles; 40 percent pebbles; mildly alkaline (pH 7.8); gradual wavy boundary. (0 to 20 inches thick)

Bk--40 to 60 inches; pale brown (10YR 6/3) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, friable, nonsticky and nonplastic; 35 percent pebbles; strongly effervescent with lime as fine soft masses; moderately alkaline (pH 8.0).

Type location: Elko County, Nevada; in an unsectionized area, about 3 miles west of IL Ranch; 41 degrees, 34 minutes, 10 seconds north latitude, 116 degrees, 27 minutes, 20 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry June through October

Soil temperature: 47 to 51 degrees F.

Combined thickness of A and Bt horizons: 20 to 40 inches.

Depth to carbonates: 20 to 40 inches.

Reaction: Neutral to moderately alkaline, normally increasing with depth.

Other features: Transitional A/B or E/B horizons are in some pedons.

Control section:
- Clay content--35 to 50 percent.
- Rock fragments--35 to 60 percent, mainly pebbles with up to 20 percent cobbles in some pedons.

A horizons:
- Value--5 or 6 dry, 3 or 4 moist.
- Chroma--2 or 3.

Bt horizons:
- Hue--7.5YR or 10YR.
- Value--5 or 6 dry, 3 through 5 moist.
- Chroma--2 through 4.
- Texture--Very gravelly clay, very gravelly sandy clay loam, very gravelly sandy clay, very gravelly clay loam.
- Structure--Prismatic, subangular or angular blocky or is massive in the lower part.
- Consistence--Slightly hard to very hard dry; friable to very firm moist; sticky or very sticky and plastic or very plastic, wet.

Bk horizon:
- Value--5 through 8 dry, 4 through 6 moist.
- Chroma--2 through 4.
- Texture--Extremely gravelly loamy sand or very gravelly sandy loam.
- Rock fragments--35 to 75 percent, mainly pebbles.
- Consistence--Loose to slightly hard, dry; loose to firm, moist.

Bioya Series

The Bioya series consists of moderately deep, well drained soils formed in loess over alluvium from volcanic rock sources. They are on summits and side slopes of fan piedmont remnants and plateaus. Slopes are 0 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Xerollic Durorthids

Typical pedon: Bioya very fine sandy loam, 0 to 2 percent slopes located in an area of map unit 236. (Colors are for dry soil unless otherwise noted.) Approximately 2 percent pebbles covers the surface.

A1--0 to 6 inches; pale brown (10YR 6/3) very fine sandy loam, brown (10YR 4/3) moist; strong very fine platy structure; soft, very friable, nonsticky and slightly plastic; common very fine and few fine roots; many very fine and few fine vesicular pores; 2 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (3 to 7 inches thick)

A2--6 to 10 inches; light yellowish brown (10YR 6/4) silt loam, brown (10YR 4/3) moist; strong very fine platy structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; few very fine tubular pores; 2 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (2 to 10 inches thick)

Bq1--10 to 14 inches; light yellowish brown (10YR 6/4) silt loam, dark brown (10YR 3/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine and medium roots; common very fine tubular pores; few thin silica coatings on faces of peds; 2 percent pebbles; mildly alkaline (pH 7.8); gradual smooth boundary. (0 to 5 inches thick)

Bq2--14 to 19 inches; light yellowish brown (10YR 6/4) silt loam, dark brown (10YR 4/3) moist;

massive; hard, firm slightly sticky and slightly plastic; few very fine roots; few very fine and fine tubular pores; common thin silica coatings on faces of peds; 30 percent hard firm 5 to 10 millimeter durinodes; 1 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary. (0 to 7 inches thick)

Bqk1--19 to 31 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; massive; hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; common thin silica coatings on faces of peds; 30 percent hard, firm 5 to 10millimeterdurinodes; slightly effervescent with disseminated lime; 1 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (9 to 20 inches thick)

Bqk2--31 to 36 inches; very pale brown (10YR 7/3) loam, light yellowish brown (10YR 6/4) moist; massive; very hard, very firm, slightly sticky and slightly plastic; few very fine tubular pores; weak discontinuous silica cementation; many thin silica coatings on faces of peds, 30 percent firm 5 to 10millimeterdurinodes; strongly effervescent; many fine lime filaments; 1 percent pebbles; strongly alkaline (pH 8.6) abrupt smooth boundary. (4 to 8 inches thick)

Bqkm--36 to 60 inches; very pale brown (10YR 8/3); indurated duripan, massive.

Type location: Elko County, Nevada; approximately 4.5 miles south of Midas; about 650 feet north and 1,600 feet east of the southwest corner of Section 10, T. 38 N., R 46 E,; 41 degrees, 10 minutes, 43 seconds north latitude, 116 degrees, 46 minutes, 17 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry from mid June to November
Soil temperature: 47 to 52 degrees F.
Depth to Bqk horizons: 8 to 19 inches.
Depth to indurated duripan: 20 to 40 inches.
Other features: Some pedons have a Bq horizons that lack carbonates and have value of 6 through 8 dry.
Control section:
Clay content--18 to 27 percent.

A horizons:
Value--5 or 6 dry, 3 through 5 moist. (More than 5.5 dry and 3.5 moist when the surface 7 inches are mixed.)
Chroma--2 through 4.
Reaction--Mildly alkaline to moderately alkaline.

Bqk horizons:
Value--6 through 8 dry, 4 through 6 moist.
Chroma--3 through 6.
Texture--Silt loam, or loam.
Structure--Subangular blocky or is massive.
Reaction--Mildly alkaline to very strongly alkaline.
Other features--20 to 50 percent durinodes or is discontinuously weakly silica cemented.

Bqkm horizons:
Structure--Thick or very thick platy, or is massive.

Blitzen Series

The Blitzen series consists of moderately deep, well drained soils that formed in residuum and colluvium from mixed rocks. Blitzen soils are on south facing hill and mountain side slopes. Slopes are 15 to 75 percent. Mean annual precipitation is about 13 inches and mean annual temperature is about 43 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Aridic Argixerolls

Typical pedon: Blitzen gravelly clay loam, 15 to 50 percent slopes, located in an area of map unit 1881. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; grayish brown (10YR 5/2) gravelly clay loam, very dark gray (10YR 3/1) moist; moderate fine and medium subangular blocky structure; soft, very friable, sticky and plastic; common very fine, fine and few medium roots; many very fine and fine vesicular and common fine tubular pores; 20 percent pebbles; neutral (pH 7.2); clear smooth boundary. (3 to 4 inches thick)

A2--4 to 10 inches; brown (10YR 5/3) gravelly clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and fine roots; common very fine, fine and few medium tubular pores; 30 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (4 to 6 inches thick)

Bt1--10 to 17 inches; yellowish brown (10YR 5/4) very gravelly clay, brown (10YR 4/3) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, very sticky and plastic; common very fine, fine and few medium roots; many very fine and fine tubular pores; common thin clay films on faces of peds and lining pores; 35 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (5 to 10 inches thick)

Bt2--17 to 24 inches; light yellowish brown (10YR 6/4) very gravelly clay, brown (10YR 4/3) moist; strong, medium and coarse subangular blocky structure; hard, firm, very sticky and very plastic; few fine roots; many very fine and fine tubular pores; many thin clay films on faces of peds; many colloidal stains on mineral grains; 45 percent pebbles; neutral (pH 7.2); clear irregular boundary. (4 to 9 inches thick)

Bt3--24 to 33 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 4/4)

moist; strong medium and coarse angular blocky structure; hard, firm, very sticky and very plastic; few fine roots; common fine tubular pores; many pressure faces, common thick clay films lining pores; 55 percent pebbles; mildly alkaline (pH 7.4); abrupt wavy boundary. (4 to 11 inches thick)
Cr--33 inches; soft weathered tuff.

Type location: Elko County, Nevada; approximately 13 miles north of Tuscarora, adjacent to the south fork of the Owyhee River; about 300 feet south and 500 feet west of the northeast corner of section 12, T. 41 N., R. 51 E.; 41 degrees, 28 minutes, 15 seconds north latitude, 116 degrees, 11 minutes, 5 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry mid-July through October
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 7 to 10 inches.
Reaction: Neutral or mildly alkaline.
Soil thickness and depth to paralithic contact: 20 to 40 inches.
Control section:
Clay content--35 to 60 percent.
Rock fragments--35 to 60 percent, mainly pebbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3 dry, 1 or 2 moist.

Bt horizons:
Value--4 through 6 dry, 3 through 5 moist.
Chroma--3 or 4.
Texture--Very gravelly clay or very gravelly clay loam.

Booford Series

The Booford series consists of moderately deep, well drained soils on hills. These soils formed in colluvium and residuum derived mainly from andesitic volcanic ash and tuff and minor amounts of tuffaceous sedimentary rocks. Slopes are 0 to 50 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Typic Argixerolls

Typical pedon: Booford silt loam, 15 to 50 percent slopes, is located in an area of map unit 1746. (Colors are for dry soil unless otherwise noted.)

A--0 to 10 inches; very dark gray (10YR 3/1) silt loam, black (10YR 2/1) moist; weak medium and coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine, few medium and coarse roots; many very fine and common fine tubular pores; 5 percent pebbles; neutral (pH 6.8); clear wavy boundary. (6 to 11 inches thick)
Bt1--10 to 19 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic parting to moderate coarse subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and few fine, medium and coarse roots; common very fine and fine tubular pores; common thin clay films lining pores; 5 percent pebbles; neutral (pH 6.8); clear wavy boundary. (3 to 10 inches thick)
Bt2--19 to 36 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist; massive; very hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine tubular pores; few thin clay films lining pores; 10 percent pebbles; neutral (pH 6.6); clear smooth boundary. (12 to 20 inches thick)
Cr--36 to 52 inches; highly fractured sandstone with few thin clay films on fractures, few fine iron and manganese coating on rock fragments; few very fine and fine roots in fractures.

Type location: Elko County, Nevada; about 600 feet west and 1,000 feet north of the southeast corner of section 5, T. 42 N.; R. 52 E.; 41 degrees, 33 minutes, 50 seconds north latitude, 116 degrees, 08 minutes, 50 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist; moist in winter and spring, dry in late summer and fall
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 7 to 19 inches thick; includes the upper part of the argillic horizon.
Solum thickness and depth to weathered bedrock: 20 to 40 inches.
Reaction of profile: Slightly acid or neutral.

A horizon:
Value--3 through 5 dry, 2 or 3 moist.
Chroma--1 or 2.

Bt1 horizon:
Hue--10YR or 7.5YR.
Value--4 or 5 dry.
Chroma--2 or 3.
Texture--Silty clay loam clay loam or clay.
Clay content--35 to 45 percent clay.
Rock fragments--5 to 25 percent.
Structure--Subangular blocky, angular blocky or prismatic.

Bt2 horizon:
Hue--10YR or 7.5YR.

Value--4 through 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Texture--Clay, silty clay or clay loam.
Clay content--45 to 60 percent.
Rock fragment--0 to 25 percent.
Structure--Prismatic or is massive.

Bregar Series

The Bregar series consists of very shallow and shallow, well drained soils that formed in residuum and colluvium from igneous flow rocks, tuff and quartzite. The Bregar soils are on hills, plateaus and mountains. Slopes are 2 to 75 percent. The mean annual precipitation is about 13 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Xerollic Haplargids

Typical pedon: Bregar extremely cobbly loam, 15 to 30 percent slopes, located in an area of map unit 1805. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 45 percent cobbles and 20 percent pebbles.

A1--0 to 2 inches; pale brown (10YR 6/3) extremely cobbly loam, dark brown (10YR 3/3) moist; weak medium platy structure; soft, friable, slightly sticky and slightly plastic; common very fine roots; common very fine vesicular pores; 20 percent pebbles, 45 percent cobbles, 15 percent stones; neutral (pH 7.2); clear smooth boundary. (2 to 6 inches thick)
A2--2 to 6 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; 35 percent pebbles, 5 percent cobbles; neutral (pH 7.2); clear smooth boundary. (0 to 5 inches thick)
Bt--6 to 11 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 4/3) moist; moderate fine subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; many thin clay films lining pores and on faces of peds; 40 percent pebbles, 10 percent cobbles; neutral (pH 7.2) abrupt wavy boundary. (2 to 6 inches thick)
R--11 inches; consolidated rhyolite.

Type location: Elko County, Nevada; in an unsectionized area, about 5 miles east and 1.5 miles south of Lake Creek Reservoir; 41 degrees, 55 minutes, 8 seconds north latitude, 116 degrees, 50 minutes, 13 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry late June through October
Soil temperature: 41 to 46 degrees F.
Depth to bedrock: 5 to 12 inches.
Reaction: Slightly acid through mildly alkaline.
Other features: The upper 3 inches of bedrock is weathered to various degrees in some pedons.
Control section:
Clay content--Average 18 to 30 percent
Rock fragments--Average 35 to 70 percent.

A horizons:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 through 4.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--2 through 4.
Texture--Very gravelly clay loam, extremely cobbly clay loam, very cobbly clay loam, very gravelly sandy clay loam or extremely cobbly sandy clay loam. Extremely gravelly loam or extremely cobbly loam is common in some pedons.
Clay content--25 to 35 percent.
Rock fragments--50 to 75 percent, mainly pebbles and cobbles with up to 15 percent stones.
Structure--Weak or moderate, fine or medium, angular or subangular blocky, or it is massive.
Consistence--Slightly hard to very hard dry, friable to very firm, moist; slightly sticky to very sticky, slightly plastic or very plastic wet.
Other features--Lower boundary is broken, irregular, or wavy.

Buffaran Series

The Buffaran series consists of shallow to a duripan, well drained soils that formed in alluvium derived from mixed rock sources. Buffaran soils are on fan piedmonts, mountain valley fans, and ballenas. Slopes are 0 to 30 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Xerollic Durargids

Typical pedon: Buffaran very fine sandy loam, 0 to 4 percent slopes, is located in an area of map unit 2505. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 3/3) moist; moderate medium platy structure; slightly hard, very friable, nonsticky and slightly plastic; many fine and

common very fine roots; many fine and medium vesicular pores; 5 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (1 to 5 inches thick)

A2--2 to 5 inches; pale brown (10YR 6/3) very fine sandy loam; dark brown (10YR 3/3) moist; weak medium and thin platy structure; soft, very friable, nonsticky and nonplastic; few medium, common fine and very fine roots; common fine vesicular and irregular pores; moderately alkaline (pH 8.0); clear wavy boundary. (0 to 4 inches thick)

Bt1--5 to 9 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; hard, friable, sticky and plastic; common medium and fine roots; few medium tubular and common irregular pores; few thin clay films on faces of peds and lining pores; 10 percent pebbles; moderately alkaline (pH 8.2); gradual wavy boundary. (0 to 4 inches thick)

Bt2--9 to 18 inches; yellowish brown (10YR 5/4) clay, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few medium and fine roots; common medium tubular and few fine irregular pores; common moderately thick clay films on faces of peds and lining pores; 5 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary. (3 to 14 inches thick)

Bqkm1--18 to 25 inches; indurated duripan, 2 millimeter thick silica laminar cap; massive; very hard, very firm; few fine roots; strongly effervescent; lime is in soft masses and coating pebbles; moderately alkaline (pH 8.4); gradual wavy boundary. (6 to 15 inches thick)

Bqkm2--25 to 60 inches; very pale brown (10YR 7/3) alternating layers of indurated and strongly cemented duripan; light yellowish brown (10YR 6/4) moist; massive; extremely hard; few fine roots; violently effervescent; strongly alkaline (pH 9.0)

Type location: Elko County, Nevada; in an unsectionized area, about 2 miles southeast of Desert Ranch Reservoir; 41 degrees, 40 minutes, 04 seconds north latitude, 116 degrees, 30 minutes, 27 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry early June through October
Soil temperature: 47 to 52 degrees F.
Depth to duripan: 14 to 20 inches.

A horizons:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 3 or 4 moist, (after mixing upper 7 inches value is greater than 5.5 dry).
Chroma--2 or 3.
Reaction--Neutral to moderately alkaline.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--2 through 6.
Texture--Clay or clay loam (35 to 50 percent clay).
Rock fragments--5 to 30 percent, mostly pebbles.
Reaction--Neutral through moderately alkaline.

Bq horizons: (when present):
Texture--Loam or clay loam.
Rock fragments--20 to 40 percent strongly cemented duripan fragments.
Reaction--Neutral through moderately alkaline, noneffervescent to strongly effervescent.

Bulake Series

The Bulake series consists of shallow, well drained soils that formed in residuum from basalt and rhyolite. Bulake soils are on plateaus and hills. Slopes are 2 to 8 percent. Mean annual precipitation is about 14 inches and mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid Lithic Mollic Haploxeralfs

Typical pedon: Bulake gravelly loam, 2 to 8 percent slopes, located in an area of map unit 2310. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 20 percent pebbles, 20 percent cobbles and a few stones.

A1--0 to 2 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 3/3) moist; weak thin platy structure; slightly hard, very friable, nonsticky and nonplastic; common fine and very fine roots; common medium and fine tubular pores; 15 percent pebbles, 5 percent cobbles; neutral (pH 6.8); clear smooth boundary. (2 to 4 inches thick)

A2--2 to 7 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and very fine roots; few fine tubular pores; 15 percent pebbles; neutral (pH 6.8); abrupt wavy boundary. (3 to 6 inches thick)

Bt1--7 to 13 inches; yellowish brown (10R 5/4) clay, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; few fine and very fine roots; few fine and very fine tubular pores; 5 percent pebbles, 5 percent cobbles; common moderately thick clay films on faces of peds and lining pores; neutral (pH 6.8); abrupt wavy boundary. (5 to 9 inches thick)

Bt2--13 to 19 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse prismatic structure parting to strong medium subangular blocky; very

hard, very firm, very sticky and very plastic; few very fine roots; few fine and very fine tubular pores; 5 percent pebbles; many thick clay films on faces of peds; neutral (pH 7.0); abrupt wavy boundary. (0 to 6 inches thick)
R--19 inches; rhyolite.

Type location: Elko County, Nevada; Owyhee Desert, about 3.5 miles east and .5 mile south of the Josephine Reservoir Dam; 41 degrees, 53 minutes, 40 seconds north latitude, 116 degrees, 23 minutes, 15 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry late July through October
Soil temperature: 44 to 47 degrees F.
Depth to bedrock: 14 to 20 inches.
Thickness of solum: 14 to 20 inches.
Control section:
Clay content--40 to 50 percent.
Rock fragments--5 to 35 percent, mainly pebbles.

A horizons:
Chroma--2 or 3.
Structure--Thin to thick platy or is granular.

Bt horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 through 6.
Texture--Clay or gravelly clay.
Structure--Moderate or strong, fine or medium, angular or subangular blocky; medium or coarse prismatic.
Reaction--Neutral or mildly alkaline.

Bullump Series

The Bullump series consists of deep, well drained soils that formed in colluvium from welded tuff, quartzite, chert, argillite, shale, conglomerate and rhyolitic rocks with a component of loess. Bullump soils are on side slopes of hills and mountains. Slopes are 15 to 50 percent. Mean annual precipitation is about 15 inches, and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Pachic Argixerolls

Typical pedon: Bullump very gravelly loam, 30 to 50 percent slopes, is located in an area of map unit 921. (Colors are for dry soils unless otherwise noted.)

A1--0 to 4 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and plastic; common very fine and fine, few medium roots; many very fine, few fine tubular and few fine interstitial pores; 35 percent pebbles; slightly acid (pH 6.1); clear smooth boundary. (2 to 8 inches thick)
A2--4 to 12 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine, few medium roots; many very fine tubular pores; 45 percent pebbles; neutral (pH 6.8); clear wavy boundary. (3 to 12 inches thick)
Bt1--12 to 22 inches; brown (10YR 4/3) very gravelly clay loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; many very fine and fine, common medium and few coarse roots; many very fine, few fine and medium tubular pores; many thick clay films bridging sand grains and lining pores, few thin on faces of peds; 45 percent pebbles, 10 percent cobbles; neutral (pH 6.8); clear broken boundary. (7 to 12 inches thick)
Bt2--22 to 32 inches; brown (10YR 5/3) very gravelly clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, common fine, few fine and coarse roots; many very fine, common fine tubular pores; many thin clay films bridging sand grains and lining pores, common thin on faces of peds; 50 percent pebbles and 5 percent cobbles; neutral (pH 6.8); clear wavy boundary. (8 to 30 inches thick)
Bt3--32 to 41 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure parting to moderate fine subangular blocky; slightly hard, very friable, sticky and plastic; common very fine and fine, few medium roots; many very fine, common fine and medium and few coarse tubular pores; few thin clay films bridging sand grains and lining pores; 45 percent pebbles and 10 percent cobbles; neutral (pH 6.8); clear wavy boundary. (0 to 10 inches thick)
C--41 to 46 inches; light yellowish brown (10YR 6/4) very gravelly loam, dark yellowish brown (10YR 4/4) moist; massive; hard, very friable, slightly sticky and plastic; few very fine and fine roots; many very fine, common fine and few medium tubular pores; 50 percent pebbles and 5 percent cobbles; neutral (pH 6.6); abrupt wavy boundary.
R--46 inches; welded tuff.

Type location: Elko County, Nevada; approximately .5 mile east and .25 mile south of Dry Creek Mountain; about 1,800 feet east and 600 feet south of the northwest corner of section 8, T. 40 N., R. 50 E.; 41 degrees, 21 minutes, 59 seconds north latitude,

116 degrees, 21 minutes, 12 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and early summer, dry late July to early October. Additional soil moisture may be supplied by lateral water movement in the lower part of the profile
Soil temperature: 43 to 47 degrees F.
Mollic epipedon thickness: 20 to 40 inches and may include the upper part of the argillic horizon.
Profile reaction: Slightly acid through mildly alkaline.
Other features: Some pedons lack C horizons that are below 40 inches.
Depth to bedrock: 40 to 80 inches.
Control section:
Clay content--25 to 35 percent.
Rock fragments--35 to 55 percent, mainly pebbles with some cobbles.

A horizons:
Value--3 through 5 dry, 2 or 3 moist.
Chroma--1 through 3.
Other features--Organic matter 2 to 6 percent.

Bt horizons:
Hue--7.5YR or 10YR.
Value--4 through 6 dry, 2 through 4 moist.
Chroma--2 through 6.
Texture--Very gravelly loam or very gravelly clay loam.
Clay content--25 to 35 percent.
Rock fragments--35 to 55 percent, mainly pebbles.
Structure--Subangular blocky or angular blocky.
Consistence--Slightly sticky or sticky and slightly plastic or plastic, wet.

Carstump Series

The Carstump series consists of moderately deep, well drained soils that formed in residuum from volcanic rocks. Carstump soils are on side slopes of mountains and hills. Slopes are 4 to 50 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Aridic Calcic Argixerolls

Typical pedon: Carstump gravelly loam, 8 to 30 percent slopes, located in an area of map unit 1659. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; soft, friable, slightly sticky and plastic; common very fine roots; few fine tubular pores; 10 percent pebbles, 5 percent cobbles; neutral (pH 7.0); clear smooth boundary. (3 to 7 inches thick)
A2--3 to 7 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and plastic; few medium, fine and very fine roots; few fine tubular pores; 10 percent pebbles, 5 percent cobbles; neutral (pH 7.0); clear wavy boundary. (4 to 14 inches thick)
A3--7 to 14 inches; brown (10YR 5/3) cobbly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, firm, sticky and very plastic; few fine and very fine roots; few medium and fine tubular pores; 5 percent pebbles, 25 percent cobbles; neutral (pH 7.0); clear wavy boundary. (0 to 7 inches thick)
Bt1--14 to 22 inches; yellowish brown (10YR 5/4) very cobbly clay, yellowish brown (10YR 5/4) moist; strong medium angular blocky structure; extremely hard, extremely firm, very sticky and very plastic; few fine and very fine roots; many moderately thick stress surfaces on peds; 10 percent pebbles, 35 percent cobbles; mildly alkaline (pH 7.4); clear smooth boundary. (3 to 10 inches thick)
Btk--22 to 35 inches; yellowish brown (10YR 5/4) very cobbly clay, dark yellowish brown (10YR 4/4) moist; strong medium angular blocky structure; extremely hard, extremely firm, very sticky and very plastic; few fine and very fine roots; common moderately thick stress surfaces on peds; 10 percent pebbles, 35 percent cobbles; strongly effervescent; lime is in common soft masses; moderately alkaline (pH 8.2); clear wavy boundary. (5 to 18 inches thick)
Bk--35 to 36 inches; very pale brown (10YR 8/3) soft lime coatings on bedrock; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (0 to 3 inches thick)
R--36 inches; consolidated rhyolite.

Type location: Elko County, Nevada; in an unsectionized area, about 3 miles southwest of Rodear Flat; 41 degrees, 25 minutes, 25 seconds north latitude, 116 degrees, 58 minutes, 23 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist November to June; usually dry July through October
Soil temperature: 45 to 47 degrees.
Mollic epipedon thickness: 7 to 15 inches, includes the upper part of the argillic horizons in some pedons.
Depth to secondary lime: 20 to 35 inches.
Depth to bedrock: 20 to 40 inches.
Control section:
Clay content--40 to 55 percent.
Rock fragments--35 to 50 percent, mainly pebbles and cobbles.

A horizons:
Chroma--2 or 3.

Bt and Btk horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--3 or 4.
Structure--Angular blocky or subangular blocky.
Texture--Very gravelly clay, very cobbly clay. Subhorizons of very gravelly silty clay loam or clay loam are in some pedons.
Consistence--Slightly hard to extremely hard, dry; friable to extremely firm moist; sticky or very sticky and plastic or very plastic; wet.
Reaction--Neutral or mildly alkaline in the noncalcareous upper part; moderately alkaline to strongly alkaline in the lower part.
Other features--Soft powdery lime in filaments or soft masses is in the Btk horizon. The Bt horizons are noneffervescent and the Btk horizons are slightly effervescent to violently effervescent.

Cavanaugh Series

The Cavanaugh series consists of moderately deep, well drained soils that formed in colluvium from rhyolite. Cavanaugh soils are on side slopes of hills. Slopes are 15 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Ultic Argixerolls

Typical pedon: Cavanaugh very stony loam, 15 to 50 percent slopes, located in an area of map unit 221. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 5 percent stones, 5 percent cobbles and 20 percent pebbles.

A--0 to 5 inches; grayish brown (10YR 5/2) very stony loam, very dark grayish brown (10YR 3/2) moist; moderate coarse platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine tubular pores; 20 percent pebbles, 15 percent cobbles and 5 percent stones; neutral (pH 7.2); abrupt wavy boundary. (2 to 11 inches thick)
Bt1--5 to 9 inches; grayish brown (10YR 5/2) cobbly clay loam; very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; few very fine and fine tubular pores; common moderately thick clay films bridging sand grains; 10 percent pebbles, 20 percent cobbles; neutral (pH 7.0); abrupt wavy boundary. (2 to 11 inches thick)
Bt1--9 to 21 inches; yellowish brown (10YR 5/4) very cobbly clay, dark grayish brown (10YR 3/4) moist; massive; hard, very firm, very sticky and very plastic; common very fine and fine roots; few very fine and fine tubular pores; common moderately thick clay films bridging sand grains; 30 percent pebbles, 25 percent cobbles; neutral (7.0); abrupt wavy boundary. (8 to 15 inches thick)
R--21 inches; fractured rhyolite.

Type location: Elko County, Nevada; approximately 13 miles southwest of Owyhee; about 3,000 feet north and 1,000 feet west of the southeast corner of section 34, T. 46 N., R. 51 E.; 41 degrees, 50 minutes, 19 seconds north latitude, 116 degrees, 14 minutes, 17 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist; dry late July through mid October
Soil temperature: 42 to 47 degrees F.
Thickness of solum and depth to bedrock: 20 to 40 inches.
Control section:
Clay content--35 to 50.
Rock fragments--35 to 65 percent.
Base saturation by sum of cations--50 to 75 percent. (In part or all of the upper 75 cm)

A horizon:
Chroma--2 or 3, moist or dry.
Reaction--Slightly acid or neutral.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Cobbly clay loam or cobbly clay in the upper subhorizons and very cobbly clay loam, very cobbly clay or very gravelly clay loam in the lower subhorizons.
Reaction--Slightly acid through mildly alkaline.
Structure--Granular, subangular blocky or is massive.

Chen Series

The Chen series consists of shallow, well drained soils that formed in residuum and colluvium weathered from volcanic rocks and other sedimentary rocks. Chen soils are on hills and mountains. Slopes are 4 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Chen very cobbly loam, 4 to 15 percent slopes, located in an area of map unit 1628. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 20 percent pebbles and 20 percent cobbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate medium platy structure; soft, friable, slightly sticky and plastic; common very fine roots; few medium and fine tubular pores; 2 percent stones, 15 percent cobbles, 20 percent pebbles; neutral (pH 7.2); clear smooth boundary. (1 to 6 inches thick)
A2--2 to 7 inches; grayish brown (10YR 5/2) very gravelly loam, dark brown (10YR 3/3) moist; moderate fine granular structure; slightly hard, friable, slightly sticky and plastic; few medium fine and very fine roots; few fine tubular pores; 10 percent cobbles, 25 percent pebbles; neutral (pH 7.2); abrupt smooth boundary. (2 to 8 inches thick)
Bt--7 to 15 inches; brown (10YR 5/3) very cobbly clay, dark yellowish brown (10YR 4/4) moist; strong medium angular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; many moderately thick clay films on faces of peds; 35 percent cobbles, 10 percent pebbles; neutral (pH 7.2); clear smooth boundary. (6 to 12 inches thick)
R--15 inches; unweathered rhyolite.

Type location: Elko County, Nevada; in an unsectionized area, about 6 miles south of Rodear Flat; 41 degrees, 22 minutes, 25 seconds north latitude, 116 degrees, 56 minutes, 57 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry summer and fall
Soil temperature: 43 to 47 degrees.
Mollic epipedon thickness: 7 to 17 inches
Depth to bedrock: 12 to 20 inches.
Reaction: Slightly acid through mildly alkaline throughout.

A horizons:
Value--4 through 6 dry (less than 5.5 when the upper 7 inches are mixed), 2 or 3 moist.
Chroma--2 or 3.

Bt horizon:
Hue--7.5YR or 10YR with 5YR common in areas with high iron concentrations in the parent material.
Value--4 or 5 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Very gravelly clay, extremely gravelly clay, very cobbly clay, extremely cobbly clay; some pedons have thin Bt1 horizon of very gravelly clay loam with 35 to 40 percent clay.
Clay content--Average 40 to 55 percent.
Rock fragments--40 to 65 percent pebbles and cobbles normally increasing with depth.
Structure--Weak to strong, fine or medium angular or subangular blocky or platy.

Cherry Spring Series

The Cherry Spring series consists of well drained soils that are moderately deep to a strongly cemented duripan. These soils formed in loess with large amounts of volcanic ash over mixed alluvium from sedimentary and pyroclastic material. The Cherry Spring soils are on fan piedmonts. Slopes are 2 to 8 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Haploxerollic Durargids

Typical pedon: Cherry Spring gravelly loam, 2 to 8 percent slopes, is located in an area of map unit 1191. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 35 percent pebbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderately thick platy structure parting to moderate very thin platy; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine roots; many very fine and fine tubular pores; 15 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (2 to 8 inches thick)
A2--3 to 8 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 3/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine tubular pores; 15 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (0 to 6 inches thick)
Bt--8 to 13 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; weak coarse prismatic structure parting to moderate fine and medium subangular blocky; slightly hard, friable, sticky and plastic; common very fine, few fine and medium roots; many very fine tubular pores; common thin clay films on faces of peds and lining pores; 10 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary. (4 to 15 inches thick)
Btqk--13 to 23 inches; pale brown (10YR 6/3) clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; few thin clay films on faces of peds

and lining pores; 20 percent weak durinodes; few fine soft lime masses; 10 percent pebbles; moderately alkaline (pH 8.2); abrupt wavy boundary. (5 to 10 inches thick)
2Bqkm--23 to 45 inches; white (10YR 8/2) strongly silica and lime cemented duripan, very pale brown (10YR 7/3) moist; massive; very hard, very firm; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; in an unsectionized area, about 6 miles southwest of Winters Ranch; 41 degrees, 26 minutes, 5 seconds north latitude, 116 degrees, 38 minutes, 26 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in the winter and spring, dry early June through October
Soil temperature: 47 to 51 degrees.
Combined thickness of A and Bt horizons: 20 to 40 inches.
Depth to strongly cemented duripan: 20 to 40 inches.
Other features: Substrata of contrasting textures are present below the duripan in some pedons.
Control section:
Clay--20 to 35 percent.
Rock fragments--0 to 15 percent.

A horizons:
Value--4 through 7 dry (greater than 5.5 when the upper 7 inches are mixed), 2 through 4 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

Bt horizon:
Hue--10YR or 7.5YR.
Chroma--3 through 6.
Texture--Loam, silt loam, clay loam, with less than 35 percent sand.
Structure--Weak or moderate, fine to coarse prismatic and parts to subangular blocky.
Reaction--Mildly alkaline through strongly alkaline, increasing with depth.

Btqk horizon:
Hue--10YR or 7.5YR.
Structure--Subangular blocky or it is massive.
Reaction--Mildly alkaline to strongly alkaline.
Cementation--Weakly silica cemented or has 20 to 40 percent durinodes in a friable matrix.
Carbonates--Few to many lime filaments or soft masses. Slightly to violently effervescent.

Bqkm horizon:
Reaction--Moderately alkaline through very strongly alkaline.
Other features--Thin, discontinuous silica laminae common in some pedons.

Chiara Series

The Chiara series consists of shallow to duripan, well drained soils that formed in alluvium from mixed rock sources with a loess mantle high in volcanic ash. The Chiara soils are on fan piedmont remnants and plateaus. Slopes are 0 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durorthids

Typical pedon: Chiara silt loam, 2 to 8 percent slopes located in an area of map unit 1229. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 3/3) moist; moderate medium platy structure; slightly hard, very friable, sticky and slightly plastic; many very fine and fine, few medium roots; many very fine tubular pores; mildly alkaline (pH 7.6); clear wavy boundary. (3 to 6 inches thick)
A2--3 to 6 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 3/3) moist; weak medium platy structure; slightly hard, very friable, sticky and slightly plastic; many very fine through coarse roots; common very fine tubular pores; mildly alkaline (pH 7.6); clear wavy boundary. (0 to 4 inches thick)
Bw--6 to 13 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine and fine, common medium and coarse roots; common very fine tubular pores; mildly alkaline (pH 7.6); clear wavy boundary. (4 to 7 inches thick)
Bqk--13 to 17 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and slightly plastic; many very fine and fine, few medium roots; many very fine and few fine tubular pores; 20 percent .3 to 1 inch in diameter weakly cemented and brittle durinodes; violently effervescent, lime is disseminated; moderately alkaline (pH 8.4); abrupt wavy boundary. (4 to 10 inches thick)
Bqkm--17 to 40 inches; white (10YR 8/2) indurated duripan, very pale brown (10YR 7/3) moist with 1 to 2 inch continuous bands of fine sandy loam containing 35 percent brittle durinodes between 3 inch thick laminar plates; violently effervescent. (20 to 50 inches thick)

Type location: Elko County, Nevada; in an unsectionized area, about 2 miles north of the IL Ranch; 41 degrees, 36 minutes, 38 seconds north latitude, 116 degrees, 22 minutes, 18 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry from summer and fall
Soil temperature: 47 to 53 degrees F.
Depth to duripan: 10 to 20 inches.
Other features: Depth to lime--7 to 15 inches.
Control section:
Clay content--5 to 18 percent.
Rock fragments--When mixed, up to 5 percent, mainly pebbles, thin subhorizons in some pedons have 4 to 25 percent, comprised mainly of duripan fragments.
Sand--Less than 15 percent fine sand and coarser.

A horizons:
Value--3 or 4 moist.
Chroma--2 or 3.
Reaction--Neutral through moderately alkaline.

Bw horizon:
Value--6 or 7 dry, 3 through 5 moist.
Chroma--3 or 4.
Texture--Very fine sandy loam, loam, and silt loam.
Structure--Weak to strong, fine to coarse subangular blocky or weak prismatic.
Consistence--Soft or slightly hard, dry; very friable or friable moist; nonsticky to sticky and nonplastic or slightly plastic, wet.
Reaction--Neutral through strongly alkaline.

Bqk horizon:
Reaction--Moderately alkaline to strongly alkaline.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Very fine sandy loam, loam or silt loam with 70 to 85 percent silt plus very fine sand.
Structure--Subangular blocky or is massive.
Consistence--Slightly hard or hard dry; very friable or friable, moist; slightly sticky or nonsticky wet.
Cementation--Contains from 20 to 60 percent weakly cemented and brittle durinodes from 0.3 to 1 inch in diameter.

Bqkm horizon:
Value--6 through 8 dry, 5 through 7 moist.
Chroma--2 through 4.
Structure--Massive or weak or moderate thick platy.

Chime Series

The Chime series are moderately deep, well drained soils that formed in residuum from tuffaceous sandstone. Chime soils are on side slopes of fan piedmont remnants with a rock core. Slopes are 8 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Durixerollic Haplargids

Typical pedon: Chime gravelly loam, 8 to 15 percent slopes, located in an area of map unit 2751. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with about 25 percent pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) gravelly loam, brown (10YR 4/3) moist; moderate thin platy structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; common fine and very fine vesicular pores; 15 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (2 to 5 inches thick)
A2--2 to 6 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; weak thin platy structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; few medium, fine and very fine roots; few fine and very fine vesicular pores; 10 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (2 to 4 inches thick)
Bt1--6 to 9 inches; pale brown (10YR 6/3) gravelly clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; hard, firm, sticky and plastic; few fine and very fine roots; common fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 15 percent pebbles; mildly alkaline (pH 7.8); abrupt wavy boundary. (3 to 5 inches thick)
Bt2--9 to 15 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse angular blocky structure; hard, firm, sticky and plastic; few medium, fine and very fine roots; common fine tubular pores; strong moderately thick clay films on faces of peds and lining pores; 10 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary. (5 to 7 inches thick)
Bq--15 to 22 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; very hard, very firm, slightly sticky and slightly plastic; few fine and very fine roots; few fine tubular pores; weak continuous silica cementation; 5 percent pebbles; mildly alkaline (pH 7.8); abrupt wavy boundary. (6 to 10 inches thick)
Cr--22 inches; weathered tuffaceous sandstone.

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 1.75 miles west of McCleary well No 2; 41 degrees, 32 minutes, 22 seconds north latitude, 116 degrees, 53 minutes, 34 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry mid June through October
Soil temperature: 47 to 52 degrees F
Depth to paralithic contact: 20 to 30 inches.
Depth to Bq horizons: 14 to 20 inches.

A horizons:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 3 or 4 moist.
Chroma--2 or 3.

Bt horizons:
Hue--10 YR or 2.5Y.
Value--5 through 7 dry.
Chroma--3 or 4.
Clay content--27 to 35 percent.
Rock fragments--Up to 20 percent, mainly pebbles.
Structure--Moderate or strong, fine to coarse angular or subangular blocky.

Bq horizon:
Hue--10YR to 2.5Y.
Value--6 through 8 dry, 4 or 5 moist.
Texture--Loam, gravelly loam, clay loam, gravelly clay loam.
Rock fragments--5 to 20 percent, mainly pebbles.

Cleavage Series

The Cleavage series consists of shallow, well drained soils that formed in residuum or colluvium from rhyolite, welded tuff, chert, shale, quartzite, sandstone or conglomerate and other igneous or sedimentary rocks. Cleavage soils are on hills and mountains. Slopes are 4 to 75 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Cleavage gravelly loam, 4 to 15 percent slopes, is located in an area of map unit 1711. (Colors are for dry soil unless otherwise noted). The soil surface is covered with 15 percent pebbles and 5 percent cobbles.

A1--0 to 1 inch; grayish brown (10YR 5/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate very fine platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine and fine vesicular pores; 15 percent pebbles, 5 percent cobbles, mildly alkaline (pH 7.4); clear smooth boundary. (1 to 9 inches thick)
A2--1 to 4 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak very fine platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; common very fine and few fine tubular pores; 10 percent pebbles, 5 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary. (0 to 8 inches thick)
BA--4 to 9 inches; brown (10YR 5/3) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and plastic; common very fine, few fine and medium roots; common very fine tubular pores; 5 percent pebbles, 30 percent cobbles, 5 percent stones; mildly alkaline (pH 7.6); clear smooth boundary. (0 to 6 inches thick)
Bt--9 to 18 inches; light yellowish brown (10YR 6/4) very cobbly clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; common very fine, few fine and thin clay films on faces of peds and lining pores; 30 percent pebbles, 25 percent cobbles; mildly alkaline (pH 7.6); abrupt wavy boundary. (6 to 12 inches thick)
R--18 inches; rhyolite.

Type location: Elko County, Nevada; about 5 miles west of Midas; about 100 feet east and 2,700 feet south of the northwest corner of section 24, T. 39 N., R. 45 E.; 41 degrees, 14 minutes, 33 seconds north latitude, 116 degrees, 51 minutes, 12 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from July through October for 70 to 120 consecutive days
Soil temperature: 44 to 47 degrees F.and ranges down to 39 degrees F.in parts of Idaho.
Mollic epipedon thickness: 7 to 10 inches, does not include Bt horizon.
Depth to bedrock: 14 to 20 inches.
Reaction: Neutral or mildly alkaline.
Control section:
Clay content--20 to 35 percent.
Rock fragments--50 to 80 percent, mostly pebbles or cobbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3

BA horizon:
Chroma--2 through 4.
Texture--Very cobbly loam or very gravelly loam.
Consistence--Slightly plastic or plastic, wet.

Bt horizon:
Hue--7.5YR or 10YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.

Texture--Very cobbly, extremely cobbly, very gravelly or extremely gravelly clay loam, very gravelly sandy clay loam,
Structure--Subangular blocky or angular blocky or it is massive.
Consistence--Friable or firm, moist.

Clementine Series

The Clementine series consists of very deep, poorly drained soils that formed in alluvium derived from mixed rock sources with influence from loess. The Clementine soils are on floodplains, stream terraces and inset fans. Slopes are 0 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Fine-silty, mixed, mesic Cumulic Haplaquolls

Typical pedon: Clementine silt loam, drained, 0 to 2 percent slopes, located in an area of map unit 1130. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; few very fine tubular and common very fine interstitial pores; neutral (pH 6.6); abrupt wavy boundary. (2 to 4 inches thick)
A2--3 to 12 inches; grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate coarse subangular blocky structure; hard, friable, sticky and slightly plastic; many very fine and fine, few medium and coarse roots; common very fine tubular and interstitial pores; mildly alkaline (pH 7.6); abrupt wavy boundary. (8 to 12 inches thick)
A3--12 to 20 inches; dark grayish brown (10YR 4/2) silty clay loam, black (10YR 2/1) moist; few fine distinct strong brown (7.5YR 4/6) iron mottles; moderate medium subangular blocky structure; hard, friable, sticky and plastic; many very fine, fine, medium and coarse roots; common very fine tubular and interstitial pores; mildly alkaline (pH 7.6); clear wavy boundary. (6 to 10 inches thick)
Bk--20 to 27 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; common fine distinct strong brown (7.5YR 4/6) iron mottles; few, fine manganese stains; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine, few medium and coarse roots; many very fine, few fine tubular pores; few fine soft lime masses; slightly effervescent matrix; moderately alkaline (pH 8.2); clear wavy boundary. (5 to 9 inches thick)
Bk1--27 to 33 inches; light brownish gray(2.5Y 6/2) silty clay loam, dark grayish brown (2.5Y 4/2) moist; few, fine distinct, strong brown (7.5YR 4/6) iron mottles; few fine manganese stains on faces of peds; moderate medium subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; many very fine tubular pores; common fine soft lime masses; slightly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (5 to 8 inches thick)
Bk3--33 to 44 inches; light brownish gray (2.5Y 6/2) silty clay loam, dark grayish brown (2.5Y 4/2) moist; few, fine, distinct strong brown (7.5YR 4/6) iron mottles; weak medium subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; many very fine tubular pores; many fine soft lime masses; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (8 to 12 inches thick)
Bk3--44 to 58 inches; light brownish gray (2.5Y 6/2) clay loam, dark grayish brown (2.5Y 4/2) moist; common fine distinct strong brown (7.5YR 4/6) iron mottles; weak medium subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; many very fine tubular pores; few fine lime filaments; noneffervescent matrix; moderately alkaline (pH 8.4); clear wavy boundary. (10 to 20 inches thick)
Bk4--58 to 60 inches; light gray (2.5Y 7.2) loam, grayish brown (2.5Y 5/2) moist; common fine distinct strong brown (7.5YR 4/6) iron mottles; few fine manganese stains; massive; slightly hard, friable, sticky and slightly plastic; few very fine roots; many very fine interstitial and few very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.4)

Type location: Elko County, Nevada; approximately 8 miles northeast of Squaw Valley Ranch; about 900 feet west and 1,700 feet south of the northeast corner of section 11, T. 39 N., R. 47 E.; 41 degrees, 16 minutes, 29 seconds north latitude, 116 degrees, 37 minutes, 42 seconds west longitude.

Range in Characteristics

Soil moisture: Saturated at or near the surface for one month or more during February through July. Drained phases are recognized
Soil temperature: 47 to 53 degrees F.
Mollic epipedon thickness: 24 to 30 inches.
Depth to carbonates: 12 to 40 inches.
Other features: Few to common, fine, redox concentrations occur below depths of 12 inches.
Control section:
Clay content--25 to 35 percent.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 through 3 dry or moist.
Reaction--Neutral to strongly alkaline.

Bk horizons:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 3 through 5 moist.
Chroma--1 through 3 dry or moist.
Texture--Stratified silt loam or silty clay loam. Strata of loam or clay loam are below depths of 40 inches in some pedons.
Structure--Subangular blocky or is massive.
Consistence--Friable or firm, moist, slightly sticky or sticky, wet.
Reaction--Moderately alkaline or strongly alkaline.
Other features--Few fine manganese stains are on peds in most pedons.

Clurde Series

The Clurde series consists of very deep, well drained soils that formed in loess and volcanic ash over alluvium from mixed rock sources. Clurde soils are on alluvial fans, fan skirts, inset fans and dissected terraces. Slopes are 0 to 15 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Durixerollic Camborthids

Typical pedon: Clurde very fine sandy loam, 0 to 2 percent slopes, located in an area of map unit I155. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 3/3) moist; weak thick platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; many fine vesicular pores; 5 percent pebbles; neutral (pH 7.2); abrupt smooth boundary. (2 to 8 inches thick)
A2--3 to 6 inches; pale brown (10YR 6/3) very fine sandy loam, brown (10YR 4/3) moist; moderate thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; few fine and very fine roots; few very fine tubular pores; mildly alkaline (pH 7.4); clear smooth boundary. (0 to 4 inches thick)
BA--6 to 10 inches; pale brown (10R 6/3) loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and plastic; few fine and very fine roots; few very fine tubular pores; moderately alkaline (pH 8.0); clear smooth boundary. (2 to 8 inches thick)
Bw--10 to 20 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist, weak coarse subangular blocky structure; hard, friable, slightly sticky and plastic; few thin clay films lining pores; 5 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (4 to 10 inches thick)
Bqk1--20 to 29 inches; very pale brown (10YR 7/3) loam, dark yellowish brown (10YR 4/4) moist; massive; very hard, friable, sticky and plastic; 20 percent durinodes; lime is in common fine threads and filaments; strongly effervescent; moderately alkaline (pH 8.2); gradual wavy boundary. (7 to 13 inches thick)
2Bqk2--29 to 43 inches; very pale brown (10YR 7/3) coarse sandy loam, brown (10YR 4/3) moist; massive; very hard, friable, slightly sticky and slightly plastic; 10 percent pebbles; 15 percent durinodes; lime is in common fine soft masses; strongly effervescent; moderately alkaline (pH 8.2); gradual wavy boundary. (12 to 14 inches thick)
2Bqk3--43 to 60 inches; pale brown (10YR 6/3) loamy sand, brown (10YR 4/3) moist; massive; hard, very friable, nonsticky and nonplastic; weakly cemented with silica and lime; 20 percent durinodes; 10 percent pebbles; lime is in common fine soft masses; strongly effervescent; moderately alkaline (pH 8.4).

Type location: Elko County, Nevada; in an unsectionized area, about 1 1/8 miles south and 7/8 mile west of McCleary Well No. 1; 41 degrees, 35 minutes, 45 seconds north latitude, 116 degrees, 52 minutes, 01 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist for short periods, December through March
Soil temperature: 47 to 52 degrees F.
Depth to base of Bw horizon: 12 to 20 inches.
Depth to carbonates: 12 to 24 inches.
Control section:
Clay content--18 to 30 percent.

A horizons:
Value--5 through 7 dry, 3 or 4 moist; when mixed values are greater than 5 dry and 3 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.
Other features--Pedons with transitional BA horizons are common.

Bw horizon:
Texture--Clay loam, loam, silt loam.
Clay content--18 to 30 percent
Rock fragments--0 to 15 percent, mainly pebbles.
Structure--Weak or moderate subangular blocky.
Consistence--Slightly hard or hard, dry; friable or very friable, moist; slightly sticky or sticky and slightly plastic or plastic, wet.
Reaction--Moderately alkaline or strongly alkaline.

Bq and Bqk horizons:
Value--5 through 7 dry, 4 through 6 moist.
Chroma--2 or 4.
Texture--Stratified gravelly sandy loam to clay loam. Some pedons have horizons with texture of loamy sand below 40 inches.
Clay content--15 to 25 percent.

Rock fragments--5 to 30 percent, mainly pebbles.
Structure--Weak or medium subangular blocky or platy or is massive.
Consistence--Very friable to firm, moist; nonsticky to sticky and nonplastic to plastic, wet
Reaction--Moderately alkaline through very strongly alkaline.
Effervescence (Bqk horizons)--Slightly effervescent through violently effervescent.
Cementation--20 to 60 percent durinodes. Thin layers with continuous brittle matrix are in some pedons.
Other features--Thin Bq horizons are above Bqk horizons in some pedons.

Clurde Variant

The Clurde variant consists of moderately deep, well drained soils that formed in mixed alluvium. Clurde variant soils are on inset fans. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxanomic class: Loamy-skeletal, mixed, mesic Durixerollic Camborthids

Typical pedon: Clurde variant loam, 0 to 2 percent slopes, located in an area of map unit 2531. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; moderate medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common fine vesicular pores; 5 percent pebbles; neutral (pH 7.2); abrupt smooth boundary. (2 to 3 inches thick)
A2--3 to 7 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; weak medium platy structure; slightly hard, friable, slightly sticky and plastic; few very fine roots; few fine tubular pores; 10 percent pebbles; neutral (pH 7.2); clear smooth boundary. (3 to 7 inches thick)
Bw--7 to 13 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, firm, sticky and plastic; few medium, fine and very fine roots; few fine tubular pores; 15 percent pebbles; neutral (pH 7.2); gradual wavy boundary. (6 to 7 inches thick)
Bq1--13 to 19 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, firm, and brittle, sticky and plastic; 25 percent pebbles; continuous brittle matrix; neutral (pH 7.2); clear wavy boundary. (6 to 7 inches thick)
Bq2--19 to 30 inches; light yellowish brown (10YR 6/4) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, and brittle, nonsticky and nonplastic; 55 percent pebbles; continuous brittle matrix; neutral (pH 7.2); clear wavy boundary. (5 to 11 inches thick)
Bq3--30 to 32 inches; lightly yellowish brown (10YR 6/4) gravelly clay, yellowish brown (10YR 5/4) moist; massive; very hard, very firm, very sticky and very plastic; 20 percent pebbles; weak continuous silica cementation; mildly alkaline (pH 7.4); abrupt wavy boundary. (0 to 2 inches thick)
R--32 inches; consolidated basalt.

Type location: Elko County, Nevada; in an unsectionized area, about 1.5 miles south of Silver Lake; 41 degrees, 38 minutes, 28 seconds north latitude, 116 degrees, 39 minutes, 19 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry June through October
Soil temperature: 47 to 51 degrees F.
Depth to continuous brittle matrix: 12 to 17 inches.
Depth to bedrock: 24 to 32 inches.
Control section:
Coarse fragments: 35 to 50 average.

Bw horizon:
Chroma--3 or 4.
Clay content--20 to 25 percent.
Rock fragments--15 to 35 percent, mostly pebbles.

Bq horizons:
Value--4 or 5 moist.
Chroma--3 or 4.
Rock fragments--20 to 60 percent.

Coltroop Series

The Coltroop series consists of shallow, well drained soils that formed in a thin loess mantle over alluvium from rhyolite and basalt. The Coltroop soils are the plateaus and fan piedmont remnants. Slopes are 0 to 4 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durorthids

Typical pedon: Coltroop very fine sandy loam, 0 to 2 percent slopes located in an area of map unit 2205. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light brownish gray (6/2) very fine sandy loam, dark grayish brown (10YR 4/2) moist; weak medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few fine

and very fine roots; common medium, many fine and very fine pores; 5 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (2 to 3 inches thick)
A2--2 to 5 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; weak thin platy structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; few medium, many fine and very fine roots; few fine tubular pores; 5 percent pebbles; mildly alkaline (pH 7.4); abrupt wavy boundary. (2 to 4 inches thick)
Bw--5 to 10 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common medium, fine and very fine roots; few fine tubular pores; 5 percent pebbles; mildly alkaline (pH 7.6); abrupt wavy boundary. (5 to 11 inches thick)
Bqk--10 to 17 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few medium pebbles; weakly cemented with silica and lime; 40 percent durinodes; slightly effervescent; mildly alkaline (pH 7.8); abrupt wavy boundary. (2 to 8 inches thick)
2Bqkm--17 to 27 inches; very pale brown (10YR 8/4) continuous indurated duripan; very pale brown (10YR 7/4) moist; strong thick platy structure; extremely hard, very firm; few very fine roots along plate surfaces; violently effervescent; abrupt wavy boundary. (9 to 10 inches thick)
2Ck--27 to 32 inches; very pale brown (10YR 7/4) sandy loam, yellowish brown (10YR 5/4) moist; massive; loose, nonsticky and nonplastic; common very fine roots; 10 percent pebbles; violently effervescent; lime is disseminated; moderately alkaline (pH 8.4); abrupt wavy boundary (0 to 5 inches thick)
R--32 inches; rhyolite.

Type location: Elko County, Nevada; in a unsectionized area, about 4.75 miles northeast of Lake Creek Reservoir, near the Little Owyhee River; 41 degrees, 59 minutes, 22 seconds north latitude, 116 degrees, 52 minutes, 12 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry June through October
Soil temperature: 47 to 52 degrees F.
Depth to duripan: 14 to 20 inches.
Depth to bedrock: 30 to 35 inches.
Depth to Bqk horizons: 10 to 16 inches.

Control section:
Clay content--20 to 30 percent.
Rock fragments--0 to 15 percent.

A horizons:
Chroma--2 or 3.

Bw horizon:
Chroma--3 or 4.
Clay content--18 to 27 percent.

Bqk horizons:
Value--4 or 5 moist.
Chroma--3 or 4.
Texture--Silt loam or silty clay loam.
Clay content--20 to 30 percent.
Durinodes--20 to 40 percent.
Reaction--Mildly alkaline or moderately alkaline.

Bqkm horizon:
Structure--Thick platy or is massive.

Cotant Series

The Cotant series consists of shallow, well-drained soils formed in residuum from tuff and mixed sedimentary rocks. Cotant soils are on hills. Slopes are 2 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid, shallow Aridic Argixerolls

Typical pedon: Cotant cobbly loam, 4 to 15 percent slopes located in an area of map unit 308. (Colors are for dry soils unless otherwise noted.) The surface is covered by 5 percent pebbles, 15 percent cobbles and 5 percent stones.

A--0 to 3 inches; light brownish gray (10YR 6/2) cobbly loam, very dark grayish brown (10YR 3/2) moist; weak thick platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine vesicular pores; 5 percent pebbles, 15 percent cobbles; neutral (7.0); clear wavy boundary. (2 to 5 inches thick)
Bt1--3 to 7 inches; brown (10YR 5/3) cobbly clay, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, very sticky and very plastic; many very fine and fine, common medium, few coarse roots; common very fine tubular pores; few moderately thick clay films coating and bridging sand grains; many stress surfaces on faces of peds; 5 percent pebbles, 15 percent cobbles; neutral (pH 7.0); clear wavy boundary. (4 to 12 inches thick)
Bt2--7 to 20 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist; strong coarse prismatic

structure; very hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; continuous stress surfaces on faces of peds; 5 percent pebbles; mildly alkaline (pH 7.4); clear wavy boundary. (5 to 13 inches thick)
Cr1--20 to 24 inches; pale brown (10YR 6/3) weathered tuff bedrock with common moderately thick clay films coating fracture planes; few very fine roots in fractures. (4 to 12 inches thick)
Cr2--24 inches; very pale brown weathered tuff bedrock with few thin clay films coating fracture planes; few very fine roots in fractures.

Type location: Elko County, Nevada; approximately 3.5 miles south of Willow Creek Reservoir; about 1,200 feet north and 1,700 feet west of the southeast corner of section 16, T. 38 N., R 48 E.; 41 degrees, 09 minutes, 56 seconds north latitude, 116 degrees, 33 minutes, 05 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist; moist in winter and spring, dry July through October
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 7 to 14 inches, including upper part of argillic horizons.
Solum thickness and depth to paralithic contact: 12 to 20 inches.
Profile reaction: Neutral or mildly alkaline.

A horizon:
Value--5 or 6 dry, 5.5 or darker when upper 7 inches are mixed.
Chroma--2 or 3.

Bt horizons:
Value--4 through 6 dry, 3 through 5 moist. The upper subhorizons is 4 or 5 dry and 3 moist.
Chroma--2 through 4, with 4 only in the lower subhorizons.
Texture--Dominantly clay, cobbly clay, gravelly clay or gravelly clay loam common in some subhorizons.
Clay content--40 to 60 percent.
Rock fragments--0 to 15 percent, mainly pebbles and cobbles; up to 25 percent common in some subhorizons.
Structure--Prismatic, angular blocky or subangular blocky.
Other features--Darker crushed matrix values common in upper part of horizons.
Consistence--Soft to very hard, dry; very friable to very firm, moist; sticky or very sticky and plastic or very plastic, wet.

Cr horizons:
Clay films--Some pedons lack clay films.

Creemon Series

The Creemon series consists of very deep, well drained soils that formed in silty alluvium from mixed rock sources with a component of volcanic ash and loess. Creemon soils are on stream terraces. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-silty, mixed, mesic Duric Camborthids

Typical pedon: Creemon silt loam, 0 to 2 percent slopes located in an area of map unit 1530. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate very thick platy parting to moderate very fine platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine roots; many very fine vesicular pores; 1 percent gravel; moderately alkaline (pH 8.0); clear smooth boundary. (3 to 7 inches thick)
A2--3 to 8 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate very thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; common very fine tubular pores; moderately alkaline (pH 8.0); clear smooth boundary. (0 to 8 inches thick)
Bw--8 to 14 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate medium and thick platy structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; common very fine, few fine tubular pores; moderately alkaline (pH 8.0); clear smooth boundary. (4 to 8 inches thick)
Bq--14 to 25 inches; light yellowish brown (10YR 6/4) weakly stratified silt loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; few very fine and fine tubular pores; 10 percent durinodes; moderately alkaline (pH 8.4); clear smooth boundary. (0 to 12 inches thick)
Bqk--25 to 47 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine, few medium roots; few very fine tubular pores; 20 percent discontinuous weak silica cementation; 20 percent durinodes; few fine irregular lime filaments; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (15 to 30 inches thick)
Ck--47 to 60 inches; light yellowish brown (10YR 6/4) stratified very fine sandy loam and fine sandy loam, dark yellowish brown (10YR 3/4) moist; massive; slightly hard, friable, slightly sticky and slightly

plastic; common very fine roots; common very fine tubular pores; common fine irregular lime filaments and seams; strongly effervescent; strongly alkaline (pH 8.5).

Type location: Elko County, Nevada; approximately 3 miles southeast of the Upper Clover Ranch; about 2,200 feet west and 2,000 feet north of the southeast corner of section 26, T. 38 N., R. 44 E.; 41 degrees, 08 minutes, 33 seconds north latitude, 116 degrees, 58 minutes, 45 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in some part for short periods from October through May
Soil temperature: 48 to 52 degrees F.
Thickness of A and Bw horizons: 11 to 15 inches.
Control section:
Clay content--8 to 18 percent.
Texture--Stratified silt loam to very fine sandy loam.
Depth to Bq or Bqk horizons: 11 to 20 inches.
Reaction: Moderately alkaline or strongly alkaline throughout.
Other features: Some pedons have lenses of volcanic ash in their lower profiles; some pedons have up to 20 percent pebbles at depths below 40 inches, and a continuous brittle matrix layer at depths between 40 to 55 inches, these soils are normally moderately or strongly salt and sodium affected below depths of 20 to 30 inches, but some pedons are moderately or strongly affected throughout.

A horizons:
Value--6 or 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Other features--Noneffervescent or slightly effervescent.

Bw horizon:
Value--6 or 7 dry.
Chroma--2 through 4.
Structure--Thin to thick platy or it is weak medium subangular blocky.
Consistence--Soft or slightly hard, very friable or friable, moist; nonsticky or slightly sticky, nonplastic or slightly plastic.

Bq and Bqk horizons:
Value--5 through 7 dry, 4 or 5 moist.
Chroma--2 through 4.
Consistence--Soft or slightly hard, dry; very friable or friable moist; nonsticky or slightly sticky.
Other features--Strongly or violently effervescent in Bqk horizons; 20 to 40 percent durinodes; many pedons between depths of 11 to 29 inches have a 3 to 10 inch thick horizon with 20 to 60 percent discontinuous weakly silica cemented lenses.

Crooked Creek Series

The Crooked Creek series consists of very deep, poorly drained soils that formed in alluvium from mixed sedimentary and igneous rocks. Crooked Creek soils are on axial stream flood-plains, stream terraces and localized seeps. Slopes are 0 to 4 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Cumulic Haplaquolls

Typical pedon: Crooked Creek silty clay loam, 0 to 2 percent slopes in an area of map unit 184. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; very dark gray (10YR 3/1) silty clay loam, black (10YR 2/1) moist; strong fine and medium subangular blocky structure; hard, friable, sticky and plastic; many very fine, fine and medium roots; many very fine interstitial pores; neutral (pH 7.2); abrupt smooth boundary. (1 to 3 inches thick)
A2--3 to 13 inches; very dark gray (10YR 3/1) silty clay, black (10YR 2/1) moist; few fine distinct brown (10YR 5/3) mottles; strong medium prismatic structure parting to strong fine angular blocky; very hard, firm, very sticky and very plastic; common very fine and fine roots; few very fine tubular pores; few clean sand grains on faces of peds; neutral (pH 7.0); clear smooth boundary. (3 to 10 inches thick)
A3--13 to 28 inches; very dark gray (10YR 3/1) silty clay, black (10YR 2/1) moist; common fine prominent yellowish red (5YR 4/6) and medium distinct brown (10 YR5/3) mottles and common manganese stains; strong medium prismatic structure parting to strong fine angular blocky; very hard, firm, very sticky and very plastic; common very fine and fine roots; common very fine tubular pores; common fine and medium clean sand grains within peds; neutral (pH 7.0); abrupt smooth boundary. (4 to 15 inches thick)
A4--28 to 37 inches; dark gray (10YR 4/1) silty clay, very dark gray (10YR 3/1) moist; common fine prominent strong brown (7.5YR 5/6) and many large distinct brown(10YR 5/3) mottles and common fine manganese stains; strong medium prismatic structure parting to strong fine angular blocky; very hard, firm, very sticky and very plastic; common very fine and fine roots; common very fine and fine tubular pores; few thin clay films lining pores; neutral (pH 7.0); abrupt smooth boundary. (3 to 14 inches thick)
C1--37 to 45 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; common fine prominent strong brown (7.5YR 5/6) and few fine prominent yellowish red (5YR 4/6) and many medium distinct brown (10YR 5/3) mottles and few fine manganese stains; massive; hard, friable, very sticky and plastic; few very fine

and fine roots; common very fine tubular pores; neutral (pH 7.0); abrupt smooth boundary. (0 to 14 inches thick)
C2--45 to 60 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; common fine and medium prominent strong brown (7.5YR 5/6) and few fine prominent yellowish red (5YR 4/6) and few large distinct black (10YR 2/1) and many medium distinct brown (10YR 5/3) mottles and common fine manganese stains; massive; very hard, firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; common thin silt coating lining pores and bridging mineral grains; neutral (pH 7.2).

Type location: Elko County, Nevada; about 4 miles east of Deep Creek Reservoir; 2,500 feet west and 1,300 feet south of the northeast corner of section 34, T. 43 N., R. 51 E.; 41 degrees, 35 minutes, 07 seconds north latitude, 116 degrees, 13 minutes, 55 seconds west longitude.

Range in Characteristics

Soil moisture: The soil is saturated at or near the surface for at least one month during most years
Soil temperature: 43 to 47 degrees F.
Mollic epipedon thickness: Greater than 24 inches.
Profile reaction: Neutral to moderately alkaline.
Control section:
Percent clay--Averages 35 to 50.
Texture--Mostly clay loam, silty clay loam, clay or silty clay with thin lenses of loam or silt loam.
Rock fragments--Averages 0 to 10 percent.

A horizons:
Value--3 through 5 dry, 1 through 3 moist.
Chroma--1 or 2.
Other features--Most subhorizons have faint to distinct mottles.

C horizons:
Hue--10YR, 7.5YR, 5Y or 2.5Y.
Value--3 through 6 dry, 3 through 5 moist.
Chroma--1 to 4.
Texture--Clay loam, silty clay loam, or silt loam.
Clay content--Averages 30 to 40 percent.
Rock fragments--Averages 0 to 10 percent. Some pedons may have up to 75 percent rock fragments in the subhorizons below 36 inches, but these are not consistent or continuous.
Structure--Subangular blocky or prismatic or it is massive.
Other features--These horizons have distinct or prominent mottles with hues of 7.5YR to 5G.

Dacker Series

The Dacker series consists of moderately deep over duripan, well drained soils that formed in silty alluvium from mixed rock sources with a component of loess and volcanic ash. The Dacker soils are on fan piedmont remnants. Slopes are 0 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Xerollic Durargids

Typical pedon: Dacker silt loam, 2 to 8 percent slopes, is located in an area of map unit 2809. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate thin platy structure; soft, friable, slightly sticky and slightly plastic; few very fine roots; common fine vesicular pores; 5 percent pebbles; neutral (pH 6.6); abrupt smooth boundary. (2 to 4 inches thick)
A2--3 to 6 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; moderate very fine subangular blocky structure; soft, friable, slightly sticky and slightly plastic; few very fine roots; common fine vesicular pores; neutral (pH 6.8); clear smooth boundary. (2 to 4 inches thick)
Bt1--6 to 11 inches; yellowish brown (10YR 5/4) silty clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine roots; few very fine tubular pores; common moderately thick clay films on faces of peds; mildly alkaline (pH 7.8); gradual smooth boundary. (4 to 13 inches thick)
Bt2--11 to 25 inches; light yellowish brown (10YR 6/4) silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few medium, fine and very fine roots; few very fine tubular pores; common moderately thick clay films on faces of peds; 10 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary. (5 to 14 inches thick)
Bqk--25 to 32 inches; pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few fine and very fine roots; few fine tubular pores; 10 percent pebbles; weakly cemented with silica; 20 percent durinodes; strongly effervescent, lime is disseminated; moderately alkaline (pH 8.0); abrupt wavy boundary. (5 to 12 inches thick)
Bqkm1--32 to 52 inches; very pale brown (10YR 8/3) continuous indurated duripan with opal laminae 1/8 to 1/4 inches thick; very pale brown (10YR 7/3) moist; massive; extremely hard; violently effervescent; clear wavy boundary.

Bqkm2--52 to 60 inches; very pale brown (10YR 7/3) strongly cemented fractured duripan, pale brown (10YR 6/3) moist; massive; very hard dry consistence; violently effervescent.

Type location: Elko County, Nevada; in an unsectionized area, about 6.5 miles northwest of Josephine Reservoir; 41 degrees, 58 minutes, 30 seconds north latitude; 116 degrees, 31 minutes, 42 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in the winter and spring, dry June through October
Soil temperature: 47 to 52 degrees F.
Combined thickness of A and Bt: 17 to 25 inches.
Depth to carbonates: 15 to 25 inches.
Depth to duripan: 20 to 35 inches.
Control section:
Clay content--27 to 35 percent.
Rock fragments--5 to 35 percent, mainly pebbles.
Other features: Very gravelly loamy sand substrata are common in some pedons below a depth of 40 inches.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

Bt horizons:
Value--5 through 7 dry, 3 through 5 moist.
Chroma--3 or 4.
Texture--Upper subhorizons: is silty clay loam or gravelly silty clay loam. Lower subhorizons: is silt loam, silty clay loam or gravelly silt loam.
Clay content--Upper subhorizons 27 to 35 percent, lower subhorizons 25 to 33 percent.
Rock fragments--Upper subhorizons 0 to 20 percent, lower subhorizons 5 to 35 percent.
Structure--Prismatic, subangular blocky or may be massive in the lower part.
Consistence--Usually hard, slightly hard in subhorizons, very friable to firm, moist; slightly sticky or sticky and slightly plastic or plastic, wet.
Reaction--Mildly alkaline or moderately alkaline.

Bqk horizon:
Value--6 or 7 dry, 3 through 5 moist.
Chroma--3 or 4.
Texture--Silt loam or loam, some pedons have gravelly silt loam or gravelly loam.
Clay content--20 to 25 percent.
Consistence--Slightly hard or hard, dry; very friable to firm, moist; slightly sticky or sticky and slightly plastic or plastic, wet.
Rock fragments--5 to 35 percent, mainly pebbles.
Other features--20 to 50 percent, 5 to 30 millimeter durinodes or pan fragments.

Bqkm horizons:
Value--6 through 8 dry, 4 through 7 moist.
Chroma--2 through 4.
Other features--Commonly has variable thickness of alternating layers of weak, strong or indurated silica-lime cemented material below.

Deepeek Series

The Deepeek series consists of shallow, well drained soils that formed in mixed alluvium and colluvium. Deepeek soils are on fan piedmont remnants, plateaus and hills. Slopes are 8 to 50 percent. Mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic, shallow Xerollic Durargids

Typical pedon: Deepeek very cobbly loam, 8 to 15 percent slopes located in an area of map unit 3030. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 20 percent pebbles and 10 percent cobbles.

A1--0 to 2 inches; pale brown (10YR 6/3) very cobbly loam, brown (10YR 4/3) moist; moderate thick platy structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many fine and common very fine roots; common medium vesicular and common fine tubular pores; 25 percent pebbles, 15 percent cobbles, 2 percent stones; mildly alkaline (pH 7.8); clear smooth boundary. (2 to 3 inches thick)
A2--2 to 5 inches; pale brown (10YR 6/3) very cobbly loam, brown (10YR 4/3) moist; weak thin platy structure parting to weak very fine granular; soft, very friable, slightly sticky and slightly plastic; few medium, common fine and very fine roots; common fine and very fine tubular pores; 25 percent pebbles, 15 percent cobbles; mildly alkaline (pH 7.8); gradual wavy boundary (2 to 3 inches thick)
Bt1--5 to 8 inches; pale brown (10YR 6/3) very cobbly loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few medium and common fine roots; few medium and common fine tubular pores; few thin clay films on faces of peds and lining pores; 15 percent pebbles, 20 percent cobbles; moderately alkaline (pH 8.0); clear wavy boundary. (3 to 5 inches thick)
Bt2--8 to 14 inches; very pale brown (10YR 7/3) very cobbly silty clay loam, yellowish brown (10YR 5/4) moist; moderate medium and fine subangular blocky structure; hard, firm, sticky and plastic; common

medium and fine roots; common medium and fine tubular pores; common thin clay films on peds, common moderately thick clay films lining pores; 20 percent pebbles; 30 percent cobbles; moderately alkaline (pH 8.4); clear smooth boundary. (5 to 9 inches thick)

Bqk--14 to 18 inches; white (10YR 8/2) very gravelly silt loam, pale brown (10YR 6/3) moist; massive; hard, firm, and brittle slightly sticky and slightly plastic; few medium and fine roots; few fine tubular pores; 40 percent pebbles, 5 percent cobbles; continuous brittle matrix, 25 percent brittle durinodes; strongly effervescent; lime is disseminated; strongly alkaline (pH 8.6); abrupt smooth boundary. (0 to 5 inches thick)

Bqkm--18 to 24 inches; white (10YR 8/2) indurated duripan, pale brown (10YR 6/3) moist; massive; extremely hard, extremely firm; few fine roots in fractures; silica laminae are 1/2 to 2 millimeters thick; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary. (5 to 8 inches thick)

Cqk--24 to 42 inches; white (10YR 8/2) gravelly silt loam, pale brown (10YR 6/3) moist; massive; hard, firm, slightly sticky and slightly plastic; few fine roots; 20 percent pebbles; continuous brittle matrix, 30 percent durinodes; 15 percent pebbles; strongly effervescent; lime is disseminated; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 14 miles northwest of Wilson Reservoir; 41 degrees, 47 minutes, 40 seconds north latitude, 116 degrees, 34 minutes, 00 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry in summer and early autumn
Soil temperature: 47 to 51 degrees F.
Solum thickness: 14 to 20 inches.
Depth to duripan: 14 to 20 inches.
Depth to bedrock: 40 to over 60 inches.
Control section:
Clay content--25 to 35 percent.
Rock fragments--35 to 50 percent, mainly pebbles and cobbles.

Bt horizons:
Value--5 through 7 dry, 4 or 5 moist.
Chroma--3 or 4.
Texture--Very cobbly silt loam, very cobbly loam, and very cobbly silty clay loam.

Bqk horizons:
Value--7 or 8 dry, 6 or 7 moist.
Chroma--2 through 4.
Durinodes--20 to 50 percent, inbedded in continuously brittle matrix.

Deseed Series

The Deseed series consists of moderately deep, well drained soils that formed in residuum and colluvium from rhyolite, tuff and basalt. Deseed soils are on side slopes of hills and mountains. Slopes are 2 to 50 percent. Mean annual precipitation is 11 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Xerollic Haplargids

Typical pedon: Deseed gravelly loam, 15 to 30 percent slopes, located in map unit 2173. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 30 percent pebbles and 5 percent cobbles.

A--0 to 4 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 3/3) moist; moderate thick platy structure; soft, very friable, slightly sticky and slightly plastic; few fine and very fine roots; common very fine vesicular pores; 15 percent pebbles, 5 percent cobbles; neutral (pH 7.0); clear smooth boundary. (3 to 5 inches thick)

Bt1--4 to 10 inches; pale brown (10YR 6/3) gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, firm, sticky and plastic; few fine and very fine roots; few fine tubular pores; few thin clay films on peds and lining pores; 20 percent pebbles, 5 percent cobbles; neutral (pH 7.0); clear smooth boundary. (4 to 7 inches thick)

Bt2--10 to 17 inches; light yellowish brown (10YR 6/4) gravelly clay, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; few fine tubular pores; common moderately thick clay films on peds; 25 percent pebbles, 5 percent cobbles; neutral (pH 7.0); clear smooth boundary. (6 to 8 inches thick)

Bt3--17 to 26 inches; brown (10YR 5/3) gravelly clay, yellowish brown (10YR 5/4) moist; strong medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; few fine and very fine tubular pores; many moderately thick clay films on peds; 20 percent pebbles, 5 percent cobbles; neutral (pH 7.2); abrupt smooth boundary. (4 to 11 inches thick)

R--26 inches; rhyolite.

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 2 miles west of Haystack Peak; 41 degrees, 25 minutes, 45 seconds north latitude, 116 degrees, 23 minutes, 27 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry late June through October
Soil temperature: 44 to 47 degrees F.
Depth to bedrock: 20 to 40 inches.
Control section:
Clay content--Average 35 to 45 percent.
Rock fragments--5 to 35 percent, mainly pebbles.

A horizon:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3 moist or dry.

Bt1 horizon:
Clay content--30 to 35 percent.
Texture--Silty clay loam or clay loam
Reaction--Neutral or mildly alkaline.

Bt2 and Bt3 horizons:
Hue--10YR or 7.5YR.
Value--4 through 6 dry, 4 or 5 moist.
Chroma--3 through 6.
Structure--Weak to strong, medium or coarse angular or subangular blocky, or weak prismatic.
Texture--Gravelly clay, gravelly clay loam, clay or clay loam.
Clay content--35 to 50 percent
Reaction--Neutral or mildly alkaline.

Deunah Series

The Deunah series consists of moderately deep to a duripan, well drained soils that formed in alluvium and eolian material mainly from basalt and volcanic ash. Deunah soils are on plateaus and summits of hills. Slopes are 2 to 4 percent. The average annual precipitation is about 14 inches and the average annual temperature is about 44 degrees F.

Taxonomic class: Very-fine, montmorillonitic, frigid Abruptic Durixeralfs

Typical pedon: Deunah stony loam, 2 to 4 percent slopes, located in an area of map unit 2310. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent pebbles.

E1--0 to 2 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; weak thin platy structure; slightly hard, very friable, nonsticky and nonplastic; common fine and very fine roots; few medium, many fine and very fine vesicular pores; 5 percent pebbles; slightly acid (pH 6.2); abrupt smooth boundary. (2 to 10 inches thick)
E2--2 to 9 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; weak thin platy structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many fine and very fine roots; few fine and very fine tubular pores; 5 percent pebbles; slightly acid (pH 6.2); abrupt smooth boundary. (0 to 8 inches thick)
2Bt1--9 to 13 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; common medium, fine and very fine roots; many fine and very fine tubular pores; common thin clay films on faces of peds and lining pores; 5 percent pebbles; slightly acid (pH 6.4); clear wavy boundary. (0 to 6 inches thick)
2Bt2--13 to 22 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate medium angular blocky structure; very hard, very firm, sticky and plastic; few medium fine and very fine roots; common fine and very fine tubular pores; many moderately thick clay films on faces of peds and lining pores; 10 percent pebbles; neutral (pH 6.6); abrupt wavy boundary. (4 to 20 inches thick)
2Bt3--22 to 26 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure parting to strong medium angular blocky; very hard, very firm, sticky and plastic; few fine and very fine roots; few very fine tubular pores; continuous moderately thick clay films on faces of peds and lining pores; many moderately thick stress surfaces; 10 percent pebbles; neutral (pH 7.0); abrupt wavy boundary. (0 to 4 inches thick)
2Bqm1--26 to 30 inches; yellow (10YR 7/6) indurated duripan, brownish yellow (10YR 6/6) moist; strong thick platy structure; very hard, very firm; few very fine roots; 10 percent pebbles; abrupt wavy boundary. (2 to 8 inches thick)
2Bqm2--30 to 33 inches; reddish yellow (7.5YR 7/6) continuous indurated duripan, light brown (7.5YR 6/4) moist; strong thick platy structure; extremely hard, extremely firm; 10 percent pebbles; abrupt wavy boundary. (0 to 5 inches thick)
R--33 inches; consolidated rhyolite.

Type location: Elko County, Nevada; approximately 1 mile south of Hatpeak; about 2,640 feet south and 2,150 feet west of the northeast corner of section 17, T. 46 N., R. 50 E.; 41 degrees, 53 minutes, 30 seconds north latitude, 116 degrees, 23 minutes, 10 seconds west longitude.

Range in Characteristics

Soil temperature: 42 to 47 degrees F.
Rock fragments in solum: 0 to 15 percent
Depth to duripan: 20 to 34 inches
Depth to bedrock: 22 to 40 inches

E horizons:
Value--5 or 6 dry (more than 5.5 mixed), 3 or 4 moist
Chroma--2 or 3 moist and dry
Reaction--Moderately acid through neutral

2Bt horizons:
Hue--7.5YR or 10YR
Value--4 through 6 dry, 3 or 4 moist
Chroma--3 through 6 moist and dry
Clay content--60 to 70 percent
Reaction--Slightly acid to mildly alkaline

2Bqm horizons:
Hue--7.5YR or 10YR
Value--5 through 8 dry, 5 or 6 moist
Chroma--2 through 8 moist or dry
Rock fragments--10 to 80 percent
Effervescence--None or slight

Dewar Series

The Dewar series consists of well drained soils that are shallow to a duripan and formed in loess and silty alluvium from mixed rock sources with a component of volcanic ash. Dewar soils are on fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durargids

Typical pedon: Dewar very cobbly very fine sandy loam, 8 to 15 percent slopes, located in an area of map unit 2521. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent pebbles and 30 percent cobbles.

A1--0 to 2 inches; pale brown (10YR 6/3) very cobbly very fine sandy loam, dark brown (10YR 4/3) moist; weak thick platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common fine vesicular pores; 5 percent pebbles and 30 percent cobbles; moderately alkaline (pH 8.2); abrupt smooth boundary. (2 to 5 inches thick)

A2--2 to 4 inches; pale brown (10YR 6/3) very cobbly silt loam, dark brown (10YR 4/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; 15 percent pebbles; 25 percent cobbles; moderately alkaline (pH 8.2); clear smooth boundary. (0 to 3 inches thick)

Bt1--4 to 10 inches; pale brown (10YR 6/3) cobbly silty clay loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, firm, sticky and plastic; few medium, fine and very fine roots; few fine tubular pores; few moderately thick clay films on faces of peds; 15 percent pebbles, 15 percent cobbles; moderately alkaline (pH 8.2); clear smooth boundary. (3 to 14 inches thick)

Bt2--10 to 14 inches; light yellowish brown (10YR 6/4) cobbly silty clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few fine and very fine roots; few very fine tubular pores; few moderately thick clay films on faces of peds; 5 percent pebbles, 15 percent cobbles; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (0 to 5 inches thick)

Btqk--14 to 19 inches; very pale brown (10YR 7/3) very cobbly silt loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm, slightly sticky and slightly plastic; few very fine roots; continuous brittle matrix, few thin clay films lining pores; 15 percent pebbles, 25 percent cobbles; violently effervescent; common fine soft masses of lime; strongly alkaline (pH 8.8); abrupt smooth boundary. (0 to 8 inches thick)

Bqkm1--19 to 22 inches; very pale brown (10YR 8/3) continuous fractured indurated duripan, very pale brown (10YR 7/3) moist; massive; extremely hard, extremely firm; violently effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary. (3 to 5 inches thick)

Bqkm2--22 to 32 inches; very pale brown (10YR 8/3) continuous indurated duripan with 1/8 inch opal laminae, very pale brown (10YR 7/3) moist; massive; extremely hard, extremely firm; violently effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary. (6 to 11 inches thick)

Ck1--32 to 42 inches; very pale brown (10YR 7/3) gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; soft, very friable, nonsticky and nonplastic; 30 percent pebbles; violently effervescent, lime is disseminated; moderately alkaline (pH 8.2); gradual wavy boundary. (0 to 20 inches thick)

Ck2--42 to 60 inches; very pale brown (10YR 7/3) gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; soft, very friable, nonsticky and nonplastic; 25 percent pebbles; violently effervescent, lime is disseminated; very strongly alkaline (pH 9.2).

Type location: Elko County, Nevada; in an unsectionized area, about 3 miles northwest of Winters Ranch Reservoir; 41 degrees, 34 minutes, 45 seconds north latitude, 116 degrees, 40 minutes, 17 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry early June through October
Soil temperature: 47 to 52 degrees F.
Depth to indurated duripan: 14 to 20 inches.
Reaction: A and Bt horizons are neutral to moderately alkaline.
Control section:
Clay content--27 to 35.
Rock fragments--15 to 35 percent dominantly pebbles and cobbles.

A horizons:
Value--3 or 4 moist.
Chroma--2 or 3.

Bt horizons:
Value--6 through 7 dry, 3 through 5 moist.
Chroma--2 through 4 dry, 3 or 4 moist.
Texture--Gravelly silty clay loam or gravelly clay loam or cobbly silty clay loam.
Clay content--27 to 35 percent.
Rock fragments--15 to 35 percent, mainly pebbles and cobbles.
Structure--Weak through strong, fine through coarse subangular blocky.
Consistence--Slightly hard or hard, dry; very friable or friable, moist.

Btqk horizon: (when present):
Value--6 or 7 dry, 4 through 6 moist.
Clay content--25 to 30 percent.
Chroma--3 or 4.
Durinodes--Weak or very weak, less than 30 percent.
Silica cementation--Few thin pendants on pebbles or continuous brittle matrix.

Bqkm horizons:
Structure--Massive or moderately thick or very thick plate like layers.
Cementation--Some pedons are alternately strongly cemented or discontinuously indurated horizons below the duripan.
Other features--In some pedons, a 1 to 3 inch zone of degraded duripan material is common along the upper horizon boundary.

Donna Series

The Donna series consists of well drained soils that are moderately deep to a duripan. These soils formed in alluvium from mixed rock sources with a component of loess high in volcanic ash. Donna soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Very-fine, montmorillonitic, frigid Abruptic Aridic Durixerolls

Typical pedon: Donna gravelly loam, 2 to 8 percent slopes, is located in an area of map unit 458. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light brownish gray (10YR 6/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; slightly hard, very friable, sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; 15 percent pebbles; neutral (pH 7.2); abrupt smooth boundary. (1 to 3 inches thick)

A2--2 to 7 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; 15 percent pebbles; neutral (pH 7.2); clear smooth boundary. (1 to 5 inches thick)

A3--7 to 10 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, firm, sticky and plastic; common very fine and fine roots; common very fine tubular pores; few thin clay films lining pores in the lower part; many uncoated sand grains; 10 percent pebbles; neutral (pH 7.2); abrupt smooth boundary. (0 to 5 inches thick)

Bt1--10 to 19 inches; brown (10YR 5/3) clay, brown (10YR 4/3) moist; strong medium prismatic structure parting to strong angular blocky; very hard, very firm, very sticky and very plastic; few very fine and fine roots mainly along faces of peds; few very fine tubular pores; continuous stress surfaces on faces of peds; tops of prisms continuously covered with uncoated sand grains; 10 percent duripan fragments; neutral (pH 7.2); clear smooth boundary. (3 to 13 inches thick)

Bt2--19 to 24 inches; brown (10YR 5/3) clay, brown (10YR 4/3) moist; strong medium prismatic structure parting to strong medium angular blocky; very hard, very firm, very sticky and very plastic; few very fine roots mainly along faces of peds; few very fine tubular pores; continuous stress surfaces on faces of peds; 10 percent duripan fragments; neutral (pH 7.2); abrupt smooth boundary. (1 to 12 inches thick)

Bt3--24 to 30 inches; light yellowish brown (10YR 6/4) clay, dark yellowish brown (10YR 4/4) moist; massive; very hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; many thin and moderately thick clay films bridging sand grains and lining pores; few uncoated sand grains throughout; 10 percent coarse fragments 1/2 of which are duripan fragments, 1/2 of which are pebbles; mildly alkaline (pH 7.8); abrupt smooth boundary. (0 to 7 inches thick)

Bqkm--30 to 48 inches; indurated duripan with 2 to 5 millimeter silica laminar cap; multiple laminar throughout; strong thick platy structure; extremely hard and brittle; common fine soft lime seams along fracture planes; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (8 to 20 inches thick)

Cqk--48 to 60 inches; light yellowish brown (10YR 6/4) weakly stratified very gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, slightly sticky and slightly plastic; continuous brittle matrix; strongly effervescent, lime is disseminated; 55 percent pebbles; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; approximately 1/4 mile east of Tuscarora; about 800 feet north and 400 feet east of the southwest corner of section 35, T. 40 N., R. 51 E.; 41 degrees, 19 minutes, 00 seconds north latitude, 116 degrees, 15 minutes, 05 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry mid June through October
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 7 to 12 inches.
Depth to duripan: 20 to 36 inches.
Thickness of duripan: 10 to 20 inches.
Other features: There is an increase of 15 to 30 percent clay at the upper boundary of the Bt horizon.
Control section:
Clay content--60 to 70 percent.
Rock fragments--0 to 15 percent, mainly pebbles.

A horizons:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 3 or 4 moist; 6 dry and 4 moist only in the upper 1 to 3 inches. After mixing the upper 7 inches the soil meets the 5.5 dry and 3.5 moist color requirements for mollic.
Chroma--2 or 3.
Reaction--Slightly acid or neutral.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 4 or 5 moist.
Chroma--3 or 4.
Structure--Weak through strong medium or coarse prismatic, parting to angular blocky, massive in the lower part.
Consistence--Very hard or extremely hard, dry.
Reaction--Slightly acid or neutral. Some pedons are mildly alkaline in the subhorizon above the duripan.

Bqkm horizon:
Reaction--Neutral or mildly alkaline where the upper subhorizons lack carbonates; moderately alkaline or strongly alkaline in the calcareous portions.
Other features--Commonly noncalcareous in the upper part but few or common fine soft lime seams are along fracture planes in some pedons.

Enko Series

The Enko series consists of very deep, well drained soils that formed in loamy alluvium weathered mainly from mixed rock sources with a component of loess and volcanic ash. Enko soils are on fan piedmont remnants. Slopes are 0 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Durixerollic Camborthids

Typical pedon: Enko fine sandy loam, 2 to 8 percent slopes, is located in an area of map unit 1241. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; light brownish gray (10YR 6/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate very thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine vesicular pores; moderately alkaline (pH 8.0); clear smooth boundary. (2 to 7 inches thick)
A2--4 to 8 inches; light brownish gray (10YR 6/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate very thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine vesicular and tubular pores; moderately alkaline (pH 8.2); clear smooth boundary. (0 to 5 inches thick)
Bw--8 to 15 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; moderate very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine tubular pores; moderately alkaline (pH 8.2); clear smooth boundary. (6 to 14 inches thick)
Bqk1--15 to 26 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; massive; hard, firm, brittle, slightly sticky and slightly plastic; few very fine and fine roots; common very fine tubular pores; continuous brittle matrix; slightly effervescent, lime is disseminated; moderately alkaline (pH 8.4); clear smooth boundary. (5 to 12 inches thick)
Bqk2--26 to 38 inches; light yellowish brown (10YR 6/4) fine sandy loam, dark yellowish brown (10YR 4/4) moist; massive; very hard, firm, brittle, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; continuous brittle matrix; strongly effervescent, lime is disseminated; 10 percent pebbles; strongly alkaline (pH 9.0); clear smooth boundary. (8 to 15 inches thick)
Bqk3--38 to 60 inches; yellowish brown (10YR 5/4) fine sandy loam, dark yellowish brown (10YR 4/4) moist; massive; hard, firm, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 50 percent discontinuous weak silica cementation; strongly effervescent, lime is disseminated; 10 percent pebbles; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 16 miles south of Midas; about 2,100 feet north and 1,300 feet west of the southeast corner of section 2, T. 36 N., R 44 E.; 41 degrees, 01 minutes, 30

seconds north latitude, 116 degrees, 58 minutes, 28 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry June through October
Soil temperature: 49 to 54 degrees F.
Thickness of A and Bw horizons: 12 to 30 inches.
Depth to continuous brittle matrix: 14 to 32 inches.
Other features: Below 40 inches some pedons have gravelly or sandy substrata, or substrata containing gypsum crystals. Some pedons have noneffervescent Bq horizons above the Bqk horizon.
Control section:
Clay content--10 to 18 percent.
Rock fragments--0 to 15 percent pebbles.

A horizons:
Hue--10YR or 2.5Y.
Value--Commonly 6 or 7 dry, with 5 dry in some subhorizons of some pedons, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Neutral through moderately alkaline.

Bw horizon:
Value--5 through 7 dry, 3 through 5 moist.
Chroma--2 through 4.
Texture--Mainly loam, fine sandy loam, or sandy loam; some pedons have strata of silt loam or clay loam in the upper part where stratified.
Structure--Prismatic, angular blocky, subangular blocky or it is massive.
Consistence--Nonsticky to sticky, nonplastic to plastic, wet.
Reaction--Neutral through moderately alkaline, increasing with depth.
Carbonates--Some pedons are calcareous in the lower portion of the horizon.

Bqk horizons:
Hue--10YR, 2.5Y, 5Y.
Value--4 through 7 moist, 6 through 8 dry.
Chroma--1 through 4 dry, 2 through 4 moist.
Texture--Loam, sandy loam, fine sandy loam, gravelly sandy loam, or very fine sandy loam.
Silica cementation--Continuous brittle matrix that has at least firm consistence when moist, horizons 10 to 40 inches thick. Subhorizons not continuously brittle contain 20 to 50 percent durinodes or are 20 to 75 percent discontinuous weakly silica-cemented.
Structure--Platy or is massive.
Consistence--Slightly hard to very hard, dry; nonsticky or slightly sticky and nonplastic or slightly plastic or brittle when wet. Substrata that are very friable, moist are in some pedons.
Reaction--Mildly alkaline through strongly alkaline increasing with depth.
Other features--Relict iron mottles or mica particles are common in many pedons. Very gravelly or extremely gravelly substratum phases are common below depths of 40 inches in some pedons.

Erakatak Series

The Erakatak series consists of moderately deep, well drained soil that formed in residuum and colluvium from sedimentary and igneous rocks. Erakatak soils are mainly on south facing side slopes of hills and mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls

Typical pedon: Erakatak gravelly loam, 15 to 50 percent slopes, is located in an area of map unit 1742. (Colors are for dry soils unless otherwise noted.) The soil surface is covered with 15 percent pebbles.

A--0 to 4 inches; dark grayish brown (10YR 4/2) gravelly loam, black (10YR 2/1) moist; weak coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; common very fine and fine tubular pores; 15 percent pebbles; neutral (pH 7.2); clear smooth boundary. (1 to 8 inches thick)
Bt1--4 to 19 inches; grayish brown (10YR 5/2) very cobbly clay loam, very dark brown (10YR 2/2) moist; weak coarse subangular blocky structure; soft, very friable, sticky and plastic; common very fine, fine, medium and few coarse roots; common very fine and fine tubular pores; 15 percent pebbles and 25 percent cobbles; small pockets of dark yellowish brown (10YR 4/6) moist clay distributed randomly throughout; neutral (pH 7.2); abrupt wavy boundary. (6 to 15 inches thick)
Bt2--19 to 32 inches; dark yellowish brown (10YR 4/4) very cobbly clay, dark yellowish brown (10YR 4/4) moist; few fine distinct yellowish brown (10YR 5/8) moist, brownish yellow (10YR 6/8) moist, and strong brown (7.5YR 4/6 and 5/8) moist iron mottles; strong coarse and very coarse angular blocky structure; hard, firm, very sticky and very plastic; few very fine and fine roots; many very fine and fine tubular pores; many small iron-manganese concretions; many stress surfaces on faces of peds; 20 percent pebbles and 35 percent cobbles; neutral (pH 7.0); abrupt wavy boundary. (12 to 22 inches thick)
Cr--32 to 35 inches; soft weathered siltstone; neutral (pH 6.8). (2 to 5 inches thick)
R--35 inches; hard, fractured siltstone.

Type location: Elko County, Nevada; about 2 miles south of Bull Run Reservoir; approximately 1,800 feet east and 1,800 feet north of the southwest corner of section 20, T. 43 N., R. 52 E.; 41 degrees, 36 minutes, 30 seconds north latitude, 116 degrees, 9 minutes, 30 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist winter and spring, dry late July through late October
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 7 to 19 inches and includes the upper part of the argillic horizon.
Soil thickness and depth to paralithic contact: 20 to 35 inches.
Depth to lithic contact: 20 to 40 inches.
Control section:
Clay content--35 to 55 percent.
Rock fragments--35 to 60 percent, mainly cobbles.

A horizon:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 through 3 dry or moist.

Bt horizons:
Hue--10YR or 7.5YR.
Value--4 through 6 dry, 2 through 4 moist with darker value in the upper subhorizon.
Chroma--2 through 4.
Texture--Very cobbly clay loam in the upper subhorizon and very cobbly clay in the lower subhorizon.
Consistence--Slightly sticky through very sticky and slightly plastic through very plastic, wet.
Reaction--Neutral or mildly alkaline.
Stress surfaces--Many present in at least part of the horizon.
Silica coats--Are present in some pedons.
Iron mottles--Common in the lower subhorizon of most pedons.

Cr horizon:
Normally contains 2 to 5 inches of weathered bedrock.

Fulstone Series

The Fulstone series consists of shallow over a duripan, well drained soils that formed in alluvium from mixed rocks. Fulstone soils are on fan piedmonts remnants. Slopes are 2 to 30 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Abruptic Xerollic Durargids

Typical pedon: Fulstone gravelly loam, 2 to 8 percent slopes, located in an area of map unit 1230. (Colors are for dry soil unless otherwise noted.) Approximately 35 percent pebbles and 5 percent cobbles cover the soil surface.

A1--0 to 2 inches; light brownish gray (10YR 6/2) gravelly loam, dark grayish brown (10YR 4/2) moist; moderate very fine platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many fine vesicular pores; 25 percent pebbles; neutral (pH 7.0); clear smooth boundary. (1 to 4 inches thick)
A2--2 to 5 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 4/3) moist; strong very fine platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; 15 percent pebbles, 2 percent cobbles; neutral (pH 7.0); abrupt smooth boundary. (2 to 4 inches thick)
Bt--5 to 17 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist; strong fine and coarse prismatic structure; hard, firm, sticky and plastic; few very fine and fine roots in mat; 5 percent pebbles, 2 percent cobbles; continuous thin clay films on faces of peds and lining pores; neutral (pH 7.3); abrupt smooth boundary. (6 to 20 inches thick)
Bqkm--17 to 40 inches; light yellowish brown (10YR 6/4) indurated silica and lime cemented duripan, dark yellowish brown (10YR 6/4) moist; massive; strongly effervescent.

Type location: Elko County, Nevada; approximately 9 miles northeast of Midas; about 1,700 feet west and 650 feet south of the northeast corner of section 28, T. 39 N., R. 47 E.; 41 degrees, 19 minutes, 18 seconds north latitude, 116 degrees, 39 minutes, 55 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry from June through October
Soil temperature: 53 to 59 degrees F.
Depth to indurated duripan: 14 to 20 inches.
Other features: Some pedons have a thin Bt3 horizon with clay or clay loam textures.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--1 through 3.
Structure--Granular or platy.
Reaction--Slightly acid or neutral.

Bt horizon:
Hue--7.5YR or 10YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--2 through 6.

Structure--Prismatic, angular blocky or subangular blocky.
Clay content--45 to 60 percent.
Rock fragments--Usually free of rock fragments, but some pedons average up to 20 percent pebbles or cobbles due to mixing by burrowing animals.
Reaction--Neutral through moderately alkaline.

Bqkm horizon:
Other features--Essentially continuously cemented, but broken in some places by burrowing animals.

Gando Series

The Gando series consists of very shallow and shallow, well drained soils that formed in residuum and colluvium from chert, argillite, shale, quartzite, rhyolite or tuffaceous sandstone. Gando soils are on crests and side slopes of mountains. Slopes are 8 to 30 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Haploxerolls

Typical pedon: Gando very gravelly loam, 15 to 30 percent slopes, from adjoining Elko County, Central Part soil survey. (Colors are for dry soil unless otherwise noted.) The surface is covered with approximately 70 percent pebbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak very thin platy structure; soft, very friable, slightly sticky and nonplastic; common very fine roots; common very fine interstitial pores; 40 percent pebbles; mildly alkaline (pH 7.6); clear wavy boundary. (2 to 7 inches thick)
A2--2 to 9 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and few fine tubular pores; 45 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary. (4 to 8 inches thick)
Bk--9 to 17 inches; pale brown (10YR 6/3) extremely gravelly loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few fine and very fine roots; few very fine tubular pores; common thin lime pendants on pebbles; 60 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary. (4 to 10 inches thick)
R--17 inches; very fractured tuffaceous sandstone with lime pendants along rock surfaces.

Type location: Elko County, Nevada; approximately 8 miles northeast of Elko; about 1,000 feet south and 1,900 feet west of the northeast corner of section 26, T. 35 N., R. 56 E.; 40 degrees, 53 minutes, 43 seconds north latitude, 115 degrees, 37 minutes, 44 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter through early summer, dry early July through mid October
Soil temperature: 43 to 46 degrees F.
Mollic epipedon thickness: 7 to 14 inches.
Depth to bedrock: 10 to 20 inches.
Depth to carbonates: 7 to 14 inches.
Reaction: Mildly or moderately alkaline, normally increasing with depth.
Control section:
Clay content--10 to 18 percent.
Rock fragments--50 to 70 percent, mainly pebbles.

A horizons:
Value--4 or 5 dry, 3 or 4 moist.
Chroma--2 or 3.
Consistence--Soft or slightly hard dry, slightly sticky to sticky and nonplastic to plastic moist.

Bk horizon:
Value--5 or 6 dry, 3 througn 5 moist.
Chroma--3 or 4.
Structure--Subangular blocky, granular or is massive.
Consistence--Soft or slightly hard dry, slightly sticky to sticky and slightly plastic to plastic.
Texture--Extremely gravelly loam, extremely gravelly sandy loam or very gravelly loam.
Rock fragments--50 to 70 percent, mainly pebbles with up to 20 percent cobbles.
Carbonates--Slightly effervescent to strongly effervescent.

Gochea Series

The Gochea series consists of very deep, well drained soils that formed in alluvium from mixed rock sources. The Gochea soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Fine-loamy, mixed, frigid Durargidic Argixerolls

Typical pedon: Gochea gravelly loam, 2 to 4 percent slopes, is located in an area of map unit 150. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic;

many very fine roots; common very fine tubular pores; 20 percent pebbles; neutral (pH 7.0); clear smooth boundary. (2 to 5 inches thick)

A2--2 to 9 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 15 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (2 to 8 inches thick)

Bt1--9 to 15 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; hard, friable sticky and plastic; common very fine roots; common very fine tubular pores; few thin clay films lining pores; 25 percent pebbles; mildly alkaline (pH 7.4); abrupt smooth boundary. (4 to 9 inches thick)

Bt2--15 to 25 inches; brown (10YR 5/3) gravelly clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; few very fine roots; few very fine tubular pores; few thin clay films lining pores; 30 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (5 to 15 inches)

Bq1--25 to 30 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 40 percent discontinuous weakly silica cemented lenses; 25 percent pebbles, 5 percent cobbles; mildly alkaline (pH 7.4); clear smooth boundary. (5 to 28 inches thick)

2Bq2--30 to 46 inches; grayish brown (10YR 5/2) extremely gravelly sand, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; 50 percent weak discontinuous silica cementation; 20 percent durinodes; 75 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (12 to 28 inches thick)

2Bq3--46 to 60 inches; grayish brown (10YR 5/2) extremely gravelly sand, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; 80 percent weak discontinuous silica cementation; 65 percent pebbles; mildly alkaline (pH 7.4).

Type location: Elko County, Nevada; approximately 6 miles east of Tuscarora; about 1,000 feet north of the southeast corner of section 27, T. 40 N., R. 52 E.; 41 degrees, 19 minutes, 45 seconds north latitude, 116 degrees, 6 minutes, 10 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist winter and spring, dry mid June through October

Soil temperature: 43 to 47 degrees F.

Mollic epipedon thickness: 10 to 15 inches which commonly includes the upper part of the argillic horizon.

Depth to Bq horizons: 18 to 25 inches.

Other features: 2Bk horizons are in some pedons.

Control section:
Clay content averages 25 to 35 percent.
Rock fragment--5 to 35 percent, mainly pebbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

Bt horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Clay loam or sandy clay loam.
Clay content--25 to 35 percent.
Rock fragments--5 to 35 percent, mainly pebbles.
Structure--Subangular or angular blocky.
Reaction--Neutral or mildly alkaline.

Bq horizons:
Value--5 through 7 dry, 3 through 5 moist.
Chroma--2 through 4.
Texture--Sandy loam or loam.
Structure--Subangular blocky or massive.
Rock fragments--0 to 30 percent, mainly pebbles and cobbles.
Consistence--Slightly hard or hard; dry; friable or firm, moist.
Silica cementation--20 to 80 percent durinodes or has up to 50 percent weak discontinuous cementation.
Reaction--Mildly alkaline to strongly alkaline.

2Bq horizons:
Value--4 or 5 moist.
Texture--Very gravelly or extremely gravelly sand.
Clay content--2 to 8 percent.
Rock fragments--50 to 75 percent, mainly pebbles.
Consistence--Slightly hard or hard, dry; very friable through firm, moist. Layers with secondary silica are continuously brittle in some pedons.
Silica cementation--Up to 80 percent weak discontinuous cementation.
Secondary carbonates--None to many lime coats on rock fragments.
Effervescence--None to slight.

Graley Series

The Graley series consists of shallow, well drained soils that formed in residuum from mixed rock sources. Graley soils are on side slopes of mountains and hills. Slopes are 4 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Graley stony loam, 4 to 15 percent slopes, is located in an area of map unit 1621. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent pebbles, 5 percent cobbles and 2 percent stones.

A1--0 to 7 inches; grayish brown (10YR 5/2) stony loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 5 percent pebbles, 5 percent cobbles, 2 percent stones; mildly alkaline (pH 7.6); clear smooth boundary. (1 to 7 inches thick)
A2--7 to 12 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine tubular pores; 15 percent pebbles, 5 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary. (2 to 8 inches thick)
Bt--12 to 17 inches; brown (7.5YR 5/4) very gravelly clay loam, dark brown (7.5YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; common very fine roots; common very fine tubular pores; continuous thin clay films on faces of peds and lining pores; 40 percent pebbles; mildly alkaline (pH 7.8); abrupt smooth boundary. (5 to 10 inches thick)
R--17 inches; consolidated bedrock.

Type location: Elko County, Nevada; approximately 7 miles northeast of Midas; about 1,800 feet west and 3,400 feet north of the southeast corner of section 24, T. 39 N., R. 46 E.; 41 degrees, 19 minutes, 55 seconds north latitude, 116 degrees, 43 minutes, 30 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist; moist in winter and spring, dry mid July through late October
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 7 to 12 inches, does not include the argillic horizon.
Depth to bedrock: 14 to 20 inches.
Reaction: Neutral or mildly alkaline.

Control section:
Clay content--35 to 50 percent.
Rock fragments--35 to 60 percent, mainly pebbles.

A horizons:
Value--4 or 5 dry.
Chroma--2 or 3.

Bt horizon:
Hue--7.5YR or 10YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Texture--Very gravelly clay loam, or very gravelly clay.
Structure--Angular or subangular blocky.
Consistence--Very hard or hard, dry, sticky or very sticky and plastic or very plastic, wet.

Gumble Series

The Gumble series consists of shallow, well drained soils that formed in residuum from tuff. Gumble soils are on fan piedmont remnants and hill side slopes. Slopes are 4 to 50 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Xerollic Haplargids

Typical pedon: Gumble very gravelly sandy loam, 2 to 8 percent slopes, is located in an area of map unit 1853. (Colors are for dry soils unless otherwise noted.) The surface is partially covered with 30 percent pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and common fine interstitial pores; 35 percent pebbles; neutral (pH 7.2); clear wavy boundary. (2 to 4 inches thick)
A2--2 to 4 inches; light gray (10YR 7/2) gravelly loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure; slightly hard, friable, slightly sticky and plastic; many very fine and common fine roots; many very fine interstitial and few fine tubular pores; 25 percent pebbles; neutral (pH 7.0); abrupt wavy boundary. (2 to 6 inches thick)
Bt1--4 to 9 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; strong medium prismatic structure parting to strong medium angular blocky; very hard, very firm, very sticky and very plastic; common very fine roots; few very fine interstitial pores; continuous distinct stress surfaces on faces of peds; 5 percent pebbles; mildly alkaline (pH 7.4); clear wavy boundary. (5 to 7 inches thick)

Bt2--9 to 13 inches; brown (10YR 5/3) clay, brown (10YR 4/3) moist; moderate medium prismatic parting to strong medium angular blocky; very hard, very firm, very sticky and very plastic; common very fine exped roots; common very fine interstitial pores; many moderately thick clay films on faces of peds and lining pores; 5 percent pebbles; mildly alkaline (pH 7.5); clear wavy boundary. (2 to 6 inches thick)
Btk--13 to 18 inches; pale brown (10YR 6/3) silty clay, brown (10YR 4/3) moist; weak medium prismatic structure; very hard, firm, very sticky and very plastic; few very fine roots; common very fine interstitial and few fine tubular pores; few moderately thick clay films on faces of peds; common fine irregularly shaped lime filaments; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); clear wavy boundary. (0 to 3 inches thick)
Cr--18 to 24 inches; pale brown (10YR 6/3) soft siltstone, dark brown (10YR 4/3) moist; few fine prominent dark yellowish brown mottles.

Type location: Elko County, Nevada; approximately 5 miles south of Wilson Reservoir; about 2,640 feet north and 530 feet east of the southwest corner of section 28, T. 43 N., R. 60 E.; 41 degrees, 35 minutes, 45 seconds north latitude, 116 degrees, 22 minutes, 30 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring
Soil temperature: 47 to 50 degrees F.
Solum thickness: 14 to 20 inches.
Depth to paralithic contact: 14 to 20 inches.
Control section:
Clay content 40 to 60 percent.
Rock fragments--5 to 35 percent, mostly pebbles with up to 10 percent cobbles in some pedons.
Reaction--Neutral to mildly alkaline in the upper solum and mildly to moderately alkaline in the lower part.

A horizons:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 or 3.

Bt1 and Bt2 horizons:
Value 5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Texture--Clay or gravelly clay.
Sand fraction--More than 15 percent sand coarser than very fine sand.

Btk horizons:
Value--4 or 5 moist.
Chroma--3 or 4.
Texture--Silty clay loam or silty clay.
Rock fragments--0 to 5 percent.

Hackwood Series

The Hackwood series consists of very deep, moderately well drained soils that formed in colluvium derived from volcanic quartzite and conglomerate rocks. Hackwood soils are on side slopes of hills and mountains. Slopes are 4 to 50 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Fine-loamy, mixed Pachic Cryoborolls

Typical pedon: Hackwood silt loam, 4 to 15 percent slopes, located in an area of map unit 1640. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; brown (10YR 4/3) silt loam, black (10YR 2/1) moist; moderate very thin platy structure; soft, friable, slightly sticky and slightly plastic; many coarse and common very fine roots; common very fine tubular pores; 5 percent pebbles; neutral (pH 7.0); clear smooth boundary. (2 to 12 inches thick)
A2--4 to 12 inches; brown (10YR 5/3) silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, many fine, medium and coarse roots; many very fine tubular pores; 10 percent pebbles; neutral (pH 6.8); clear smooth boundary. (7 to 25 inches thick)
A3--12 to 26 inches; brown (10YR 5/3) loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium, common very fine roots; common very fine tubular pores; 15 percent pebbles; neutral (pH 6.8); abrupt irregular boundary. (0 to 9 inches thick)
A4--26 to 34 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium, common very fine roots; common very fine tubular pores; 15 percent pebbles; neutral (pH 6.8); abrupt irregular boundary. (0 to 9 inches thick)
2C--34 to 60 inches; light gray (10YR 7/2) very gravelly loam, grayish brown (10YR 5/2) moist; massive; hard, friable, slightly sticky and slightly plastic; few fine roots; common fine tubular pores; 60 percent pebbles; silt coatings lining pores; neutral (pH 6.8).

Type location: Elko County, Nevada, in an unsectionized area, approximately 7 miles west of Midas; 41 degrees, 15 minutes, 07 seconds north latitude, 116 degrees, 54 minutes, 53 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist late fall through mid-summer, dry late summer through mid fall. Additional soil moisture supplied by lateral water movement in lower part of the control section or substratum
Average soil temperature: 38 to 44 degrees F.
Average summer soil temperature: 43 to 47 degrees F.
Mollic epipedon thickness: 16 to 35 inches.
Depth to the 2C horizons: 30 to 49 inches.
Reaction: Neutral or slightly acid, decreasing with depth.
Control section:
Clay content--Averages 18 to 30 percent.
Rock fragments--Averages 15 to 35 percent, mainly pebbles.
Texture--silt loam, gravelly silt loam and gravelly loam, lower part commonly very gravelly loam to very gravelly silty clay loam.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 through 3 dry, 1 or 2 moist.

2C horizon:
Hue--2.5Y or 10YR.
Value--5 through 7 dry, 4 or 5 moist.
Chroma--2 or 3.
Texture--Very gravelly loam to very gravelly silty clay loam.
Structure--Subangular blocky or is massive.
Consistence--Slightly hard or hard, dry; very friable or friable, moist; slightly sticky or sticky and slightly plastic or plastic, wet.
Other features--Lower C horizons: Pores lined with very thin silt coats or uncoated sand grains. Some pedons have few to common fine distinct 10YR 5/6 dry and 4/4 moist mottles. Some pedons have few manganese stains coating pebbles and lining pores.

Handy Series

The Handy series consists of very deep, well drained soils that formed in alluvium and colluvium from igneous rocks with some influence from limestone and dolomite. Handy soils are on hills, fan piedmonts and mountain valley fans. Slopes are 2 to 50 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Xerollic Haplargids

Typical pedon: Handy loam, 15 to 30 percent slopes, located in an area of map unit 3000. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common fine and very fine roots; few fine vesicular pores; 10 percent pebbles; neutral (pH 7.2); clear smooth boundary. (2 to 6 inches thick)
A2--2 to 5 inches; brown (10YR 5/3) loam, dark brown (10YR 4/3) moist; weak medium platy structure; soft very friable, slightly sticky and slightly plastic; common fine and very fine roots; few fine tubular pores; 5 percent pebbles; neutral (pH 7.2); clear smooth boundary. (0 to 4 inches thick)
BA--5 to 10 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, friable, sticky and plastic; few fine and very fine roots; few fine tubular pores; 10 percent pebbles; neutral (pH 7.2); clear smooth boundary. (2 to 8 inches thick)
Bt--10 to 22 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 4/4) moist; moderate coarse prismatic structure parting to strong medium and fine angular blocky; extremely hard, extremely firm, very sticky and very plastic; few fine roots; few fine tubular pores; many moderately thick clay films on faces of peds; 10 percent pebbles; neutral (pH 7.2); clear smooth boundary. (4 to 14 inches thick)
Btk--22 to 28 inches; light yellowish brown (10YR 6/4) clay, dark yellowish brown (10YR4/4) moist; moderate medium angular blocky structure; hard, firm, sticky and plastic; few fine roots; few fine tubular pores; common moderately thick clay films on faces of peds; 10 percent pebbles; strongly effervescent in few thin filaments of lime, noneffervescent matrix; mildly alkaline (pH 7.4); clear smooth boundary. (0 to 15 inches thick)
Bk1--28 to 40 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; hard, firm, sticky and plastic; few fine tubular pores; 15 percent pebbles; lime is disseminated, strongly effervescent; moderately alkaline (pH 7.6); clear smooth boundary. (0 to 12 inches thick)
Bk2--40 to 47 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 4/3) moist; massive; hard, firm, slightly sticky and plastic; few fine tubular pores; 15 percent pebbles; lime is disseminated, strongly effervescent; moderately alkaline (pH 7.6); clear smooth boundary. (5 to 9 inches thick)
Bk3--47 to 60 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 4/3) moist; massive; hard, firm, slightly sticky and plastic; few fine tubular pores; 15 percent pebbles; lime is disseminated, strongly effervescent; moderately alkaline (pH 7.6).

Type location: Elko County, Nevada; approximately 18 miles north of Midas; 41 degrees, 28 minutes, 58 seconds north latitude, 116 degrees, 39 minutes, 25 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry June through October
Soil temperature: 45 to 47 degrees F.
Depth to lime: 12 to 23 inches.
Depth to Bk horizon: 20 to 40 inches.
Control section:
Clay content--40 to 50 percent.
Rock fragments--0 to 30 percent, mainly pebbles.

A horizons:
Value--4 to 6 dry (greater than 5.5 when the surface 7 inches are mixed), 3 or 4 moist.
Chroma--2 or 3.

BA horizon:
Value--5 or 6 dry
Texture--Loam or gravelly clay loam.
Structure--Granular or subangular blocky.

Bt and Btk horizons:
Hue--10YR or 7.5YR, with 5YR in some pedons.
Value--5 or 6 dry, 4 or 5 moist.
Chroma--2 to 4.
Texture--Clay or gravelly clay.
Structure--Moderate or strong angular blocky or prismatic.
Reaction--Neutral through moderately alkaline, commonly increasing with depth.

Bk horizons:
Texture--Stratified gravelly loam to very gravelly loamy sand.
Rock fragments--15 to 60 percent, mainly pebbles.
Other features--Slightly to violently effervescent.
Reaction--Moderately alkaline to strongly alkaline.

Hapgood Series

The Hapgood series consists of deep and very deep, well drained soils that formed in alluvium and colluvium from mixed rocks. Hapgood soils are on hills and mountain side slopes. Slopes are 15 to 75 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed Pachic Cryoborolls

Typical pedon: Hapgood very gravelly loam, 30 to 50 percent slopes, is located in an area of map unit 570. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine interstitial pores; 40 percent pebbles; slightly acid (pH 6.4); clear wavy boundary. (0 to 7 inches thick)
A2--3 to 13 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, few medium and coarse roots; many very fine tubular pores; 40 percent pebbles; neutral (pH 6.2); gradual wavy boundary. (4 to 10 inches thick)
A3--13 to 21 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; many very fine tubular pores; 40 percent pebbles; neutral (6.6); clear wavy boundary. (6 to 20 inches thick)
C1--21 to 41 inches; pale brown (10YR 6/3) very gravelly loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 45 percent pebbles; slightly acid (pH 6.2); clear smooth boundary. (10 to 25 inches thick)
C2--41 to 55 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; few very fine roots; few very fine tubular pores; 30 percent pebbles, 10 percent cobbles; slightly acid (pH 6.4).
R--55 inches; hard quartzite.

Type location: Elko County, Nevada; approximately 7 miles west of Tuscarora, about 800 feet east and 1,600 feet north of the southeast corner of section 02, T 39 N., R. 50 E.; 41 degrees, 17 minutes, 55 seconds north latitude, 116 degrees, 20 minutes, 10 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry late July through early October
Soil temperature: 38 to 47 degrees F.
Average summer soil temperature: 55 to 59 degrees F.
Mollic epipedon thickness: 16 to 60 inches.
Depth to bedrock: 40 to more than 80 inches.
Reaction: Slightly acid or neutral.
Control section:
Clay content--18 to 27 percent.
Rock fragments--35 to 50 percent, dominantly pebbles.

A horizons:
Hue--10YR or 7.5YR
Value--2 through 5 dry, 2 or 3 moist.

Chroma--1 through 3 in most pedons, chroma of 1 is common only in A1 horizon and chroma of 3 is common only in A3 horizon or below.
Base saturation--50 to 75 percent in upper part.

C horizons:
Hue--10YR or 7.5YR.
Value--4 through 7 dry, 3 through 5 moist.
Chroma--2 through 6.
Texture--Predominantly loam, but strata of fine sandy loam, sandy loam, silt loam or clay loam are permissible.
Consistence--Very friable or friable, moist.
Other features--Some pedons lack C horizons where the mollic epipedon rests on the bedrock at depths less than 48 inches.

Hatpeak Series

The Hatpeak series consists of moderately deep, well drained soils that formed in alluvium from basalt, rhyolite and tuff with a small component of loess. Hatpeak soils are on fan piedmont remnants and on plateaus. Slopes are 2 to 15 percent. Mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Typic Durixerolls

Typical pedon: Hatpeak loam, 2 to 4 percent slopes, located in an area of map unit 3715. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure parting to moderate very fine subangular blocky; soft, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral (pH 7.2); abrupt smooth boundary. (3 to 4 inches thick)
A2--3 to 10 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate very fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; neutral (pH 7.2); clear smooth boundary. (3 to 7 inches thick)
Bt1--10 to 12 inches; pale brown (10YR 6/3) silty clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few fine and very fine roots; few thin clay films on faces of peds; 5 percent cobbles; mildly alkaline (pH 7.4); clear smooth boundary. (2 to 9 inches thick)
Bt2--12 to 19 inches; pale brown (10YR 6/3) silty clay, brown (10YR 4/3) moist; strong fine angular blocky structure; very hard, very firm, very sticky and very plastic; few fine and very fine roots; few fine and very fine tubular pores; common moderately thick clay films on faces of peds; 5 percent cobbles; mildly alkaline (pH 7.4); clear smooth boundary. (5 to 7 inches thick)
Bt3--19 to 30 inches; yellowish brown (10YR 5/4) silty clay, dark yellowish brown (10YR 3/4) moist; strong medium prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine roots; many moderately thick clay films on faces of peds; mildly alkaline (pH 7.4); gradual wavy boundary. (4 to 11 inches thick)
Bqkm1--30 to 38 inches; light yellowish brown (10YR 6/4) fractured indurated duripan, dark yellowish brown (10YR 4/4) moist; strong thick and very thick platy structure; very hard, very firm, strongly effervescent; strongly alkaline (pH 9.0); gradual wavy boundary. (0 to 8 inches thick)
Bqkm2--38 to 60 inches; white (10YR 8/2) continuous indurated duripan, light gray (10YR 7/2) moist; massive; extremely hard, extremely firm; opal laminae 1/8 to 1/4 inch thick; strongly effervescent.

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, approximately 20 miles north of Wilson Reservoir; 41 degrees, 59 minutes, 25 seconds north latitude, 116 degrees, 27 minutes, 05 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from mid July through October
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 8 to 15 inches.
*Depth to duripan:*20 to 34 inches.
*Depth to bedrock:*40 to over 60 inches.
Control section:
Clay content--35 to 50 percent.
Rock fragments--Up to 15 percent, mainly cobbles.

A horizons:
Value--2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Value--3 or 4 moist.
Texture--Silty clay loam, silty clay, clay loam and clay.
Structure--Prismatic, angular or subangular blocky.
Reaction--Neutral or mildly alkaline.

Bqkm horizons:
Value--4 through 7 moist.
Chroma--2 through 4.
Consistence--Very hard or extremely hard, dry.
Other features--Some pedons have a strongly silica cemented duripan below the indurated duripan.

Heechee Series

The Heechee series consists of very deep, well drained soils that formed in alluvium from mixed rock sources. They are on fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 14 inches; the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Typic Argixerolls

Typical pedon: Heechee cobbly loam, 4 to 15 percent slopes is in an area of map unit 1261. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 15 percent pebbles and 10 percent cobbles.

A1--0 to 3 inches; grayish brown (10YR 5/2) cobbly loam, very dark grayish brown (10YR 3/2) moist; weak coarse platy structure parting to moderate medium subangular blockly; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many fine, common very fine tubular pores; 10 percent pebbles and 10 percent cobbles; neutral (pH 7.0); abrupt smooth boundary. (2 to 5 inches thick)

A2--3 to 7 inches; dark grayish brown (10YR 4/2) cobbly loam, very dark grayish brown (10YR 3/2) moist; strong coarse subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine, few medium tubular pores; 10 percent pebbles and 5 percent cobbles; neutral (pH 7.0); abrupt smooth boundary. (4 to 12 inches)

2Bt1--7 to 14 inches; brown (10YR 5/3) very cobbly clay loam, dark brown (10YR 3/3) moist; weak coarse prismatic structure parting to moderate medium angular blocky; hard, friable, sticky and plastic; few very fine through medium roots; common very fine, few fine tubular pores; few thin clay films lining pores; 20 percent pebbles and 15 percent cobbles; neutral (pH 7.0); clear smooth boundary. (5 to 12 inches thick)

2Bt2--14 to 27 inches; brown (7.5YR 4/4) very cobbly clay loam, dark brown (7.5YR 3/4) moist; moderate medium angular blocky structure; hard, friable, sticky and plastic; few very fine through medium roots; common very fine, few fine and medium tubular pores; few thin clay films lining pores; 20 percent pebbles and 15 percent cobbles; neutral (pH 6.8); clear smooth boundary. (10 to 18 inches thick)

2C--27 to 61 inches; brown (7.5YR 5/4) extremely cobbly sandy loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine through medium roots; few very fine tubular pores; 25 percent pebbles, 35 percent cobbles, 5 percent stones; neutral (pH 6.8)

Type location: Elko County, Nevada; approximately 12 miles northeast of Tuscarora; about 2,300 feet east and 800 feet north of the southwest corner of section 13, T. 41 N., R. 52 E.; 41 degrees, 26 minutes, 45 seconds north latitude, 116 degrees, 4 minutes, 35 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist; moist in winter and spring, dry mid July through early October
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 12 to 20 inches, includes the upper part of the argillic horizon.
Depth to base of argillic horizons: 27 to 40 inches.
Other features: In some small areas on plateaus, some pedons are recognized with a paralithic contact at 50 to 60 inches.
Control section:
Clay content--25 to 35 percent.
Rock fragments--35 to 60 percent; 20 to 45 percent pebbles, 15 to 25 percent cobbles, 0 to 10 percent stones.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 through 3.

Bt horizons:
Hue--7.5YR or 10 YR.
Value--4 through 6 dry, 3 through 5 moist.
Chroma--2 through 4.
Texture--Very cobbly clay loam, very gravelly sandy clay loam or very cobbly loam.
Structure--Prismatic or angular blocky.

C horizon:
Hue--7.5YR or 10 YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--4 through 6.
Texture--Extremely cobbly loam, extremely cobbly sandy loam; extremely cobbly coarse sandy loam and coarser textures are common in some pedons below 40 inches.
Rock fragments--60 to 80 percent, mainly cobbles and stones.
Structure--Subangular blocky or is massive.

Humboldt Series

The Humboldt series consists of very deep, poorly drained soils that formed in silty alluvium from mixed rock sources with a component of volcanic ash. Humboldt soils are on flood plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Fluvaquentic Haplaquolls

Typical pedon: Humboldt silty clay loam, located in an area of map unit 280. (Colors are for dry soil unless otherwise noted.)

Ap--0 to 6 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine and fine roots; many very fine and fine tubular pores; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (2 to 12 inches thick)

A--6 to 12 inches; grayish brown (2.5Y 5/2) silty clay loam, very dark grayish brown (2.5Y 3/2) moist; few fine distinct light yellowish brown (10YR 6/4) mottles; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; many very fine and fine roots; many very fine tubular and interstitial pores; strongly effervescent; strongly alkaline (pH 8.7); abrupt wavy boundary. (5 to 9 inches thick)

C--12 to 20 inches; light brownish gray (2.5Y 6/2) silty clay, dark grayish brown (2.5Y 4/2) moist; few fine distinct light yellowish brown (10YR 6/4) mottles; strong fine and medium angular blocky structure; hard, firm, very sticky and very plastic; many very fine and common fine roots; common very fine tubular and interstitial pores; strongly effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary. (0 to 10 inches thick)

Ck1--20 to 30 inches; light gray (2.5Y 7/2) silty clay loam, grayish brown (2.5Y 5/2) moist; moderate medium angular blocky structure; hard, firm, sticky and plastic; common very fine and few medium roots; common very fine tubular and interstitial pores; few fine filaments and threads of lime; strongly effervescent; strongly alkaline (pH 9.0); abrupt wavy boundary. (2 to 20 inches thick)

Ck2--30 to 52 inches; light gray (2.5Y 7/2) silty clay, grayish brown (2.5Y 5/2) moist, thin lenses of dark silt loam are common; massive; hard, firm, very sticky and very plastic; common very fine and few medium roots; common very fine tubular and interstitial pores; few fine soft masses of lime; strongly effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary. (15 to 30 inches)

Ab--52 to 60 inches; grayish brown (2.5Y 5/2) crudely stratified silt loam, very dark grayish brown (2.5Y 3/2) moist; massive; slightly hard, friable, slightly sticky and very plastic; few very fine roots; many very fine interstitial pores; strongly alkaline (pH 8.8).

Type location: Elko County, Nevada; approximately 14 miles southwest of Midas; about 150 feet east and 600 feet south of the northwest corner of section 3, T. 37 N., R. 44 E.; 41 degrees, 7 minutes, 10 seconds north latitude, 117 degrees, 00 minutes, 31 seconds west longitude.

Range in Characteristics

Soil moisture: Usually saturated for one month or more during most years unless drained
Soil temperature: 50 to 54 degrees F.
Mollic epipedon thickness: 10 to 24 inches.
Reaction: Mildly alkaline to very strongly alkaline, the higher values being only in sodium affected areas.
Carbonates: Slightly effervescent to strongly effervescent throughout; some strata below 20 inches in some pedons are noneffervescent. The calcium carbonate equivalent is less than 15 percent.
Iron mottles: Distinct or prominent iron mottles are on the lower part of the mollic epipedon or immediately below; or if no mottles, matrix chroma is 1 or less.
Other features: Some pedons have stratified silt loam to fine sand below 30 inches. Buried A horizons common.
Control section:
Clay content--35 to 45 percent.
Texture--Stratified silty clay loam to clay with minor substrata of silt loam in some pedons.

A horizons:
Hue--10YR or 2.5Y or N.
Value--4 or 5 dry, 6 on surface of some pedons due to deposition, 2 or 3 moist.
Chroma--0 through 2.

C and Ck horizons:
Hue--10YR to 5GY or N.
Value--6 or 7 dry, 3 through 5 moist. Volcanic ash layers are 8 dry, 6 moist.
Chroma--0 through 3.
Structure--Moderate or strong prismatic or blocky in the upper part; weak medium and coarse subangular blocky structure in the lower part, or it is massive.
Carbonates--Few to many very fine to medium lime concretions or soft segregations in some subhorizons.

Hunnton Series

The Hunnton series consists of moderately deep over a duripan, well drained soils that formed in alluvium from mixed rock sources with a component of loess and volcanic ash. The Hunnton soils are on summits, side slopes and foot slopes of fan piedmont remnants, partial ballenas and plateaus. Slopes are 1 to 30 percent. The mean annual precipitation is about 9 inches and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Xerollic Durargids

Typical pedon: Hunnton silt loam, 2 to 8 percent slopes, is located in an area of map unit 1229. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 20 percent pebbles.

A--0 to 3 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate very thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine, and few medium roots; many very fine and fine interstitial pores; 5 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (2 to 6 inches thick)

Bt1--3 to 6 inches; light brownish gray (10YR 6/2) silty clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, very sticky and very plastic; common very fine roots; common very fine tubular pores; 5 percent pebbles; few moderately thick clay films; moderately alkaline (pH 8.0); clear smooth boundary. (3 to 7 inches thick)

Bt2--6 to 13 inches; light yellowish brown (10YR 6/4) clay, brown (10YR 4/3) moist; moderate fine prismatic structure parting to strong medium angular blocky; hard, firm, very sticky and very plastic; common very fine roots; few very fine tubular pores; 5 percent pebbles; many thick clay films on faces of peds and lining pores; moderately alkaline (pH 8.2); clear smooth boundary. (5 to 10 inches thick)

Bt3--13 to 23 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 4/4) moist; moderate very coarse angular blocky structure; hard, firm, sticky and plastic; few very fine roots; few very fine tubular pores; many stress surfaces; few thin and moderately thick clay films lining pores and bridging sand grains; 5 percent pebbles; moderately alkaline (pH 8.2); abrupt wavy boundary. (0 to 12 inches thick)

Btqk--23 to 36 inches; pale brown (10YR 6/3) clay, dark brown (10YR 3/3) moist; moderate coarse angular blocky structure; hard, firm, sticky and plastic; few very fine roots; few very fine tubular pores; few moderately thick clay films lining pores and on face of peds; 15 percent durinodes in a friable matrix; common silica coats on peds; common fine, irregularly shaped soft masses of lime; slightly effervescent; 5 percent pebbles; moderately alkaline (pH 8.2); abrupt wavy boundary. (0 to 15 inches thick)

Bqkm--36 to 44 inches; very pale brown (10YR 8/3) indurated duripan pale brown (10YR 6/3) moist; continuous laminar capping 2 to 4 millimeter thick; strongly effervescent.

Type location: Elko County, Nevada; approximately 1 mile South of Wilson Reservoir; about 600 feet south and 6,300 feet west of the northwest corner of section 7, T. 43 N., R. 50 E.; 41 degrees, 32 minutes, 45 seconds north latitude, 116 degrees, 19 minutes, 25 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry, moist mid fall through spring, dry from summer through early fall
Soil temperature: 47 to 52 degrees F.
Depth to duripan: 20 to 40 inches.
Depth to lime: 19 to 32 inches.
Other features: Some pedons have a 4 to 11 inch thick Bq horizon above the duripan that is brittle or discontinuous weakly silica cemented.
Control section:
Clay content--40 to 55 percent
Rock fragments--Average 5 to 25 percent

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Neutral through moderately alkaline.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 through 7 dry, 3 through 5 moist.
Chroma--2 through 4.
Texture--Clay or gravelly clay.
Clay content--40 to 55 percent.
Rock fragments--Up to 25 percent, mainly pebbles.
Structure--Weak or moderate, very fine to very coarse subangular or angular blocky or prismatic.
Consistence--Slightly hard or very hard dry; sticky or very sticky and plastic or very plastic, wet.
Reaction--Neutral through moderately alkaline.
Effervescence--Noneffervescent in the upper subhorizons, noneffervescent to strongly effervescent in the lower subhorizons.
Other features--Some pedons have a 4 to 7 inch thick loam, silty clay loam or clay loam Bt1 horizon with few thin clay films. Some pedons have lime masses and silica concretions in the lower portion of the horizon.

Bqkm horizon:
Value--7 or 8 dry, 4 through 7 moist.
Chroma--2 or 3 dry, 3 or 4 moist.
Structure--Massive, or has weak medium to very thick platy structure.
Other features--Some pedons have strongly silica cemented horizons with 40 to 60 percent pebbles below the indurated duripan.

Kelk Series

The Kelk series consists of very deep, well drained soils that formed in loess with some influence from volcanic ash and mixed silty alluvium derived mainly

from mixed rock sources. The Kelk soils are on inset fans, inset fan remnants, fan piedmont remnants, partial ballenas, stream terraces, drainage channels, alluvial plains, axial stream floodplains and fan skirts. Slopes are 0 to 15 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is 48 degrees F.

Taxonomic class: Fine-silty, mixed, mesic Durixerollic Camborthids

Typical pedon: Kelk very fine sandy loam, 0 to 2 percent slopes, located in an area of map unit 2545. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 3/3) moist; weak thin platy structure; slightly hard, very friable, sticky and plastic; few very fine roots; few coarse and medium, many fine and very fine tubular pores; neutral (pH 6.8); abrupt smooth boundary. (2 to 4 inches thick)

A2--2 to 4 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 3/3) moist; moderate thin platy structure; slightly hard, very friable, sticky and plastic; few very fine roots; few very fine tubular pores; neutral (pH 6.8); abrupt smooth boundary. (0 to 4 inches thick)

Bw--4 to 13 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; few fine and very fine roots; few fine and very fine tubular pores; neutral (pH 7.2); clear smooth boundary. (6 to 28 inches thick)

Bq--13 to 25 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium angular blocky structure; hard, firm and brittle, sticky and plastic; few fine and very fine roots; few fine and very fine tubular pores; continuous brittle matrix; strongly effervescent; mildly alkaline (pH 7.4); gradual wavy boundary. (0 to 15 inches thick)

Bqk1--25 to 36 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium angular blocky structure; hard, firm and brittle, sticky and plastic; few very fine roots; few very fine tubular pores; continuous brittle matrix; mildly alkaline (pH 7.4); gradual wavy boundary. (10 to 34 inches thick)

Bqk2--36 to 48 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; massive; hard, friable, sticky and plastic; few very fine roots; few very fine tubular pores; 30 percent brittle durinodes; strongly effervescent; lime is in few fine seams and filaments; moderately alkaline (pH 8.4); gradual wavy boundary. (0 to 13 inches thick)

Bk--48 to 60 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; massive; hard, firm, sticky and plastic; common very fine tubular pores; violently effervescent; lime is in few fine seams and filaments; strongly alkaline (pH 8.6)

Type location: Elko County, Nevada; in an unsectionized area, about 30 miles north of Midas; 41 degrees, 40 minutes, 23 seconds north latitude, 116 degrees, 53 minutes, 55 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in the winter and spring, dry from early June through October
Soil temperature: 47 to 52 degrees F.
Depth to base of Bw horizons: 10 to 35 inches.
Depth to continuous brittle matrix: 13 to 35 inches.
Depth to carbonates: 12 to 35 inches.
Other features: These soils are normally slightly or moderately salt affected below 24 to 48 inches.
Control section:
Clay content--18 to 27 percent.

A horizons:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Effervescence--Noneffervescent or slightly effervescent.

Bw horizons:
Value--6 or 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Structure--Blocky or prismatic or it is massive.
Consistence--Very friable or friable, moist; sticky or slightly plastic or plastic, wet.
Reaction--Neutral to moderately alkaline. It is strongly alkaline when affected by salts and sodium.
Effervescence--Noneffervescent or slightly effervescent.
Other features--There are 10 to 20 percent weak durinodes near the lower horizon boundary in some pedons.

Bq and Bqk horizons:
Value--6 through 8 dry, and 3 through 6 moist.
Chroma--2 through 4.
Texture--Dominantly silt loam with thin strata of silty clay loam common in some pedons below 30 inches.
Structure--Moderate fine and medium subangular blocky or massive.
Consistence--Very friable to firm and brittle, moist; slightly sticky or sticky and slightly plastic or plastic, wet.
Reaction--Neutral through strongly alkaline, increasing with depth.
Effervescence--Slightly effervescent through violently effervescent in the Bqk horizon.

Cementation--Subhorizons without continuously brittle matrix contain 30 to 90 percent durinodes or are 20 to 50 percent discontinuous weakly silica cemented.
Other features: Some pedons have lenses of 5 to 15 percent pebbles in some Bqk subhorizon or extremely gravelly substrata below 42 inches. Some pedons have silty clay loam 2Bk horizons below 39 inches.

Kleckner Series

The Kleckner series consists of very deep, well drained soils that formed in alluvium from mixed rock sources and in some areas colluvium from welded tuff or rhyolite. Kleckner soils are on fan piedmont remnants and mountain valley fan remnants and hills. Slopes are 2 to 50 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Aridic Argixerolls

Typical pedon: Kleckner silt loam, 2 to 8 percent slopes, is located in map unit 141. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 10 percent pebbles.

A1--0 to 2 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; moderate very fine platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine vesicular pores; 15 percent pebbles; slightly acid (pH 6.2); clear smooth boundary. (2 to 4 inches thick)
A2--2 to 8 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; moderate very fine platy structure; soft, very friable, slightly sticky and plastic; common very fine roots; few very fine tubular pores; 20 percent pebbles; slightly acid (pH 6.4); clear smooth boundary. (4 to 8 inches thick)
Bt1--8 to 13 inches; brown (10YR 5/3) very gravelly clay loam, dark bown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine roots; few very fine and fine tubular pores; few thin clay films lining pores; 30 percent pebbles, 10 percent cobbles; slightly acid (pH 6.4) clear smooth boundary. (2 to 5 inches thick)
Bt2--13 to 20 inches; light yellowish brown (10YR 6/4) very gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, very sticky and very plastic; common very fine and few medium roots; few very fine and fine tubular pores; 30 percent pebbles, 10 percent cobbles; neutral (pH 6.6); clear smooth boundary. (10 to 20 inches thick)
Bt3--20 to 42 inches; light yellowish brown (10YR 6/4) very cobbly clay, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, very sticky and very plastic; common very fine and fine roots; few very fine tubular pores; many moderately thick clay films on faces of peds and lining pores; 30 percent pebbles, 20 percent cobbles; neutral (pH 7.0); gradual smooth boundary. (10 to 25 inches thick)
Bq--42 to 60 inches; light yellowish brown (10YR 6/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common cobbles, few fine silica coats on pebbles; neutral (pH 7.0)

Type location: Elko County, Nevada; approximately 5 miles southeast of Midas; about 1,600 feet west and 1,200 feet south of the northeast corner of section 3, T. 38 N., R. 45 E.; 41 degrees, 12 minutes, 12 seconds north latitude, 116 degrees, 52 minutes, 42 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry early July through October
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 10 to 16 inches. It includes the upper part of the argillic horizon.
Depth to Bq horizons: 40 to 60 inches.
Control section:
Clay content--35 to 50 percent.
Rock fragments--35 to 60 percent; mainly pebbles or cobbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.
Reaction--Slightly acid to mildly alkaline.

Bt horizons:
Hue--7.5YR or 10YR.
Value--5 through 7 dry, 3 through 5 moist. Darker values are common only in the upper subhorizons.
Chroma--3 through 6.
Texture--Very cobbly clay, very cobbly clay loam, very gravelly clay loam, loam or very gravelly clay in the upper part and gravelly clay loam, very gravelly clay or very cobbly clay in the lower part. Loam is common in some pedons at depths below 35 inches.
Reaction--Neutral or mildly alkaline.

Bq horizon:
Cementation--Contain 20 to 40 percent durinodes or has continuous brittle matrix that is hard and firm.
Reaction--Neutral to moderately alkaline.

Other features--Some pedons have lime in the lower subhorizons. Some pedons lack durinodes or weak silica cementation, but have silica coats or pendents on rock fragments.

Kortty Series

The Kortty series consists of deep, well drained soils that formed in alluvium and loess from mixed sources. Kortty soils are on fan piedmont remnants. Slopes are 0 to 2 percent. Mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Duric Haplargids

Typical pedon: Kortty silt loam, 0 to 2 percent slopes, located in an area of map unit 1156. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; weak coarse platy structure; slightly hard, very friable, nonsticky and nonplastic; few fine roots; few coarse and medium, many fine and very fine vesicular pores; 5 percent pebbles; strongly alkaline (pH 8.8); abrupt wavy boundary. (2 to 4 inches thick)

A2--3 to 6 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate fine platy structure, slightly hard, very friable, slightly sticky and slightly plastic; common fine and few very fine roots; few fine vesicular and tubular pores; 5 percent pebbles; moderately alkaline (ph 8.4); abrupt wavy boundary. (2 to 7 inches thick)

Bt--6 to 12 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine and very fine roots; few fine tubular pores; common thin clay films on faces of peds and lining pores; 5 percent pebbles; strongly alkaline (pH 8.6); abrupt wavy boundary. (5 to 7 inches thick)

Bq--12 to 15 inches; very pale brown (10YR 7/4) loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; hard, firm and brittle, slightly sticky and slightly plastic; few fine and very fine roots; few very fine tubular pores; 5 percent pebbles; continuous brittle matrix, 5 percent brittle durinodes; strongly alkaline (pH 8.8); clear wavy boundary. (0 to 4 inches thick)

Bqk1--15 to 30 inches; very pale brown (10YR 7/4) loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, and brittle; slightly sticky and slightly plastic; few fine and very fine roots; few very fine tubular pores; 5 percent pebbles; continuous brittle matrix, 25 percent brittle durinodes; strongly effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary. (4 to 17 inches thick)

Bqk2--30 to 42 inches; very pale brown (10YR 7/3) gravelly silt loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few fine and very fine roots; 15 percent pebbles; 10 percent brittle durinodes; common fine lime filaments; violently effervescent; moderately alkaline (pH 8.4); gradual wavy boundary. (11 to 14 inches thick)

2Bqk3--42 to 55 inches; very pale brown (10YR 7/3) very gravelly sandy loam, brown (10YR 5/3) moist; massive; hard, firm, nonsticky and nonplastic; few very fine roots; 40 percent pebbles; continuous brittle matrix; common fine lime filaments; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (10 to 20 inches thick)

2Bqkm-55 to 60 inches; white (10YR 8/2) strong silica cemented duripan, light yellowish brown (10YR 6/4) moist; massive; extremely hard, very firm; violently effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, approximately 28 miles west of Josephine Reservoir; 41 degrees, 55 minutes, 40 seconds north latitude, 116 degrees, 58 minutes, 23 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry in summer and autumn
Soil temperature: 47 to 53 degrees F.
Solum thickness and depth to silica cementation: 9 to 18 inches.
Depth to lime: 12 to 22 inches.
Depth to 2Bqk horizons: 32 to 50 inches.
Depth to duripan: 50 to 60 inches.
Control section:
Clay content--25 to 35 percent.
Rock fragments--0 to 15 percent, mainly pebbles.

A horizons:
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 or 3.
Consistence--Very friable or friable, moist.

Bt horizon:
Texture--Loam or clay loam.
Structure--Subangular or angular blocky.
Reaction--Moderately alkaline or strongly alkaline.
Consistence--Slightly hard or hard, dry; slightly sticky or sticky and slightly plastic or plastic wet.

Bq and Bqk horizons:
Value--7 or 8 dry, 5 or 6 moist.
Chroma--2 to 4.
Texture--Loam, gravelly loam, gravelly silt loam or gravelly fine sandy loam.
Rock fragments--5 to 20 percent

Other features--Commonly slightly saline affected at some depth below 30 inches.

2Bqk horizons:
Rock fragments--35 to 50 percent, mainly pebbles.
Consistence--Slightly hard or hard, dry; very friable through firm, moist.
Cementation--20 to 40 percent weakly silica cemented durinodes or has continuous brittle matrix.

Lerrow Series

The Lerrow series consists of moderately deep, well drained soils that formed in residuum and colluvium from welded tuff, andesite, rhyolite, shale, quartzite or chert. Lerrow soils are on hills, mountains and side slopes of fan piedmont remnants with rock core. Slopes are 4 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Aridic Argixerolls

Typical pedon: Lerrow cobbly loam, 15 to 50 percent slopes, is located in an area of the map unit 126. (Colors are for dry soil unless otherwise noted.) The surface is partially covered with 30 percent pebbles.

A1--0 to 3 inches; pale brown (10YR 6/3) cobbly loam, dark brown (10YR 3/3) moist; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few medium, common very fine and fine roots; common fine and medium vesicular pores; 20 percent cobbles, 10 percent pebbles; neutral (pH 7.0); clear smooth boundary. (1 to 3 inches thick)
A2--3 to 9 inches; brown (10YR 5/3) loam; dark brown (10YR 3/3) moist; weak medium platy structure; hard, firm, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; 10 percent pebbles; neutral (pH 7.2); clear smooth boundary. (1 to 7 inches thick)
Bt1--9 to 14 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; weak medium platy structure; hard, firm, sticky and plastic; common very fine and fine roots; few very fine tubular pores; few thin clay films lining pores; 20 percent pebbles, 5 percent cobbles; mildly alkaline (pH 7.4); clear smooth boundary. (4 to 11 inches thick)
Bt2--14 to 19 inches; brown (10YR 5/3) gravelly clay, brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, firm, sticky and plastic; few very fine and fine roots; common very fine and fine tubular pores; common moderately thick clay films lining pores and on faces of peds; 15 percent pebbles, 5 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary. (5 to 11 inches thick)
Bt3--19 to 27 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 4/4) moist; weak medium prismatic structure; hard, firm, sticky and plastic; few very fine and few fine roots; few very fine tubular pores; common thin clay films lining pores and on faces of peds; 5 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.6); abrupt smooth boundary. (0 to 9 inches thick)
2Cr1--27 to 44 inches; brownish yellow (10YR 6/6) weathered tuff bedrock that retains primary rock structure and textures to a clay; disseminated lime; common thin clay films lining pores and on faces of peds; few very fine and fine roots; few fine tubular pores; abrupt smooth boundary.
2Cr2--44 to 60 inches; reddish yellow (7.5YR 6/8) weathered tuff bedrock that retains primary rock structure and textures to a clay; disseminated lime.

Type location: Elko County, Nevada; approximately 14 miles southeast of Tuscarora; about 2,250 feet south and 1,100 feet east of the northwest corner of section 3, T. 38 N., R. 53 E.; 41 degrees, 12 minutes, 48 seconds north latitude, 116 degrees, 00 minutes, 13 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist late fall through spring, dry late June through October
Soil temperature: 45 to 47 degrees F.
Mollic epipedon thickness: 10 to 17 inches, includes the upper argillic horizon.
Depth to paralithic contact: 20 to 40 inches.
Reaction: Neutral to mildly alkaline increasing with depth.
Control section:
Clay content--35 to 50 percent.
Rock fragments--15 to 35 percent, mainly cobbles and pebbles.

A horizons:
Value--5 or 6 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt1 horizon:
Chroma--2 or 3.
Texture--Clay loam or gravelly clay loam.
Clay content--30 to 40 percent
Rock fragments--10 to 35 percent average, mainly pebbles.
Structure--Weak or moderate subangular blocky, or is platy.

Bt2 and Bt3 horizons:
Chroma--3 or 4 moist.
Clay content--40 to 55 percent.
Texture--Clay, gravelly clay or cobbly clay.

Rock fragments--10 to 20 percent pebbles, 0 to 5 percent stones and 5 to 15 percent cobbles.
Structure--Subangular or angular blocky in the upper subhorizon, weak to strong, fine to coarse prismatic in the lower subhorizons.

Cr horizons:
Effervescence--Noneffervescence to slightly effervescent.

Linkup Series

The Linkup series consists of shallow, well drained soils that formed in residuum and colluvium from basalt, andesite, rhyolite and tuff. Linkup soils are on summits or crests and side slopes of plateaus, hills and mountains. Slopes are 2 to 50 percent. Mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid Lithic Xerollic Haplargids

Typical pedon: Linkup gravelly clay loam, 4 to 15 percent slopes, located in an area of map unit 1675. (Colors are for dry soils unless otherwise noted.) The surface is partially covered with 15 percent pebbles and 5 percent cobbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) gravelly clay loam, dark grayish brown (10YR 4/2) moist; moderate thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; few medium, many fine and very fine vesicular pores; 5 percent cobbles, 15 percent pebbles; neutral (pH 6.6); abrupt smooth boundary. (3 to 4 inches thick)
A2--3 to 5 inches; brown (10YR 5/3) clay loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common medium, many fine and very fine roots; few fine and very fine vesicular and interstitial pores; 5 percent pebbles; neutral (pH 7.2); abrupt smooth boundary. (0 to 4 inches thick)
Bt1--5 to 9 inches; dark brown (7.5YR 4/4) gravelly clay, dark brown (7.5YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; common medium and fine roots; common fine and very fine interstitial pores; many moderately thick clay films on faces of ped and lining pores; 5 percent cobbles, 10 percent pebbles; neutral (pH 7.2); abrupt wavy boundary. (4 to 7 inches thick)
Bt2--9 to 17 inches; dark brown (7.5YR 4/4) clay, dark brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure parting to coarse and medium angular blocky; very hard, firm, sticky and plastic; few medium and fine roots; few very fine interstitial pores; continuous thick clay films on faces of peds and lining pores, 5 percent cobbles, 5 percent pebbles; neutral (pH 7.2); abrupt wavy boundary. (5 to 8 inches thick)
R--17 inches; rhyolite.

Type location: Elko County, Nevada; approximately 9 miles west of Midas; in an unsectionized area, about 1,800 feet north and 1,900 feet west of the southeast corner of the estimated section 2, T. 46 N., R. 46 E.; 41 degrees, 55 minutes, 10 seconds north latitude, 116 degrees, 47 minutes, 40 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in the winter and spring, dry mid-June through early November
Soil temperature: 45 to 47 degrees F.
Soil thickness and depth to bedrock: 14 to 20 inches.
*Sand content:*20 to 45 percent.
Reaction: Slightly acid through mildly alkaline, usually increasing with depth.
Control section:
Clay content--35 to 50 percent.
Rock fragments--10 to 35 percent, mainly pebbles and cobbles.

A horizons:
Value--3 or 4 moist.
Chroma--2 or 3.

Bt horizons:
Hue--7.5YR or 10YR.
Value--4 through 6 dry, 3 through 5 moist.
Chroma--3 through 6.
Texture--Gravelly clay, clay loam, gravelly clay loam or cobbly clay loam with very cobbly clay loam common in some pedons in the upper part. Clay, gravelly clay or cobbly clay in the lower part.
Clay content--27 to 45 percent in the upper part, 40 to 55 percent in the lower part.
Structure--Fine through coarse prismatic subangular blocky, or angular blocky.
Consistence--Hard or very hard dry.
Other features--The lower Bt subhorizons of some pedons have lime coats on rock fragments.

Loncan Series

The Loncan series consists of moderately deep, well drained soils that formed in residuum and colluvium derived mainly from chert or sedimentary and volcanic rock sources. Loncan soils are on side slopes of hills and mountains. Slopes are 4 to 75 percent. The mean annual precipitation is about 14 inches and the mean annual air temperature is 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Aridic Haploxerolls

Typical pedon: Loncan very gravelly loam, 15 to 50 percent slopes, located in an area of map unit 586. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium platy structure; slightly hard, firm, slightly sticky and nonplastic; common fine and very fine roots; many medium vesicular and common fine tubular pores; 35 percent pebbles, mildly alkaline (pH 7.4); clear smooth boundary. (1 to 5 inches thick)
A2--3 to 7 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common fine and very fine tubular pores; 55 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (3 to 7 inches thick)
A3--7 to 17 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine tubular pores; 55 percent pebbles; neutral (pH 7.2); clear smooth boundary. (3 to 12 inches thick)
C--17 to 30 inches; yellowish brown (10YR 5/4) very gravelly sandy clay loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; 55 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (10 to 22 inches thick)
R--30 inches; hard fractured chert.

Type location: Elko County, Nevada; approximately 35 miles north of Elko; about 1,830 feet south and 1,420 feet west of the northeast corner of section 28, T. 39 N., R. 53 E.; 41 degrees, 14 minutes, 37 seconds north latitude, 116 degrees, 00 minutes, 32 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry late June through mid-October
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 10 to 17 inches.
Depth to bedrock: 21 to 38 inches.
Other features: Some pedons have AC horizons.
Control section:
Clay content--18 to 27 percent.
Rock fragments--Averages 50 to 70 percent pebbles and cobbles with very few stones.

A horizons:
Value--4 or 5 dry.
Chroma--2 or 3.

C horizon:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Very gravelly loam, extremely cobbly loam, very gravelly sandy clay loam or extremely gravelly loam.
Rock fragments--40 to 70 percent pebbles and cobbles.

Lynnbow Series

The Lynnbow series consists of deep, well drained soils that formed in thin loess over mixed alluvium and residuum from tuff. The Lynnbow soils are on hills and fan piedmont remnants with a rock core. Slopes are 2 to 8 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Typic Palexerolls

Typical pedon: Lynnbow silt loam, 2 to 8 percent slopes, located in an area of map unit 200. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 5 percent pebbles.

A--0 to 4 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; slightly hard, very friable, sticky and plastic; many very fine roots; many very fine tubular pores; neutral (pH 7.2); abrupt smooth boundary. (3 to 7 inches thick)
Bt1--4 to 8 inches; very dark grayish brown (10YR 3/2) silty clay, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, friable, very sticky and very plastic; common very fine and fine roots; many very fine tubular pores; common thin clay films lining pores, on faces of peds and bridging sand grains; common clean sand grains throughout; 10 percent pebbles; neutral (pH 7.0); clear wavy boundary. (3 to 6 inches thick)
Bt2--8 to 15 inches; very dark grayish brown (10YR 3/2) silty clay, very dark brown (10YR 2/2) moist; strong medium subangular blocky structure; hard, firm, very sticky and very plastic; common very fine and fine roots; many very fine tubular pores; common thin clay films on faces of peds and bridging sand grains; faces of peds coated with clean sand grains; many clean sand grains in peds; 10 percent pebbles; neutral (pH 7.0); abrupt wavy boundary. (6 to 9 inches thick)
2Bt3--15 to 18 inches; dark brown (7.5YR 3/2) silty clay, dark brown (7.5YR 3/2) moist; strong medium prismatic structure; very hard, very firm, very sticky

and very plastic; common very fine exped roots; few very fine tubular pores; continuous stress surfaces on faces of peds; top of prisms coated with clean sand grains; 5 percent pebbles; neutral (pH 7.2); abrupt wavy boundary. (2 to 4 inches thick)

2Bt4--18 to 26 inches; brown (7.5YR 4/4) silty clay, brown (7.5YR 4/4) moist; strong medium prismatic structure; very hard, very firm, very sticky and very plastic; few very fine exped roots; few very fine tubular pores; continuous stress surfaces on faces of peds; 5 percent pebbles; mildly alkaline (pH 7.4); clear wavy boundary. (6 to 10 inches thick)

2Btqk1--26 to 33 inches; yellowish brown (10YR 5/4) silty clay, dark yellowish brown (10YR 3/4) moist; moderate medium prismatic structure parting to strong medium and coarse angular blocky; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; common strong brown (7.5YR 5/6) dry clay films and silica coats on faces of peds; 10 percent pebbles; common medium soft masses of lime; moderately alkaline (pH 8.0); clear wavy boundary. (5 to 12 inches thick)

2Btqk2--33 to 40 inches; yellowish brown (10YR 5/4) silty clay, dark yellowish brown (10YR 3/4) moist; moderate medium angular blocky structure; hard, friable, very sticky and very plastic; few very fine roots; common very fine tubular pores; common strong brown (7.5YR 5/6) dry clay films and silica coats on faces of peds; 15 percent pebbles; common medium filaments, threads and soft masses of lime; slightly effervescent; moderately alkaline (pH 8.0); clear wavy boundary. (6 to 9 inches thick)

3Bqk--40 to 58 inches; brown (10YR 5/3) loam, dark yellowish brown (10YR 3/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; weak continuous silica cementation; 10 percent pebbles; many medium filaments and threads of lime; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary. (5 to 20 inches thick)

Cr--58 inches; soft tuff.

Type location: Elko County, Nevada; approximately 4 miles east of Wilson Reservoir; about 1,000 feet west and 700 feet north of the southeast corner of section 22, T. 44 N., R. 51 E.; 41 degrees, 41 minutes, 35 seconds north latitude, 116 degrees, 13 minutes, 30 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from mid July through October

Soil temperature: 44 to 47 degrees F.

Mollic epipedon thickness: 14 to 19 inches.

Depth to paralithic: 45 to 60 inches.

Depth to carbonates and silica coats: 20 to 30 inches.

Control section:
Clay content--50 to 60 percent.
Texture--Silt clay or clay.
Rock fragments--0 to 15 percent.

A horizon:
Value--2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Hue--10YR or 7.5YR.
Value--3 through 5 dry, 2 through 4 moist.
Chroma--2 or 3.
Texture--Silty clay or clay.
Clay content--45 to 65 percent in any one subhorizon and averages 50 to 60 percent.
Rock fragments--0 to 15 percent.
Structure--Subangular blocky, angular blocky or prismatic.
Reaction--Neutral or mildly alkaline.

Btqk horizons:
Hue--10YR or 7.5YR.
Value--4 or 5 dry.
Chroma--3 or 4.
Texture--Silty clay or clay.
Clay content--40 to 55 percent.
Rock fragments--0 to 15 percent.
Structure--Angular blocky or prismatic.
Silica coats--Common or many on ped surfaces.
Secondary carbonates--Common or many segregated soft masses, filaments or threads.

Mahala Series

The Mahala series consists of moderately deep, well drained soils that formed in a thin loess mantle over residuum from tuff. Mahala soils are on hills. Slopes are 4 to 15 percent. The mean annual temperature is about 47 degrees F.and the mean annual precipitation is about 11 inches.

Taxonomic class: Fine, montmorillonitic, mesic Xerollic Paleargids

Typical pedon: Mahala silt loam, 4 to 15 percent slopes, located in an area of map unit 1910. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine vesicular pores; 5 percent, 2 to 5 millimeter pebbles; neutral (pH 7.2); abrupt smooth boundary. (1 to 4 inches thick)

E--4 to 5 inches thick; light brownish gray (10YR 6/2) silt loam, dark brown (10YR 3/3) moist with light gray (10YR 7/2) bleached sand grains and common

fine distinct dark brown (7.5YR 3/4) iron mottles; weak medium prismatic structure; hard, friable, sticky and slightly plastic; common very fine, fine and few medium roots; many very fine and few fine tubular pores; neutral (pH 7.2); abrupt smooth boundary. (0 to 1 inches thick)

2Bt1--5 to 9 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist with light gray (10YR 7/2) bleached sand grains capping prisms, strong medium prismatic structure parting to strong coarse angular blocky, very hard, firm, very sticky and very plastic; common very fine roots; many very fine tubular pores; many stress surfaces on faces of peds; mildly alkaline (pH 7.4); clear smooth boundary. (4 to 13 inches thick)

2Bt2--9 to 14 inches; light yellowish brown (10YR 6/4) clay, yellowish brown (10YR 5/4) moist; weak medium prismatic structure parting to moderate coarse angular blocky; very hard, firm, very sticky and very plastic; common very fine roots; many very fine tubular pores; common stress surfaces on faces of peds and common moderately thick clay films on faces of peds; moderately alkaline (pH 8.0); clear wavy boundary. (5 to 12 inches thick)

2Btk--14 to 26 inches; light yellowish brown (10YR 6/4) clay, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure parting to moderate fine subangular blocky; very hard, firm, very sticky and plastic; few very fine roots; many very fine tubular pores; many thin clay films coating sand grains and on faces of peds; lime is disseminated; slightly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (7 to 20 inches thick)

Cr--26 inches; very pale brown (10YR 7/3) weathered tuff bedrock with few fine discontinuous lime coatings in fractures.

Type location: Elko County, Nevada; approximately 10 miles west of Jack Creek; about 2,312 feet north and 100 feet west of the southeast corner of section 19, T. 43 N., R. 51 E.; 41 degrees, 36 minutes, 35 seconds north latitude, 116 degrees, 16 minutes, 50 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry late June through October

Soil temperature: 47 to 50 degrees F.

Depth to carbonates: 14 to 30 inches.

Solum thickness and depth to weathered bedrock: 20 to 40 inches.

Reaction: Neutral through moderately alkaline, normally increasing with depth.

Control section:
Clay content--40 to 60 percent average.
Rock fragments--0 to 20 percent mainly pebbles.

A horizon:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--1 through 3.

E horizon: (when present):
Value--6 or 7 dry.
Other features--Commonly has bleached sand grains and common fine distinct iron mottles.

Bt horizons:
Value--5 or 6 dry, 4 to 6 moist.
Chroma--2 through 4 dry, 3 or 4 moist.
Texture--Clay or gravelly clay.
Structure--Weak through strong, medium to coarse prismatic,or columnar weak or moderate fine to coarse subangular or angular blocky or prismatic parting to angular or subangular blocky.
Other features--Bleached sand grains commonly cap prisms.

Btk horizon:
Value--6 or 7 dry, 5 or 6 moist.
Chroma--2 to 4.
Texture--Clay or clay loam with gravelly clay loam, or silty clay loam common in some pedons.
Reaction--Mildly or moderately alkaline.
Carbonates--Disseminated but may include filaments or threads in some pedons.

Cr horizons:
Other features--Few or common, fine or medium, lime coats or soft masses and threads on fracture planes.
Effervescence--None to slightly, may be strong in areas of visible carbonate accumulation.

McCleary Series

The McCleary series consists of very deep, very poorly drained soils that formed in alluvium from mixed sources with a thin loess cap. McCleary soils are on small relict lake plains and fan skirts adjacent to lake plains. Slopes are 0 to 2 percent. Mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine, montmorillonitic, nonacid, mesic Aeric Fluvaquents.

Typical pedon: McCleary silt loam, located in an area of map unit 2560. (Colors are for dry soil unless otherwise noted.)

A1--0 to 1 inch; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; weak medium platy structure; soft, friable, slightly sticky and slightly plastic; many medium vesicular pores; moderately alkaline (pH 8.0); abrupt smooth boundary. (l to 2 inches thick)

A2--l to 4 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; weak medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many medium vesicular pores; moderately alkaline (pH 8.0); abrupt smooth boundary. (2 to 4 inches thick)
2C1--4 to 13 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; few fine distinct yellowish brown (10YR 5/6) iron mottles; strong medium angular blocky structure; very hard, very firm, very sticky and very plastic; few fine roots, few fine tubular pores; moderately alkaline (pH 8.0); clear smooth boundary. (8 to 13 inches thick)
2C2--13 to 22 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; few fine distinct yellowish brown (10YR 5/6) iron mottles; moderate medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few fine roots; few fine tubular pores; few fine manganese concretions; moderately alkaline (pH 8.0); gradual wavy boundary. (8 to 17 inches thick)
2C3--22 to 56 inches; light brownish gray (2.5Y 6/2) clay, dark grayish brown (2.5Y 4/2) moist; few fine distinct dark yellowish brown (10YR 4/4) iron mottles; massive; very hard, very firm, very sticky and very plastic; few fine roots; few fine tubular pores; few fine manganese concretions; moderately alkaline (pH 8.2); gradual wavy boundary. (25 to 35 inches thick)
2C--56 to 60 inches; light brown (7.5YR 6/4) clay, yellowish brown (10YR 5/4) moist; few fine faint brown (7.5YR 5/4) iron mottles; massive; very hard, very firm, very sticky and very plastic; few fine tubular pores; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 7 miles west of Desert Ranch Reservoir; 41 degrees, 40 minutes, 31 seconds north latitude, 116 degrees, 40 minutes, 12 seconds west longitude.

Range in Characteristics

Soil moisture: Seasonal high water table between 4 and 20 inches between February and May
Soil temperature: 47 to 52 degrees F.
Other features: Few to many iron manganese concretions can occur in any horizon.
Control section:
Clay content--40 to 50 percent.
Rock fragments--0 to 15 percent.

A horizons:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 3 through 5 moist.
Chroma--2 or 3.

C horizons:
Texture--Clay or silty clay.

McIvey Series

The McIvey series consists of very deep, well drained soils that formed mainly in colluvium from tuff, shale, sandstone, conglomerate, andesite, rhyolite, quartzite or welded tuffs. The McIvey soils are on hills, mountains and high fan piedmont remnants and partial ballenas bordering hills and mountains. Slopes are 2 to 75 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls

Typical pedon: McIvey gravelly silt loam, 15 to 30 percent slopes, is located in an area of map unit 1950. The soil surface is covered by 20 percent pebbles and 5 percent cobbles. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; dark grayish brown (10YR 4/2) gravelly silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 20 percent pebbles, 5 percent cobbles; neutral (pH 6.8); abrupt wavy boundary. (2 to 8 inches thick)
A2--4 to 16 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark brown (10YR 2/2) moist; strong fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and common fine roots; many very fine and few fine tubular pores; 15 percent pebbles, 5 percent cobbles; neutral (pH 6.8); clear wavy boundary. (5 to 12 inches thick)
Bt1--16 to 29 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; common very fine roots; many very fine and common fine tubular pores; 30 percent pebbles, 10 percent cobbles; few thin clay films lining pores; neutral (pH 6.8); clear wavy boundary. (3 to 13 inches thick)
2Bt2--29 to 44 inches; yellowish brown (10YR 5/4) very cobbly clay, dark yellowish brown (10YR 4/4) moist; moderate medium angular blocky structure; hard, friable, sticky and plastic; few very fine roots; many very fine and common fine tubular pores; 30 percent pebbles, 20 percent cobbles; many moderately thick clay films on faces of peds and lining pores; neutral (pH 6.8); clear wavy boundary (5 to 18 inches thick)
2Bt3--44 to 58 inches; yellowish brown (10YR 5/4) very cobbly clay, yellowish brown (10YR 5/4) moist; strong medium angular blocky structure; hard, very firm, very sticky and very plastic; few very fine roots; many very fine and few fine tubular

pores; 30 percent pebbles, 25 percent cobbles; many moderately thick clay films on faces of peds and lining pores; (pH 6.8); clear wavy boundary. (11 to 16 inches thick)
3C--58 to 65 inches; yellowish brown (10YR 5/4) extremely stony sandy clay loam, yellowish brown (10YR 5/4) moist; massive; hard, very firm, sticky and plastic; few very fine roots; common very fine tubular pores; 25 percent stones, 5 percent boulders; many distinct clay films lining pores; neutral (pH 7.0).

Type location: Elko County, Nevada; approximately 1 mile north of Bull Run Reservoir; about 1,600 feet west and 1,600 feet north of the southeast corner of section 3, T. 43 N., R. 52 E.; 41 degrees, 39 minutes, 5 seconds north latitude, 116 degrees, 06 minutes, 40 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in the winter and spring, dry mid July through October
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 12 to 20 inches, does not include the argillic horizon.
Control section:
Clay content--35 to 50 percent.
Rock fragments--Averages 35 to 60 percent, mainly pebbles and cobbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 to 3.

Bt1 horizon:
Hue--7.5YR or 10YR.
Value--3 or 4 moist.
Chroma--3 or 4.
Texture--Very gravelly clay loam or gravelly clay loam.
Consistence--Hard or very hard, friable to very firm moist.
Clay content--30 to 40 percent.
Rock fragments--15 to 40 percent pebbles, 0 to 10 percent cobbles.
Reaction--Slightly acid to mildly alkaline.
Other features--Moist and dry colors of this horizon do not meet the requirements of a mollic epipedon.

Lower Bt horizons:
Hue--7.5YR or 10YR.
Value--5 or 6 dry, 4 or 5 moist.
Chroma--3 through 6.
Texture--Very gravelly clay, very cobbly clay or extremely cobbly clay with extremely cobbly clay loam or very gravelly clay loam common in some subhorizons below 40 inches.
Clay content--Commonly 40 to 50 percent, but some pedons have lower subhorizons with 30 to 40 percent.
Rock fragments--35 to 50 percent pebbles, 5 to 25 percent cobbles, 0 to 15 percent stones.
Structure--Subangular blocky, angular blocky or prismatic throughout the profile but is commonly massive in the lower subhorizons.
Consistence--Hard or very hard, firm or very firm moist.
Reaction--Slightly acid through mildly alkaline.

Midraw Series

The Midraw series consists of shallow over an indurated duripan, well drained soils that formed in residuum from rhyolite. Midraw soils are on plateaus and hills. Slopes are 2 to 15 percent. Mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Xerollic Durargids

Typical pedon: Midraw gravelly loam, 8 to 15 percent slopes, located in an area of map unit 3510. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 10 percent pebbles and 5 percent cobbles.

A--0 to 2 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 3/3) moist; moderate thick platy structure; soft, friable, slightly sticky and slightly plastic; few very fine roots; common very fine vesicular pores; 15 percent pebbles, 5 percent cobbles; neutral (pH 6.6); abrupt smooth boundary. (2 to 6 inches thick)
Bt1--2 to 6 inches; pale brown (10YR 6/3) gravelly clay loam, brown (10YR 4/3) moist; weak medium subangular blocky structure parting to moderate very fine subangular blocky; slightly hard, firm, sticky and plastic; few very fine roots; few very fine tubular pores; few thin clay films lining pores; 15 percent pebbles; neutral (pH 6.6); clear smooth boundary. (2 to 5 inches thick)
Bt2--6 to 13 inches; light yellowish brown (10YR 6/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; weak medium prismatic structure parting to strong fine angular blocky; very hard, very firm, very sticky and very plastic; few fine and very fine roots; few fine tubular pores; many moderately thick clay films on peds and lining pores; 10 percent pebbles, 5 percent cobbles; neutral (pH 7.2); gradual smooth boundary. (3 to 7 inches thick)
Bt3--13 to 17 inches; light yellowish brown (10YR 6/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; strong fine angular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; few fine tubular pores; many

moderately thick clay films on peds and lining pores; 10 percent pebbles; 5 percent cobbles; slightly effervescent; neutral (pH 7.2); gradual smooth boundary. (0 to 5 inches thick)

Bqk--17 to 19 inches; very pale brown (10YR 7/3) very gravelly clay loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, sticky and plastic; 50 percent gravel size duripan fragments; violently effervescent, lime is disseminated; moderately alkaline (pH 8.0); clear smooth boundary (0 to 5 inches thick)

Bqkm--19 to 25 inches; very pale brown (10YR 7/3) indurated duripan; massive, extremely hard, extremely firm; silica laminae are 1/2 to 2 millimeter thick; duripan composed of thin to thick alternating weakly cemented and indurated layers; abrupt smooth boundary. (4 to 15 inches thick)

R--25 inches; rhyolite.

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 27 miles northwest of Wilson Reservoir; approximately 1,400 feet west of the apparent northeast corner of section 4, T. 46 N., R. 47 E.; 41 degrees, 55 minutes, 22 seconds north latitude, 116 degrees, 42 minutes, 50 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry in late June through October
Soil temperature: 47 to 52 degrees F.
Depth to base of Bt horizons: 14 to 20 inches.
Depth to duripan: 14 to 20 inches.
Depth to bedrock: 20 to 35 inches.
Control section:
Clay content--35 to 45 percent.
Rock fragments--15 to 35 percent.

A horizon:
Value--6 or 7 dry, 3 through 5 moist.
Chroma--2 or 3.
Reaction--Neutral to moderately alkaline.

Bt horizon:
Value--5 or 6 dry, 3 through 5 moist.
Chroma--2 through 4.
Texture--Gravelly clay loam, gravelly silty clay loam, gravelly clay or cobbly clay.
Consistence--Friable, firm or very firm, moist.
Structure--Prismatic, subangular blocky or angular blocky.
Rock fragments--15 to 35 percent.
Reaction--Neutral to moderately alkaline.
Other features--Some pedons have durinodes or pan fragments in the lower subhorizon.

Bqk horizon:
Hue--7.5YR or 10YR.
Value--6 or 7 dry, 3 or 4 moist
Chroma--3 or 4 .
Structure--Subangular blocky or is massive
Consistence--Friable or firm, moist; slightly plastic or plastic, wet.

Bqkm horizon:
Hue--7.5YR or 10YR.
Value--5 through 7 dry, 4 or 5 moist.
Chroma--3 or 4.

Ninemile Series

The Ninemile series consists of shallow, well drained soils that formed in residuum from andesite, rhyolite, basalt and welded tuff. The Ninemile soils are on hills and mountains. Slopes are 4 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Ninemile cobbly loam, 4 to 15 percent slopes, located in an area of map unit 1653. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 10 percent pebbles and 20 percent cobbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) cobbly loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; common medium, fine and very fine roots; common medium and fine vesicular pores; 10 percent pebbles, 20 percent cobbles; neutral (pH 7.2); abrupt smooth boundary. (1 to 7 inches thick)

A2--2 to 4 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate thin platy parting to strong fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; common medium and fine tubular pores; 10 percent pebbles, 5 percent cobbles; neutral (pH 7.2); abrupt wavy boundary. (0 to 4 inches thick)

Bt1--4 to 9 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; strong fine subangular blocky structure; very hard, firm, sticky and plastic; few medium fine and very fine roots; few fine and very fine tubular pores; many moderately thick clay films on faces of peds and lining pores; 5 percent pebbles, 5 percent cobbles; neutral (pH 7.2); abrupt wavy boundary. (0 to 5 inches thick)

Bt2--9 to 14 inches; brown (10YR 5/3) clay, dark brown (10YR 4/3) moist; strong coarse prismatic structure; very hard, very firm, very sticky and very plastic; few medium, fine and very fine roots; few fine and very fine pores; continuous stress surfaces on faces of peds; 5 percent pebbles, 5 percent

cobbles; mildly alkaline (pH 7.4); abrupt wavy boundary. (3 to 9 inches thick)
Bt3--14 to 19 inches; light yellowish brown (10YR 6/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; massive; very hard, very firm, very sticky and very plastic; 20 percent pebbles; 5 percent cobbles, many moderately thick clay films coating coarse fragments; mildly alkaline (pH 7.4); abrupt wavy boundary. (4 to 7 inches thick)
R--19 inches; rhyolite.

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 8 miles north of Midas; 41 degrees, 20 minutes, 40 seconds north latitude, 116 degrees, 51 minutes, 08 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist during the winter and spring, dry mainly during late June through early October
Soil temperature: 44 to 47 degrees F.
Depth to bedrock: 10 to 20 inches.
Mollic epipedon: 6 to 18 inches; commonly includes part or all of the argillic horizon. (Mixed to 7 inches will be mollic)
Control section:
Clay content--Averages 40 to 60 percent.
Rock fragments--0 to 35 percent

A horizons:
Hue--10YR or 7.5YR
Value--3 through 5 dry, 2 or 3 moist.
Chroma--1 through 3.
Reaction--Slightly acid through moderately alkaline.
Other features--Surface 1 or 2 inches of some pedons have color value of 6 and are massive.

Bt horizons:
Hue--5YR, 7.5YR or 10YR.
Value--3 through 6 dry, 2 through 4 moist.
Chroma--2 through 4, lower subhorizons have chroma of 6 in some pedons.
Clay content--Typically 40 to 60 percent. Some subhorizons range to 35 percent.
Texture--Mainly clay or gravelly clay, but some subhorizons range to clay loam.
Rock fragments--0 to 30 percent pebbles or cobbles.
Structure--Moderate or strong subangular or angular blocky or prismatic. Bt3 horizons may be massive in some pedons
Reaction--Neutral through moderately alkaline.
Other features--Some pedons are slightly hard dry, sticky and plastic wet in the Bt1 horizon.

R horizons:
Other features--In some pedons, where bedrock is less than 15 inches deep, the upper 1 to 3 inches of bedrock is weathered.

Olac Series

The Olac series consists of shallow, well drained soils that formed in residuum weathered from andesite and related rocks. The Olac soils are on hills and mountains. Slopes are 4 to 75 percent. Mean annual precipitation is about 9 inches, and mean annual temperature is about 48 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids

Typical pedon: Olac very stony loam, 4 to 15 percent slopes, located in an area of map unit 2641. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 15 percent pebbles, 20 percent cobbles and 10 percent stones.

A1--0 to 2 inches; pale brown (10YR 6/3) very stony loam, dark brown (10YR 3/3) moist; moderate medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; many fine vesicular pores; 15 percent pebbles; 20 percent cobbles, 10 percent stones; neutral (pH 7.2); abrupt smooth boundary. (1 to 3 inches thick)
A2--2 to 4 inches; pale brown (10YR 6/3) very stony loam, dark brown (10YR 4/3) moist; moderate thin platy structure; slightly hard, friable, slightly sticky and plastic; few very fine roots; many fine vesicular pores; 5 percent pebbles, 20 percent cobbles, 15 percent stones; mildly alkaline (pH 7.6); clear smooth boundary. (1 to 3 inches thick)
Bt1--4 to 9 inches; pale brown (10YR 6/3) extremely gravelly clay loam, dark brown (10YR 4/3) moist, moderate fine subangular blocky structure; hard, firm, sticky and plastic; few fine and very fine roots; few fine tubular pores; common moderately thick clay films on faces of peds; 45 percent pebbles, 15 percent cobbles; mildly alkaline (pH 7.6); clear wavy boundary. (4 to 5 inches thick)
Bt2--9 to 14 inches; brown (7.5YR 5/4) extremely gravelly clay loam, dark, brown (7.5YR 4/4) moist; strong fine subangular blocky structure; hard, firm, sticky and plastic; few fine roots; many thick clay films on faces of peds; 45 percent pebbles, 15 percent cobbles; mildly alkaline (pH 7.4); abrupt smooth boundary. (1 to 5 inches thick)
R--14 inches; consolidated basalt.

Type location: Elko, Nevada; Owyhee Desert, in an unsectionized area, about 20 miles northeast of Midas; 41 degrees, 36 minutes, 35 seconds north latitude, 116 degrees, 59 minutes, 37 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry summer and fall, moist November through early June
Soil temperature: 47 to 52 degrees F.
Depth to bedrock: 8 to 14 inches.
Reaction: Slightly acid through mildly alkaline.
Control section:
Clay content--18 to 27 percent.
Rock fragments--35 to 60 percent, mainly angular pebbles with 0 to 30 percent cobbles or stones in the upper part.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Rock fragments--20 to 65 percent.

Bt horizons:
Hue--10YR or 7.5YR.
Value--4 through 7 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Extremely gravelly loam or extremely gravelly clay loam.
Clay content--23 to 30 percent.
Rock fragments--60 to 75 percent, mainly pebbles.

Old Camp Series

The Old Camp series consists of shallow, well drained soils that formed in residuum and colluvium weathered from tuff, basalt, rhyolite and andesite with a minor component of volcanic ash. Old Camp soils are on hills, mountains, and plateaus. Slopes are 2 to 75 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids

Typical pedon: Old Camp extremely stony loam, 15 to 30 percent slopes, located in an area of map unit 2790. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 10 percent pebbles, 30 percent cobbles and 10 percent stones.
A1--0 to 3 inches; pale brown (10YR 6/3) very stony loam, dark brown (10YR 3/3) moist; weak medium platy structure; soft, friable, slightly sticky and slightly plastic; few fine and very fine roots; few fine tubular pores; 10 percent pebbles, 25 percent cobbles, 10 percent stones; neutral (pH 7.0); abrupt smooth boundary. (1 to 4 inches thick)
A2--3 to 6 inches; pale brown (10YR 6/3) very cobbly loam, dark brown (10YR 4/3) moist; massive; soft, friable, slightly sticky and slightly plastic; few very fine roots; few very fine pores; 20 percent pebbles, 20 percent cobbles; mildly alkaline (pH 7.4); clear smooth boundary. (0 to 3 inches thick)
Bt--6 to 16 inches; pale brown (10YR 6/3) very cobbly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; common moderately thick clay films on faces of peds; few thin lime and silica coatings on undersides of rock fragments next to the bedrock; 25 percent pebbles, 25 percent cobbles; mildly alkaline (pH 7.4); clear wavy boundary. (6 to 13 inches thick)
R--16 inches; consolidated rhyolite; many fine and very fine matted roots on bedrock.

Type location: Elko County, Nevada; in an unsectionized area, about 20 miles northwest of Midas; 41 degrees, 29 minutes, 2 seconds north latitude, 116 degrees, 58 minutes, 44 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist November through May
Soil temperature: 47 to 52 degrees F.
Depth to bedrock: 10 to 20 inches.
Control section:
Rock fragments--50 to 75 percent, dominantly cobbles and stones. The upper part has 35 to 50 percent rock fragments in some pedons.

A horizons:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

Bt horizon:
Hue--10YR to 7.5YR
Value--4 through 7 dry, 3 through 5 moist.
Chroma--2 through 4.
Texture--Clay loam or sandy clay loam, with subhorizons in some pedons of loam, modified by average of 50 to 75 percent rock fragments, mainly cobbles and stones.
Clay content--27 to 35 percent.
Structure--Weak or moderate, coarse to fine angular or subangular blocky or massive.
Reaction--Neutral or mildly alkaline in the upper part, neutral to strongly alkaline in the lower part.
Other features--Few to continuous lime coats on rock fragments or bedrock.

Orovada Series

The Orovada series consists of very deep, well drained soils that formed in loess high in volcanic ash over alluvium from mixed rock sources. The Orovada soils are on fan skirts, fan aprons, inset fans, partial

ballenas, hills and footslopes. Slopes are 0 to 30 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Durixerollic Camborthids

Typical pedon: Orovada very fine sandy loam, 0 to 2 percent slopes, is located in an area of map unit 1363. (Colors are for dry soils unless otherwise noted.)

A1--0 to 2 inches; pale brown (10YR 6/3) very fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate thin platy structure; soft, very friable, nonsticky and nonplastic; common very fine and few fine, medium and coarse roots; many very fine interstitial and vesicular, and few fine tubular pores; mildly alkaline (pH 7.8); clear wavy boundary. (2 to 8 inches thick)

A2--2 to 5 inches; light brownish gray (10YR 6/2) very fine sandy loam, brown (10YR 4/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine, medium and coarse roots; common very fine interstitial and few fine and medium tubular pores; mildly alkaline (pH 7.8); abrupt wavy boundary. (0 to 5 inches thick)

Bw--5 to 19 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine, medium and coarse roots; common very fine interstitial and few fine and medium tubular pores; moderately alkaline (pH 7.8); clear wavy boundary. (4 to 20 inches thick)

Bq--19 to 29 inches; light gray (2.5Y 7/2) very fine sandy loam, brown (10YR 5/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine and few fine interstitial and tubular pores; 40 percent durinodes; moderately alkaline (pH 8.2); clear wavy boundary. (0 to 12 inches thick)

Bqk1--29 to 39 inches; light yellowish brown (2.5Y 7/2) very fine sandy loam, dark yellowish brown (10YR 4/4) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; common very fine interstitial pores; 25 percent durinodes; few thin lime filaments slightly effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (5 to 12 inches thick)

Bqk2--39 to 60 inches; light yellowish brown (10YR 6/4) very fine sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, slightly sticky and nonplastic; few very fine roots; common very fine and few fine interstitial pores; 25 percent durinodes; few thin filaments and soft masses of lime; slightly effervescent; moderately alkaline (pH 8.4).

Type location: Elko County, Nevada; approximately 18 miles southwest of Midas; about 850 feet west and 2,400 feet south of the northeast corner of section 11, T. 37 N., R. 44 E.; 41 degrees, 6 minutes, 00 seconds north latitude, 116 degrees, 58 minutes, 20 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry from late June through early November
Soil temperature: 47 to 52 degrees F.
Depth to Bq or Bqk horizons: 10 to 28 inches.
Control section:
Other features: When mixed, value of the upper 7 inches is greater than 5.5 dry and 3.5 moist.
Clay content--5 to 18 percent.
Rock fragments--0 to 15 percent, mainly pebbles.

A horizons:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 through 4.
Reaction--Neutral through moderately alkaline.

Bw horizon:
Hue--10YR or 2.5Y.
Value--6 through 8 dry; 3 through 6 moist.
Chroma--2 through 6.
Texture--Fine sandy loam, very fine sandy loam, loam, silt loam with strata of loamy fine sand or sandy loam in some pedon.
Clay content--5 to 18 percent.
Rock fragments--Averages 0 to 15 percent pebbles.
Structure--Subangular blocky, prismatic, or horizon is massive.
Reaction--Mildly alkaline or moderately alkaline.

Bq and Bqk horizons:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 3 through 5 moist.
Chroma--2 through 6.
Texture--Fine sandy loam, very fine sandy loam, loam, silt loam with strata of loamy fine sand or sandy loam in some pedon.
Rock fragments--Up to 30 percent pebbles in some subhorizons of some pedons.
Consistence--Soft to hard, dry and very friable or friable, moist, nonsticky or slightly sticky and nonplastic or slightly plastic, wet.
Reaction--Moderately alkaline through very strongly alkaline, increasing with depth.
Cementation--Contains 20 to 80 percent durinodes.
Other features--Gypsum crystals are below depths of 37 inches in some pedons.

Pattani Series

The Pattani series consists of moderately deep well drained soils that formed in residuum from tuff. The Pattani soils are on hills and rock pediments. Slopes are 4 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Entic Chromoxererts

Typical pedon: Pattani clay, 4 to 15 percent slopes, located in an area of map unit 308. (Colors are for dry soil unless otherwise noted.)

A--0 to 1 inches; reddish brown (5YR 5/3) clay, reddish brown (5YR 5/3) moist; moderate fine subangular blocky structure parting to strong very fine granular; soft, very friable, very sticky, very plastic; few very fine roots; many very fine interstitial pores; 5 percent pebbles; mildly alkaline (pH 7.6); abrupt wavy boundary. (1 to 2 inches thick)

B--1 to 14 inches; reddish brown (5YR 5/3) clay, reddish brown (5YR 4/3) moist; moderate coarse subangular blocky structure; hard, firm, very sticky, very plastic; few very fine and fine roots; many very fine tubular and common very fine interstitial pores; moderately thick stress surfaces coating faces of peds; 5 percent pebbles; moderately alkaline (pH 7.6); clear wavy boundary. (4 to 13 inches thick)

Bk1--14 to 30 inches; reddish brown (5YR 5/3) clay, reddish brown (5YR 4/3) moist; moderate coarse subangular blocky structure; hard, firm, very sticky, very plastic; few very fine and fine roots; many very fine tubular, common very fine interstitial pores; common slickensides; many stress surfaces on faces of peds; 5 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (5 to 20 inches thick)

Bk2--30 to 37 inches; light reddish brown (5YR 6/3) clay, light reddish brown (5YR 6/3) moist; weak coarse subangular blocky structure; hard, firm, very sticky, very plastic; few very fine roots; many very fine tubular pores; common slickensides; 5 percent decomposing brownish yellow (10YR 6/6) tuff pebbles; many stress surfaces on faces of peds, disseminated lime with few fine soft masses; strongly effervescent; 5 percent pebbles; moderately alkaline (pH 8.4); clear wavy boundary. (5 to 10 inches thick)

Cr--37 to 40 inches; light gray (2.5Y 7.2) weathered tuff with light reddish brown (5YR 6/3) clay films in fractures; strongly effervescent.

Type location: Elko County, Nevada; approximately 6 miles southwest of Willow Creek Reservoir; about 2,500 feet east and 2,400 feet south of the northwest corner of section 13, T. 38 N., R. 47 E.; 41 degrees, 10 minutes, 16 seconds north latitude, 116 degrees, 36 minutes, 48 seconds west longitude.

Range in Characteristics

Soil moisture: Moist winter and spring, dry June through October
Soil temperature: 45 to 47 degrees F.
Depth to paralithic contact: 20 to 40 inches.
Depth to lime: 12 to 20 inches.
Control section:
Clay content--35 to 55 percent.
Other features--The soil has cracks that close when the soil becomes moist in late October and opens when the soil becomes dry in early June.

A horizon:
Hue--10YR, 7.5YR, 5YR or 2.5Y.
Value--5 or 6 moist or dry.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

B and Bk horizons:
Hue--10YR, 7.5YR, 5YR or 2.5Y.
Value--5 or 6 dry, 4 through 6 moist.
Chroma--2 or 3.
Texture--Clay, silty clay, or clay loam.
Structure--Angular blocky, subangular blocky or it is massive.
Reaction--Moderately alkaline or strongly alkaline.
Other features--Common to many slickensides, has cracks in the dry season that extend to the surface and range up to 2 inches in width.

Pequop Series

The Pequop series consists of deep, well drained soils that formed in colluvium and residuum from rhyolite, tuff and intrusive igneous rocks. Pequop soils are on side slopes of hills, mountains and fan piedmont remnants with a bedrock core. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Typic Argixerolls

Typical pedon: Pequop gravelly loam, 30 to 50 percent slopes in an area of map unit 1691. (Colors are for dry soil unless otherwise noted.)

Al--0 to 4 inches; dark grayish brown (10YR 4/2) gravelly loam, black (10YR 2/l) moist; moderate fine and medium subangular blocky structure; parting to weak fine granular, soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine tubular pores; 15 percent

pebbles; neutral (pH 6.8); clear smooth boundary. (3 to 8 inches thick)

A2--4 to 12 inches; dark brown (10YR 4/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine, fine, and few medium tubular pores; 25 percent pebbles; neutral (pH 7.0); clear smooth boundary. (7 to 12 inches thick)

Bt1--12 to 19 inches; brown (7.5YR 5/4) extremely gravelly sandy clay loam, dark brown (7.5YR 3/4) moist; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and plastic; many very fine, fine, and few medium roots; many fine and medium tubular pores; common moderately thick clay films on faces of peds and lining pores; 65 percent pebbles; neutral (pH 7.0); clear smooth boundary. (5 to 9 inches thick)

Bt2--19 to 28 inches; yellowish red (5YR 5/6) very gravelly sandy clay loam, reddish brown (5YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and plastic; common very fine, fine, and few medium roots; many very fine and fine tubular pores; many moderately thick clay films on faces of peds and lining pores; 50 percent pebbles; neutral (pH 7.0); abrupt wavy boundary. (7 to 11 inches thick)

Bt3--28 to 41 inches; reddish brown (5YR 5/4) extremely gravelly sandy clay loam, reddish brown (5YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and plastic; common very fine, fine and medium roots; many very fine and fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 20 percent cobbles, 45 percent pebbles; neutral (pH 7.2); abrupt wavy boundary. (11 to 15 inches thick)

Bt4--41 to 50 inches; brown (7.5YR 5/4) very gravelly clay loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; hard, firm, sticky and plastic; few very fine and fine roots; common very fine, fine and medium pores; few moderately thick clay films on faces of peds and lining pores; 10 percent cobbles, 40 percent pebbles; neutral (pH 7.2); clear smooth boundary. (7 to 11 inches thick)

Bk--50 to 60 inches; yellowish brown (10YR 5/4) very gravelly loam, dark yellowish brown (10YR 4/4) moist; massive; hard, firm, slightly sticky and slightly plastic; many fine and medium tubular pores; common distinct lime coatings on lower surfaces of pebbles; few soft fine lime masses and filaments; 15 percent cobbles, 40 percent pebbles; neutral (pH 7.2).

Type location: Elko County, Nevada; about 8 miles southeast of Midas; approximately 800 feet south and 2,500 feet west of the northeast corner of section 8, T. 37 N., R. 46 E.; 41 degrees, 06 minutes, 16 seconds north latitude, 116 degrees, 48 minutes, 22 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry mid-July through October
Soil temperature: 43 to 47 degrees F.
Mollic epipedon thickness: 10 to 20 inches.
Depth to base of argillic horizons: 40 to 60 inches.
Depth to bedrock: 50 to 80 inches.
Reaction: Neutral or mildly alkaline.
Control section:
Clay percent--20 to 35.
Rock fragments--40 to 70 percent, dominantly pebbles.

A horizons:
Value--3 through 5 dry, 2 through 4 moist.
Chroma--1 to 3.

Bt horizons:
Hue--10YR, 7.5YR or 5YR.
Value--3 through 5 moist, 5 or 6 dry.
Chroma--3 through 6 dry, 3 or 4 moist.
Texture--Very gravelly sandy clay loam, extremely gravelly sandy clay loam or very gravelly clay loam with less than 35 percent silt.
Clay content--20 to 35 percent.
Rock fragments--40 to 70 percent, dominantly pebbles.
Structure--Very fine, fine or medium subangular blocky.

Bk horizon: (When present):
Value--4 to 5 moist.
Chroma--3 or 4.
Rock fragments--40 to 80 percent, dominantly pebbles with cobbles dominant in some pedons.

Pernty Series

The Pernty series consists of shallow, well drained soils that formed in residuum and some colluvium from rhyolite, quartzite, sandstone, conglomerate, chert, welded tuff and andesite. Pernty soils are on mountain and hill crests and side slopes. Slopes are 2 to 75 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Pernty very gravelly loam, 30 to 50 percent slopes, located in an area of map unit 270. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 40 percent pebbles, 10 percent cobbles.

A1--0 to 1 inch; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine roots; many very fine and few fine pores; 40 percent pebbles and 5 percent cobbles; neutral (pH 7.2); abrupt wavy boundary.
A2--1 to 5 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and few fine roots; many very fine and few fine tubular pores; 30 percent pebbles and 10 percent cobbles; neutral (pH 7.2); clear wavy boundary. (Combined thickness of A horizons is 2 to 5 inches)
Bt1--5 to 10 inches; brown (10YR 5/3) very cobbly clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine and few fine tubular pores; many thin clay films on faces of peds; 30 percent pebbles and 20 percent cobbles; neutral (pH 7.3); abrupt wavy boundary. (4 to 6 inches thick)
Bt2--10 to 14 inches; yellowish brown (10YR 5/4) very cobbly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine and few fine tubular pores; many thin clay films on faces of peds; 30 percent pebbles and 20 percent cobbles, neutral (pH 7.3). (4 to 6 inches thick)
R--14 inches; fractured quartzite.

Type location: Elko County, Nevada; approximately 40 miles northwest of Elko; about 2,200 feet south and 1,850 feet east of the northwest corner of section 19, T. 39 N., R. 53 E.; 41 degrees, 40 minutes, 00 seconds north latitude, 116 degrees, 03 minutes, 25 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in some part from late October through early June and is dry for 90 to 120 consecutive days
Soil temperature: 42 to 47 degrees.
Average summer soil temperature: 59 to 64 degrees F.
Mollic epipedon thickness: 7 to 10 inches, includes the upper Bt horizons.
Depth to base of Bt horizon: 14 to 20 inches.
Depth to lithic contact: 14 to 20 inches.
Control section:
Clay content--25 to 35 percent, when mixed.
Rock fragments--35 to 50 percent when mixed, mainly pebbles or cobbles.

A horizons:
Chroma--2 or 3.

Bt horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Texture--Very gravelly clay loam, gravelly loam, very gravelly loam or very cobbly clay loam, very stony clay loam.
Structure--Weak or moderate subangular blocky or is massive.

Petan Series

The Petan series consists of shallow, well drained soils that formed in residuum from rhyolite and basalt. Petan soils are on side slopes of hills, plateaus and fan piedmonts and have slopes of 4 to 15 percent. Mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid, shallow Typic Durixerolls

Typical pedon: Petan extremely stony loam, 4 to 15 percent slopes, located in an area of map unit 3710. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent pebbles, 30 percent cobbles and 10 percent stones.

Al--0 to 3 inches; grayish brown (10YR 5/2) extremely stony loam, very dark grayish brown (10YR 3/2) moist; moderate thick platy structure; soft, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 10 percent pebbles; 25 percent cobbles, 30 percent stones; neutral (pH 7.2); clear smooth boundary. (2 to 4 inches thick)
A2--3 to 6 inches; brown (10YR 5/3) very stony clay loam, dark brown (10YR 3/3) moist; moderate fine granular structure; hard, firm, sticky and plastic; few fine and very fine roots; few very fine tubular pores; 5 percent pebbles, 10 percent cobbles, 25 percent stones; neutral (pH 7.2); abrupt smooth boundary. (2 to 6 inches thick)
Btl--6 to 10 inches; brown (10YR 5/3) very cobbly clay, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; many thin clay films on peds; 15 percent pebbles, 25 percent cobbles; neutral (pH 7.2); clear smooth boundary. (3 to 5 inches thick)
Bt2--10 to 19 inches; dark yellowish brown (10YR 4/4) very cobbly clay, dark brown (10YR 4/3) moist; moderate medium prismatic structure that parts to stong medium angular blocky; extremely hard, extremely firm, very sticky and very plastic; many moderately thick clay films on peds; 15 percent pebbles, 40 percent cobbles; mildly alkaline (pH 7.4); abrupt smooth boundary. (6 to 9 inches thick)
Bqkm--19 to 20 inches; very pale brown (10YR 8/3) indurated laminae l/8 to l/2 inch thick over a

degrading duripan; extremely hard, extremely firm; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary. (1/2 to 3 inches thick)
R--20 inches; basalt

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, approximately 6 miles north of Josephine Reservoir; 41 degrees, 59 minutes, 35 seconds north latitude, 116 degrees, 28 minutes, 05 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from mid July through October
Soil temperature: 44 to 47 degrees F.
Thickness of mollic epipedon: 7 to 12 inches, includes the upper part of the Bt2 horizon.
Depth to base of argillic horizon: 14 to 20 inches.
Depth to duripan: 14 to 20 inches.
Depth to bedrock: 15 to 23 inches.
Control section:
Clay content--40 to 60 percent.

A horizons:
Value--5 or 6 dry, thin layers with value of 6 dry, when mixed with the upper 7 inches, has a dominant value of less than 5.5 dry.
Chroma--2 or 3.

Bt horizons:
Value--4 to 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Rock fragments--35 to 55 percent, mainly cobbles or stones.
Other features--Darker value and chroma in upper Bt2 horizon.
Reaction--Slightly acid to mildly alkaline.

Pie Creek Series

The Pie Creek series consists of moderately deep, well drained soils that formed in residuum weathered from tuff. Pie Creek soils are on rolling low hills and mountains. Slopes are 4 to 50 percent. The mean annual precipitation is about 11 inches and the mean annual air temperature is about 43 degrees F.

Taxonomic class: Very-fine, montmorillonitic, frigid Aridic Palexerolls

Typical pedon: Pie Creek very cobbly silt loam, 4 to 15 percent, located in an area of map unit 580. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 30 percent pebbles and 20 percent cobbles.

A1--0 to 4 inches; grayish brown (10YR 5/2) very cobbly silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores; 30 percent pebbles and 20 percent cobbles; neutral (pH 7.0); abrupt smooth boundary. (1 to 6 inches thick)
E--4 to 5 inches; light brownish gray (10YR 6/2) very cobbly silt loam; dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine, and few medium roots; many very fine interstitial pores; 20 percent pebbles and 20 percent cobbles, neutral (pH 7.0); abrupt smooth boundary. (1 to 3 inches thick)
Bt1--5 to 11 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; strong medium and coarse prismatic structure; very hard, very firm, very sticky and very plastic; common very fine and few fine roots mainly along faces of peds; few very fine tubular pores; many stress surfaces on faces of peds, and many thick clay films lining pores; 5 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (4 to 9 inches thick)
Bt2--11 to 16 inches; light yellowish brown (10YR 6/4) clay, yellowish brown (10YR 5/4) moist; strong medium prismatic structure; very hard, very firm, very sticky and very plastic; common very fine and few fine roots mainly along faces of peds; few very fine tubular pores; many stress surfaces and common thick clay films lining pores; 5 percent pebbles; moderately alkaline (pH 8.4); gradual smooth boundary. (5 to 12 inches thick)
Bt3--16 to 23 inches; very pale brown (10YR 7/3) clay, yellowish brown (10YR 5/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; common very fine tubular pores; common moderately thick clay films on faces of peds and lining pores; mildly alkaline (pH 7.4); clear smooth boundary. (0 to 10 inches thick)
R--23 inches; tuff.

Type location: Elko County, Nevada; approximately 5 miles southeast of St. John's Ranch, in an unsectionized area, about 1,900 feet north and 2,700 feet east of Chicken Springs; 41 degrees, 08 minutes, 30 seconds north latitude, 116 degrees, 26 minutes, 35 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry early June to early October
Soil temperature: 44 to 47 degrees F.
Depth to bedrock: 23 to 40 inches.
Control section:
Clay content--60 to 70 percent.
Rock fragments--Less than 5 percent pebbles.

A horizons:
Chroma--2 or 3.
Structure--Weak very thin or thin platy, weak to strong very fine to medium subangular blocky or it is massive.

E horizon:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Texture--Loam or silt loam.
Structure--Weak medium prismatic or very fine or fine subangular blocky.

Bt horizons:
Hue--5YR to 10YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Structure--Medium or coarse columnar or prismatic.
Reaction--Neutral or mildly alkaline.

Piline Series

The Piline series consists of very deep, poorly drained soils that formed in alluvium from mixed sources. Piline soils are on internally drained areas of small relict lake plains, alluvial flats and playas. Slopes are 0 to 2 percent. Mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Aquic Chromoxererts

Typical pedon: Piline silty clay loam located in an area of map unit 2555. (Colors are for dry soil unless otherwise noted.) The soil surface has gilgai that are 2 to 6 centimeters high.

A1--0 to 2 inches; light brownish gray (10YR 6/2) silty clay loam, grayish brown (2.5Y 5/2) moist; moderate fine granular structure; slightly hard, firm, sticky and very plastic; few fine, common very fine roots; common fine, few very fine tubular pores; mildly alkaline (pH 7.8); abrupt smooth boundary. (2 to 4 inches thick)
A2--2 to 12 inches; light brownish gray (2.5Y 6/2) silty clay loam, grayish brown (2.5Y 5/2) moist; weak medium subangular blocky structure parting to moderate fine granular; very hard, very firm, sticky and very plastic; few fine and very fine roots; few fine tubular pores; few iron manganese concretions; mildly alkaline (pH 7.8); gradual smooth boundary. (6 to 11 inches thick)
C1--12 to 19 inches; light brownish gray (2.5Y 6/2) clay, grayish brown (2.5Y 5/2) moist; few fine distinct dark yellowish brown (10YR 3/4) mottles; moderate medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; few fine tubular pores; common iron manganese concretions; mildly alkaline (pH 7.6); gradual wavy boundary. (6 to 17 inches thick)
C2--19 to 48 inches; light brownish gray (2.5Y 6/2) clay, grayish brown (2.5Y 5/2) moist; common fine distinct dark yellowish brown (10YR 3/4) mottles; weak coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; few fine roots; common iron manganese concretions; mildly alkaline (pH 7.6); gradual wavy boundary. (13 to 32 inches thick)
C3--48 to 60 inches; light brownish gray (2.5Y 6/2) clay loam, grayish brown (2.5Y 5/2) moist; massive; very hard, very firm, very sticky and very plastic; common iron manganese concretions; mildly alkaline (pH 7.6).

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 7 miles west of Desert Ranch Reservoir; 41 degrees, 40 minutes, 19 seconds north latitude, 116 degrees, 40 minutes, 28 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry late may through November
Soil temperature: 47 to 52 degrees F.
Reaction: Neutral to moderately alkaline.
Control section:
Clay content--35 to 50 percent.
Other features: When dry, vertical cracks 1 centimeter or more in width, extend to a depth of more than 40 inches. Gilgai are 2 to 10 centimeters in height. Few to many iron-manganese concretions can occur in any horizon.

A horizons:
Hue--10YR or 2.5Y
Value--6 or 7 dry, 5 or 6 moist.
Chroma--2 or 3
Reaction--Neutral to mildly alkaline.

C horizons:
Hue--10YR or 2.5Y
Value--6 or 7 dry, 5 or 6 moist.
Chroma--2 or 3
Textures--Dominantly clay or silty clay but contains clay loam in the lower substratum.
Iron mottles--Few to many and fine to medium in the lower subhorizons, but common or many or distinct or prominent mottles are within 20 inches of the surface

Placeritos Series

The Placeritos series consists of very deep, somewhat poorly drained soils that formed in mixed alluvium. The Placeritos soils are on floodplains. Slopes are 0 to 2 percent. The mean annual precipitation is

about 8 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Aquic Xerofluvents

Typical pedon: Placeritos silt loam, 0 to 2 percent slopes, is located in an area of Creemon-Placeritos association. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light grayish brown (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate very thin platy structure; slightly hard, very friable, slightly sticky, slightly plastic; many very fine and fine and few medium roots; many very fine tubular and vesicular pores; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (1 to 9 inches thick)

A2--2 to 8 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate medium and thick platy structure; slightly hard, very friable, slightly sticky, slightly plastic; many very fine and fine and few medium roots; many very fine tubular and vesicular pores; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (0 to 7 inches thick)

A3--8 to 13 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate thin and thick platy structure; slightly hard, very friable, slightly sticky, slightly plastic; common very fine roots; many fine and common medium tubular pores; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (0 to 6 inches thick)

C1--13 to 20 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure parting to moderate very thin platy; slightly hard, very friable, slightly sticky, slightly plastic; common very fine and fine roots; many very fine and few medium tubular pores; slightly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (9 to 20 inches thick)

C2--20 to 32 inches; white (10YR 8/2) silt loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, slightly sticky, slightly plastic; common very fine roots; common very fine tubular pores; ash layer; moderately alkaline (pH 8.4); abrupt wavy boundary. (8 to 15 inches thick)

2A1b--32 to 39 inches; gray (10YR 5/1) silty clay loam, very dark gray (10YR 3/1) moist; few fine distinct mottles of strong brown (7.5YR 5/6) moist; strong medium prismatic structure; hard, friable; sticky, plastic; many very fine roots matted on faces of peds and within peds; many very fine tubular pores; moderately alkaline (pH 8.2); abrupt wavy boundary. (0 to 10 inches thick)

2A2b--39 to 50 inches; gray (10YR 5/1) silty clay loam, very dark gray (10YR 3/1) moist; few fine distinct mottles of strong brown (7.5YR 5/6) moist; strong medium prismatic structure parting to moderate medium subangular blocky; hard, friable, sticky, plastic; common very fine and fine roots; common very fine tubular pores; moderately alkaline (pH 8.0); abrupt wavy boundary. (0 to 15 inches thick)

2Cg--50 to 60 inches; light olive gray (5Y 6/2) clay loam, olive gray (5Y 5/2) moist; many medium distinct mottles of yellow (5Y 7/6) moist; strong medium prismatic structure parting to moderate medium subangular blocky; hard, friable, sticky, plastic; common very fine and fine roots; common very fine tubular pores; moderately alkaline (pH 7.8).

Type location: Elko County, Nevada; approximately 12 miles southwest of Midas; about 1,600 feet east and 100 feet north of the southwest corner of section 25, T. 38 N., R. 44 E.; 41 degrees, 08 minutes, 09 seconds north latitude, 116 degrees, 57 minutes, 46 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist in the winter and spring months, dry during the summer and fall.
Soil temperature: 51 to 57 degrees F.
Control section:
Clay content--18 to 27 percent.
Rock fragment--15 percent fine sand and coarser.

A horizons:
Hue--10YR or 2.5Y but can be 5Y in the lower horizons having color values of 5 dry and 3 moist are less than 4 inches thick or occur below 20 inches.
Value--5 through 7 dry, 3 through 5 moist.
Chroma--1 through 3 (chromas of 1 are in the buried A horizons).

C horizons:
Hue--10YR, 2.5Y or 5Y
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 or 3
Structure--Massive but can have weak or moderate coarse to fine subangular blocky, or weak thick platy structure.
Texture--Stratified silt loam, very fine sandy loam, and silty clay loam with thin strata of loam, fine sandy loam or silty clay can occur in the control sections, and textures from clay to sand can occur in the substratums.
Reaction--Moderately alkaline to very strongly alkaline.
Calcium carbonate--1 to 10 percent and is mainly disseminated. Few to common fine segregated seams and filaments of lime can occur in the C horizons of some pedons, and a few small lime concretions can occur in the lower substratum.

Puett Series

The Puett series consists of shallow, well drained soils that formed in residuum and colluvium from weathered tuff, tuffaceous sandstone and siltstone. Puett soils are on low hills, side slopes of plateaus, rock pediments, rock core areas of fan piedmont remnants and partial ballenas. Slopes are 4 to 75 percent. The mean annual precipitation is about 9 inches and mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed (calcareous), mesic, shallow Xeric Torriorthents

Typical pedon: Puett gravelly loam, 30 to 50 percent slopes, is located in an area of the map unit 2668. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with 30 percent pebbles and 5 percent cobbles.

A--0 to 3 inches; very pale brown (10YR 7/3) gravelly loam, brown (10YR 5/3) moist; weak thin platy structure; soft, friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine irregular and vesicular pores; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary. (1 to 7 inches thick)
C1--3 to 10 inches; pale brown (10YR 6/3) gravelly loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, slightly sticky and slightly plastic; common very fine and fine, few medium roots; many very fine irregular pores; 30 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary. (3 to 15 inches thick)
Cr--11 to 20 inches; soft weathered tuff.

Type location: Elko County, Nevada; approximately 8 miles north of Midas; about 1,685 feet north and 1,450 feet east of the southwest corner of section 10, T. 40 N., R. 46 E.; 41 degrees, 21 minutes, 32 seconds north latitude, 116 degrees, 45 minutes, 42 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry June through October
Soil temperature: 47 to 52 degrees F.
Depth to bedrock: 10 to 20 inches.
Reaction: Moderately alkaline or strongly alkaline.
Carbonates: Strongly or violently effervescent, throughout. Lime coats on pebbles in lower part of some pedons.
Control section:
Clay content--5 to 10 percent.
Rock fragments--Up to 35 percent pebbles.

A horizon:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 through 4.

C horizons:
Hue--10YR or 2.5Y.
Value--6 through 8 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Loamy fine sand to loam but is dominantly coarse sandy loam to loam. Gravelly loam or gravelly sandy loam is common in some pedons.
Structure--Subangular blocky or it is massive.
Consistence--Soft to hard, dry; nonsticky or slightly sticky and nonplastic or slightly plastic, wet.

Puett Variant

The Puett variant consists of shallow, well drained soils that formed in residuum from tuff. The Puett variant soils are on side slopes of hills. Slopes are 30 to 50 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed (calcareous), mesic Lithic Torriorthents.

Typical pedon: Puett variant gravelly loam, 30 to 50 percent slopes, located in an area of Map Unit 1855. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 20 percent pebbles, 5 percent cobbles.

A1--0 to 2 inches; very pale brown (10YR 7/3) gravelly loam, yellowish brown (10YR 5/4) moist; strong very fine platy structure; soft, very friable, nonsticky, slightly plastic; few very fine roots; many fine and medium vesicular and common fine tubular pores; 15 percent pebbles, 1 percent cobbles; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (1 to 4 inches thick)
A2--2 to 6 inches; very pale brown (10YR 7/3) gravelly loam, yellowish brown (10YR 5/4) moist; strong very fine platy structure; slightly hard, very friable, nonsticky, slightly plastic; common very fine roots; common very fine tubular pores; 15 percent pebbles; strongly effervescent; strongly alkaline (pH 8.8); abrupt clear smooth . (3 to 5 inches thick)
C--6 to 17 inches; very pale brown (10YR 7/3) gravelly loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, slightly plastic; common very fine and fine roots; common very fine and few medium tubular pores; 20 percent pebbles, 2 percent cobbles; strongly effervescent; strongly

alkaline (pH 8.8); abrupt wavy boundary. (5 to 12 inches thick)
R--17 inches; welded tuff.

Type location: Elko County, Nevada; approximately 13 miles west of Midas; about 3,800 feet east and 200 feet north of the southwest corner of section 15, T. 38 N., R. 44 E., 41 degrees, 09 minutes, 58 seconds north latitude, 117 degrees, 00 minutes, 05 seconds west longitude.

Range in characteristics:

Soil moisture: Moist in winter and spring, dry mid-June through October.
Soil temperature: 47 to 52 degrees F.
Depth to bedrock: 10 to 20 inches.
Control section:
Clay content = 10 to 15 percent.
Rock fragments = 15 to 35 percent, mainly pebbles.

A horizon:
Value = 6 or 7 dry, 4 or 5 moist.

C horizon:
Value = 6 or 7 dry, 4 or 5 moist.

Quarz Series

The Quarz series consists of moderately deep, well drained soils that formed in residuum and colluvium from sandstone, shale, chert, conglomerate, quartzite, quartz latite, welded tuffs, andesite or rhyolite. Quarz soils are on low rock pediment remnants, plateaus, low hills and mountain side slopes. Slopes are 4 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Aridic Argixerolls

Typical pedon: Quarz very stony loam, 15 to 50 percent slopes, is located in an area of map unit 1725. (Colors are for dry soils unless otherwise noted.). The surface is covered with 15 percent pebbles and 5 percent cobbles and 5 percent stones.

A1--0 to 4 inches; brown (10YR 5/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and fine roots; many very fine, fine and medium vesicular and few fine tubular pores; 30 percent pebbles and 10 percent cobbles, 5 percent stones; neutral (pH 7.2); clear smooth boundary. (2 to 16 inches thick)
Bt1--4 to 12 inches; brown (10YR 5/3) very cobbly clay loam, dark brown (10YR 3/3) moist; moderate, medium subangular blocky structure; hard, friable, very sticky and plastic; many very fine and fine, and few medium roots; many very fine and fine tubular pores; common moderately thick clay films in pores, bridging sand grains and on faces of peds; 25 percent pebbles and 15 percent cobbles; neutral (pH 7.2); clear smooth boundary. (4 to 10 inches thick)
Bt2--12 to 17 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate, medium subangular blocky structure; hard, firm, very sticky and very plastic; common very fine and few fine roots; common fine tubular pores; many thick clay films in pores, bridging sand grains and on faces of peds; 40 percent pebbles and 10 percent cobbles; neutral (pH 7.2); clear smooth boundary. (5 to 15 inches thick)
Bt3--17 to 26 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 4/4) moist; massive; hard, firm, very sticky and very plastic; few fine roots; common fine tubular pores; many thick clay films in pores, bridging sand grains and on faces of peds; few medium soft lime masses and threads; 40 percent pebbles and 15 percent cobbles; neutral (pH 7.0); abrupt wavy boundary. (0 to 10 inches thick)
R--26 inches; highly fractured welded tuff.

Type location: Elko County, Nevada; approximately 2 miles southeast of Eagle Rock Reservoir; about 1,500 feet south and 2,000 feet east of the northwest corner of section 21, T. 38 N., R. 53 E.; 41 degrees, 10 minutes, 25 seconds north latitude, 116 degrees, 08 minutes, 40 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry late July through October
Soil temperature: 44 to 47 degrees F.
Depth to bedrock: 20 to 40 inches.
Mollic epipedon thickness: 7 to 16 inches which includes the upper part of the argillic horizon in some pedons.
Reaction: Neutral or mildly alkaline.
Control section:
Clay content--35 to 55 percent.
Rock fragments--Averages 35 to 60 percent, mainly pebbles with up to 15 percent that are cobbles or stones.

A horizon:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Hue--5YR, 7.5YR or 10YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--3 through 5.
Texture--Dominantly very gravelly clay loam or very gravelly clay with very cobbly clay loam or extremely gravelly clay common in some subhorizons.
Structure--Subangular blocky, angular blocky or prismatic.

Ramires Series

The Ramires series consists of moderately deep, well drained soils that formed in residuum from tuff, andesite and rhyolite with a component of loess high in volcanic ash. Ramires soils are on side slopes of hills and mountains and fan piedmonts with a rock core. Slopes are 15 to 50 percent. Mean annual precipitation is about 11 inches and mean temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Aridic Calcic Argixerolls

Typical pedon: Ramires silt loam, 8 to 15 percent slopes, located in an area of map unit 2803. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 15 percent pebbles and 5 percent cobbles.

A1--0 to 2 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak medium platy structure parting to moderate fine and very fine granular; soft, very friable, slightly sticky and slightly plastic; few medium, many fine and very fine roots; common medium, many fine and very fine interstitial pores; 10 percent pebbles; mildly alkaline (pH 7.8); gradual wavy boundary. (1 to 4 inches thick)

A2--2 to 5 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak thin platy structure parting to moderate medium and fine granular; soft, very friable; slightly sticky and slightly plastic; few medium, many fine and very fine roots; common medium and many fine and very fine interstitial pores; 5 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary. (3 to 9 inches thick)

Bt1--5 to 9 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; weak medium prismatic structure parting to moderate medium and coarse subangular blocky; hard, firm, sticky and plastic; many fine, common medium and very fine roots; many fine, few medium interstitial and tubular pores; common moderately thick clay films on faces of peds and lining pores; 10 percent pebbles; moderately alkaline (pH 8.0); clear wavy boundary. (4 to 8 inches thick)

Bt2--9 to 14 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/4) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, firm, sticky and plastic; common fine, few medium and very fine roots; common fine and very fine interstitial pores; common moderately thick clay films on faces of peds and lining pores; 10 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (5 to 12 inches thick)

Btk--14 to 24 inches; pale brown (10YR 6/3) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure; hard, friable, sticky and plastic; common medium and fine roots; common medium and fine interstitial pores; few thin clay films on faces of peds; 25 percent pebbles; slightly effervescent, lime is disseminated; moderately alkaline (pH 8.4); gradual wavy boundary. (0 to 10 inches thick)

Bk--24 to 40 inches; pale brown (10YR 6/3) very cobbly loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, nonsticky and nonplastic; few medium and fine roots; few medium and fine interstitial pores; 20 percent pebbles, 30 percent cobbles; few fine soft masses of lime, strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary. (4 to 16 inches thick)

R--40 inches; welded tuff.

Type location: Elko County, Nevada; in an unsectionized area, approximately 7 miles southwest of Wilson Reservoir; 41 degrees, 35 minutes, 02 seconds north latitude, 116 degrees, 25 minutes, 25 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry mid June to mid October
Soil temperature: 45 to 47 degrees F.
Mollic epipedon thickness: 8 to 15 inches and commonly includes the upper Bt horizons.
Depth to the base of the Bt horizon: 20 to 36 inches.
Depth to bedrock: 24 to 40 inches.
Other features: Some pedons lack Bk horizons, but have a lower Btk subhorizon that extends to the bedrock, or have Btk horizons above the Bk.
Control section:
Clay content--35 to 50 percent.
Rock fragments--Up to 35 percent, mainly pebbles with some cobbles.

A horizons:
Chroma--1 through 3.
Reaction--Neutral or mildly alkaline.

Bt and Btk horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 through 4.

Texture--Gravelly clay, gravelly sandy clay, gravelly clay loam, clay loam or clay. Some pedons have a thin subhorizon of very gravelly clay above the lithic contact.
Structure--Weak to strong medium or coarse subangular blocky, weak or moderate fine to coarse prismatic.
Consistence--Hard or very hard, friable or firm, sticky or very sticky, plastic or very plastic.
Reaction--Neutral to moderately alkaline.
Other features--The lower Bt subhorizons of some pedons contain secondary carbonates.

Bk horizon:
Value--4 through 7 moist.
Chroma--2 thorugh 4.
Texture--Sandy clay loam or sandy loam.
Rock fragments--10 to 50 percent, mainly pebbles and cobbles.

Ratsow Series

The Ratsow series consists of moderately deep, well drained soils that formed in residuum from rhyolite. Ratsow soils are on hills. Slopes are 0 to 15 percent. Mean annual precipitation is about 11 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Xerollic Durargids

Typical pedon: Ratsow loam, 4 to 15 percent slopes, located in an area of map unit 3100. (Colors are for dry soil unless otherwise noted.)

Al--0 to 2 inches; light brownish gray (10YR 6/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine vesicular pores; mildly alkaline (pH 7.4); clear smooth boundary. (l to 3 inches thick)
A2--2 to 7 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 3/3) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; few fine tubular pores; mildly alkaline (pH 7.4); clear smooth boundary. (3 to 6 inches thick)
Bt1--7 to 15 inches; light yellowish brown (10YR 6/4) clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; very hard, firm, sticky and plastic; few medium, fine, and very fine roots; few fine and very fine tubular pores; few thin clay films lining pores; mildly alkaline (pH 7.4); clear smooth boundary. (5 to 9 inches thick)
Bt2--15 to 23 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 4/4) moist; weak coarse prismatic structure parting to strong medium angular blocky; extremely hard, very firm, very sticky and very plastic; few medium, fine, and very fine roots; many moderately thick clay films on faces of peds; 5 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (7 to 9 inches thick)
Btk--23 to 27 inches; yellowish brown (10YR 5/6) clay loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; hard, very firm, sticky and very plastic; few very fine roots; few very fine tubular pores; common moderately thick clay films on faces of peds; 5 percent pebbles; few medium lime filaments; slightly effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (2 to 5 inches thick)
Bk--27 to 29 inches; very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, slightly sticky and slightly plastic; 10 percent pebbles; common fine lime in soft masses; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary. (0 to 2 inches thick)
Bqkm--29 to 30 inches; very pale brown (10YR 7/3) indurated duripan, pale brown (10YR 6/3) moist; silica lamina are 3 millimeters thick; extremely hard, extremely firm; thick root mat on surface of duripan; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary. (l/2 to 4 inches thick)
R--30 inches; rhyolite.

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 12 miles northwest of Midas; 41 degrees, 24 minutes, 20 seconds north latitude, 116 degrees, 54 minutes, 09 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry in early June through October
Soil temperature: 44 to 47 degrees F.
Solum thickness: 18 to 30 inches.
Depth to the base of the argillic horizons: 18 to 30 inches.
Depth to duripan: 20 to 30 inches.
Depth to bedrock: 21 to 34 inches.
Depth to lime: 18 to 25 inches.
Control section:
Clay content--35 to 50 percent.
Rock fragments--0 to 15 percent, mainly pebbles.

A horizons:
Value--3 or 4 moist.
Chroma--2 or 3.

Bt1 horizon:
Value--3 or 4 moist.

Bt2 horizon:
Value--5 or 6 dry, 4 or 5 moist.
Chroma--4 to 6.
Texture--Heavy clay loam, clay.

Bk horizon:
Value--5 to 7 dry, 4 or 5 moist.
Chroma--4 to 6.
Rock fragments--0 to 25 percent, mainly pebbles.

Bqkm horizon:
Value--7 or 8 dry, 6 or 7 moist.
Chroma--2 to 4.
Thickness of laminae--I to 5 millimeters.

Relley Series

The Relley series consists of very deep, well drained soils that formed in mixed silty alluvium from mostly volcanic rocks with a component of loess and volcanic ash. These soils are on fan skirts and inset fans. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Fine-silty, mixed, mesic Duric Camborthids

Typical pedon: Relley silt loam, 0 to 2 percent slopes, frequently flooded, is located in an area of map unit 3010. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; pale brown (10YR 6/3) silt loam, brown (10YR 5/3) moist; weak thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common coarse, medium and fine vesicular pores; moderately alkaline (pH 8.2); abrupt smooth boundary. (2 to 8 inches thick)
A2--3 to 6 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; moderate fine platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; few fine vesicular and tubular pores; moderately alkaline (pH 8.2); clear smooth boundary. (2 to 8 inches thick)
Bw--6 to 14 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/4) moist; weak medium and fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few coarse, medium, fine and very fine roots; few fine tubular pores; moderately alkaline (pH 8.0); clear smooth boundary. (6 to 11 inches thick)
Bq--14 to 25 inches; very pale brown (10YR 8/3) silt loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, sticky and plastic; few medium and fine roots; few fine tubular pores; 25 percent brittle durinodes; moderately alkaline (pH 8.4); clear smooth boundary. (10 to 12 inches thick)
Bqk1--25 to 35 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, sticky and plastic; few fine and very fine roots; few fine tubular pores; 20 percent brittle durinodes; slightly effervescent in spots; strongly alkaline (pH 8.6); clear smooth boundary. (4 to 14 inches thick)
Bqk2--35 to 53 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; common medium faint yellowish brown (10YR 5/4) mottles; massive; slightly hard, very friable, sticky and plastic; few fine and very fine roots; 25 percent brittle durinodes; slightly effervescent; lime is in few fine filaments and soft masses; strongly alkaline (pH 8.6); clear wavy boundary. (0 to 19 inches thick)
Bqk3--53 to 60 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; common medium faint yellowish brown (10YR 5/4) mottles; massive; hard, firm and brittle, sticky and plastic; few fine and very fine roots; weak continuous brittle matrix; violently effervescent; lime is in common medium filaments and soft masses; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; in an unsectionized area, about 27 miles west of Josephine Reservoir; 41 degrees, 56 minutes, 09 seconds north latitude, 116 degrees, 59 minutes, 12 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry late May through November
Soil temperature: 47 to 53 degrees F.
Depth to duric horizons: 11 to 25 inches.
Depth to carbonates: 11 to 25 inches
Relict mottles: Faint or distinct relict mottles are common in any horizon below 16 inches.
Salt and sodium: These soils are normally moderately or strongly salt and sodium affected at depths below 30 inches.
Other features: Some pedons have coarse sandy loam textures below depths of 50 inches.
Control section:
Clay content--18 to 27 percent.

A horizons:
Value--6 or 7 dry, 3 through 5 moist.
Hue--2.5Y or 10YR.
Chroma--2 or 3.
Reaction--Moderately alkaline or strongly alkaline.

Bw horizon:
Value--6 or 7 dry, 3 through 6 moist.
Chroma--2 through 4 dry.
Structure--Prismatic, platy or subangular blocky.
Consistence--Slightly hard or hard, very friable or friable; slightly sticky or sticky and slightly plastic or plastic, wet.
Reaction--Moderately alkaline or strongly alkaline.

Bq, Bk and Bqk horizons:
Value--5 through 8 dry, 4 through 6 moist.
Chroma--2 through 4.

Texture--Silt loam with strata of very fine sandy loam or silty clay loam in some pedons.
Structure--Platy or it is massive.
Consistence--Slightly sticky or sticky and slightly plastic or plastic, wet.
Reaction--Moderately alkaline through very strongly alkaline.
Carbonates--Slightly to violently effervescent, noneffervescent Bq horizons are overlying Bqk horizons in some pedons.
Silica cementation--20 to 50 percent weak or strongly cemented durinodes. A 4 to 7-inch thick horizon that is 30 to 50 percent discontinuous weakly silica-cemented that is hard and brittle is common between depths of 16 to 34 inches.
Other features--A continuous weakly or strongly cemented hardpan is below 50 inches in some pedons.

Reluctan Series

The Reluctan series consists of moderately deep, well-drained soils that formed in residuum and colluvium weathered from volcanic rocks. Reluctan soils are on plateaus, hills and mountains. Slopes are 2 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine-loamy, mixed, frigid Aridic Argixerolls

Typical pedon: Reluctan cobbly loam, 15 to 30 percent slopes in an area of map unit 1711. (Colors for dry soils unless otherwise noted.) The soil surface is covered by 10 percent pebbles and 10 percent cobbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate very fine platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 10 percent pebbles, 10 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary. (2 to 5 inches thick)
A2--2 to 9 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; moderate very fine platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; common very fine tubular pores; 10 percent pebbles, 5 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary. (4 to 11 inches thick)
Bt1--9 to 15 inches; yellowish brown (10YR 5/4) gravelly loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine, few fine and medium roots; common very fine tubular pores; 15 percent pebbles; few thin clay films on faces of peds and lining pores; mildly alkaline (pH 7.6); clear smooth boundary. (2 to 10 inches thick)
Bt2--15 to 27 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; common very fine and few fine roots; common very fine tubular pores; 20 percent pebbles, 7 percent cobbles; common thin clay films on faces of peds and lining pores; mildly alkaline (pH 7.6); abrupt wavy boundary. (10 to 25 inches thick)
R--27 inches; slightly weathered rhyolite.

Type location: Elko County, Nevada; approximately 3 miles west of Midas; about 800 feet east and 1,200 feet south of the northwest corner of section 24, T. 39 N., R. 45 E.; 41 degrees, 14 minutes, 48 seconds north latitude, 116 degrees, 51 minutes, 03 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from July to October
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 7 to 17 inches. Commonly includes part of argillic horizon.
Solum thickness: 20 to 40 inches.
Depth to bedrock: 20 to 40 inches.

A horizons:
Value--4 or 5 dry.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

Bt horizons:
Value--4 through 6 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Gravelly loam or gravelly clay loam.
Clay content--25 to 35 percent.
Rock fragments--15 to 35 percent, mainly pebbles.
Consistence--Very friable to firm, moist; slightly sticky or sticky and slightly plastic or plastic, wet.
Reaction--Neutral or mildly alkaline, usually increasing with depth.

Rugar Series

The Rugar series consists of deep, moderately well drained soils that formed in residuum from tuffaceous siltstone, claystone and sandstone. Rugar soils are on fan piedmont remnants with a rock core, concave side slopes and foot slopes of hills and mountains. Slopes are 2 to 30 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 43 to degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Pachic Argixerolls

Typical pedon: Rugar clay loam, 15 to 30 percent slopes, located in an area of map unit 1742. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; weak very fine and fine subangular blocky structure parting to moderate fine and medium granular; slightly hard, very friable, sticky and plastic; many very fine, common fine, and few coarse roots; common very fine and few fine tubular pores; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary. (2 to 4 inches thick)

A2--2 to 20 inches; grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; hard, friable, sticky and plastic; common very fine, fine, medium and few coarse roots; many very fine, fine and few medium tubular pores; 5 percent pebbles; neutral (pH 6.6); abrupt smooth boundary. (16 to 20 inches thick)

Bt1--20 to 27 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; few fine prominent reddish yellow (7.5YR 6/6) moist, iron mottles; moderate medium and coarse angular blocky structure; hard, firm, sticky and very plastic; few very fine, fine and coarse roots; common very fine, fine and few medium tubular pores; common stress surfaces; few fine iron-manganese nodules; 10 percent pebbles and 2 percent cobbles; slightly acid (pH 6.2); clear wavy boundary. (6 to 12 inches thick)

Bt2--27 to 43 inches; yellowish brown (10YR 5/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; common fine and medium, prominent strong brown (7.5YR 5/6) moist, iron mottles; moderate coarse and very coarse angular blocky structure; very hard, firm, very sticky and very plastic; few very fine roots; common very fine, fine, and few medium tubular pores; common stress surfaces; few, fine iron-manganese nodules; 20 percent soft weathered pebbles slightly acid (pH 6.2); clear wavy boundary. (16 to 24 inches thick)

Cr--43 to 60 inches; highly weathered soft siltstone maintaining primarily rock structure; common fine iron manganese nodules.

Type location: Elko County, Nevada; approximately 2 miles south of Bull Run Reservoir; about 500 feet west and 400 feet south of the northeast corner of section 29, T. 43 N., R. 52 E.; 41 degrees, 36 minutes, 10 seconds north latitude, 116 degrees, 08 minutes, 50 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist; moist in winter and spring, dry late July through late October

Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 24 to 36 inches.
Depth to base of argillic horizons: 40 to 60 inches.
Depth to paralithic contact: 40 to 60 inches.
Reaction: Neutral to slightly acid.
Control section:
Clay percent--40 to 55 percent.
Rock fragments--5 to 30 percent, mainly pebbles.

Bt horizons:
Value--3 or 4 moist.
Chroma--3 or 4 dry and moist.
Texture--Clay or gravelly clay.
Structure--Moderate medium, coarse and very coarse angular blocky; or weak medium prismatic.
Other features--Most fragments are siltstone, are soft and will slake after overnight soaking

Shabliss Series

The Shabliss series consists of shallow over a duripan, well drained soils that formed in alluvium from mixed rock sources with a thin loess mantle high in volcanic ash. The Shabliss soils are on partial ballenas, terraces and fan piedmont remnants. Slopes are 0 to 50 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Haploxerollic Durorthids

Typical pedon: Shabliss very fine sandy loam, 0 to 2 percent slopes, located in an area of map unit 1351. (Colors are for dry soil unless otherwise noted).

A1--0 to 2 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; weak thin platy structures; soft, very friable, slightly sticky and slightly plastic; few fine roots; common medium vesicular pores; moderately alkaline (pH 8.2); abrupt smooth boundary.

A2--2 to 6 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; moderate medium platy structure; soft, very friable, slightly sticky and slightly plastic; few medium, fine and very fine roots; common fine vesicular pores; moderately alkaline (pH 8.2); abrupt smooth boundary. (Combined thickness of A horizons is 2 to 6 inches)

Bw--6 to 10 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; moderate fine subangular blocky structure, soft friable, slightly sticky and slightly plastic; few medium, fine and very fine roots; few very fine discontinuous pores; moderately alkaline (pH 8.2); abrupt smooth boundary. (4 to 10 inches thick)

Bqkm--10 to 16 inches; light yellowish brown (10YR 6/4) continuous strongly cemented duripan, dark brown (10YR 4/3) moist; strong, thick platy structure; very hard, very firm; few fine roots between duripan plates; few very fine discontinuous pores; slightly effervescent; few fine filaments and soft masses of lime; moderately alkaline (pH 8.2); clear smooth boundary. (5 to 18 inches thick)

Bqk1--16 to 24 inches; very pale brown (10YR 7/4) loam, brown (10YR 5/3) moist; massive; hard, firm, slightly sticky and slightly plastic; very few fine and very fine roots; few fine discontinuous pores; weak silica and lime cementation; 10 percent durinodes; strongly effervescent; very strongly alkaline (pH 9.2); clear wavy boundary. (0 to 10 inches thick)

Bqk2--24 to 35 inches; light gray (10YR 7/2) fine sandy loam, pale brown (10YR 6/3) moist; massive; hard, firm, slightly sticky and slightly plastic; very few fine roots; few fine discontinuous pores; weak silica and lime cementation; 20 percent durinodes; 5 percent pebbles; strongly effervescent; few fine filaments and soft masses of lime; very strongly alkaline (pH 9.2); clear wavy boundary. (0 to 18 inches thick)

2Bk--35 to 42 inches; very pale brown (10YR 7/3) very gravelly fine sandy loam, light yellowish brown (10YR 6/4) moist; massive; soft, friable, nonsticky and nonplastic; 50 percent pebbles; strongly effervescent; few fine filaments and soft masses of lime; strongly alkaline (pH 9.0); gradual wavy boundary. (0 to 25 inches thick)

Bqk3-42 to 60 inches; very pale brown (10YR 7/3) very gravelly loamy sand, yellowish brown (10YR 5/4) moist; massive; hard, firm, nonsticky and nonplastic; weak silica and lime cementation; moderately alkaline 40 percent pebble size duripan fragments; strongly effervescent; few fine filaments and soft masses of lime; (pH 8.2).

Type location: Elko County, Nevada; in an unsectionized area, about 18 miles north of Midas; 41 degrees, 34 minutes, 19 seconds north latitude, 116 degrees, 39 minutes, 26 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist during winter and spring, dry summer through fall
Soil temperature: 47 to 55 degrees F.
Depth to base of Bw horizon: 10 to 15 inches.
Depth to strongly cemented duripan: 10 to 20 inches.
Depth to bedrock: 60 inches or more.
Control section:
Clay content--5 to 15 percent.
Rock fragments--Averages 0 to 25 percent.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Neutral to moderately alkaline.
Other features--Some pedons have few fine soft pockets and films of lime and are violently effervescent.

Bw horizon:
Value--5 or 6 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Very fine sandy loam, silt loam or loam with thin subhorizons with fine sandy loam in some pedons.
Consistence--Soft to very friable, very friable to friable, nonsticky to slightly sticky and nonplastic to slightly plastic.
Reaction--Neutral to strongly alkaline.
Other features--Some pedons have few fine soft films of lime that are effervescent in pockets.

Bqkm horizon:
Structure--Platy or massive.
Consistence--Very hard or extremely hard.
Other features--In some pedons, 2 or more strongly cemented layers are interbedded with weakly cemented material.
Other features--Strongly to violently effervescent.

Bqk and Bk horizons:
Clay content--0 to 10 percent.
Rock fragments--Some pedons are gravelly or very gravelly below the duripan.
Reaction--Moderately alkaline through very strongly alkaline.
Cementation--The Bqk horizons have 5 to 45 percent extremely hard, extremely firm, brittle 1/8 to 1/2 inch cylindrical durinodes in a friable or firm matrix or have a continuous brittle matrix.

Shalake Series

The Shalake series consists of moderately deep, well drained soils that formed in loess and alluvium from mixed volcanic rocks. Shalake soils are on broad summits and sides slopes of fan piedmont remnants. Slopes are 0 to 4 percent. Mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Xerollic Durorthids

Typical pedon: Shalake very fine sandy loam, 0 to 2 percent slopes, located in an area of map unit 2600. (Colors are for dry soil unless otherwise noted.)

Al--0 to 3 inches; pale brown (10YR 6/3) very fine sandy loam, brown (10YR 4/3) moist; moderate thick platy structure parting to strong thin platy; slightly hard, very friable, nonsticky and nonplastic; few fine and very fine roots; few medium and many

fine vesicular pores; mildly alkaline (pH 7.6); abrupt smooth boundary. (2 to 4 inches thick)
A2--3 to 8 inches; pale brown (10YR 6/3) very fine sandy loam, brown (10YR 4/3) moist; moderate thin platy structure; hard, friable, nonsticky and nonplastic; few medium, fine and very fine roots; many very fine vesicular pores; mildly alkaline (pH 7.8); clear smooth boundary. (I to 5 inches thick)
Bq--8 to 13 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few medium, fine and very fine roots; few very fine vesicular pores; 10 percent pebbles; 15 percent weak silica cemented durinodes; mildly alkaline (pH 7.8); abrupt wavy boundary. (3 to 10 inches thick)
Bqk1--13 to 18 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, brittle, nonsticky and nonplastic; few fine and very fine roots; 15 percent pebbles; 35 percent brittle durinodes; continuous brittle matrix; common fine lime in filaments; strongly effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary. (5 to 12 inches thick)
Bqk2--18 to 25 inches; very pale brown (10YR 8/3) gravelly loam, very pale brown (10YR 7/4) moist; massive; very hard, very firm, brittle, nonsticky and nonplastic; few fine and very fine roots; 30 percent pebbles; 40 percent brittle durinodes; continuous brittle matrix; violently effervescent, lime is disseminated; moderately alkaline (pH 8.0); abrupt wavy boundary. (5 to 10 inches thick)
Bqkm1--25 to 30 inches; very pale brown (10YR 8/3) continuous indurated duripan, very pale brown (10YR 7/3) moist; massive; extremely hard; extremely firm; strongly effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary. (5 to 29 inches thick)
Bqkm2--30 to 60 inches; very pale brown (10YR 8/3) fractured indurated duripan; light gray (10YR 7/2) moist; strong thick and very thick platy; extremely hard, extremely firm; strongly effervescent; strongly alkaline (pH 8.8).

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, about 15 miles north of Midas; 41 degrees, 31 minutes, 38 seconds north latitude, 116 degrees, 37 minutes, 44 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry in summer and early autumn
Soil temperature: 47 to 52 degrees F.
Depth to continuous silica cementation: 10 to 20 inches.
Depth to duripan: 20 to 40 inches.
Control section:
Clay content--12 to 18 percent.
Rock fragments--10 to 35 percent, mainly pebbles.

A horizons:
Value--3 or 4 moist.
Chroma--2 or 3.

Bq, Bqk horizons:
Value--6 through 8 dry, 4 through 7 moist.
Chroma--3 or 4.
Texture--Loam, gravelly loam, gravelly silt loam.
Durinodes--Averages 20 to 50 percent.

Shalper Series

The Shalper series consists of shallow, well drained soils that formed in residuum and colluvium from welded tuff, rhyolite and other igneous rocks. The Shalper soils are on side slopes and crests or summits of hills and fan piedmonts with a rock core. Slopes are 2 to 50 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Shalper very gravelly loam, 4 to 15 percent slopes, is located in an area of the map unit 625. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by 50 percent pebbles and 5 percent cobbles.

A1--0 to 2 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; common very fine, fine and medium roots; few very fine tubular pores; 35 percent pebbles; neutral (pH 6.8); abrupt smooth boundary. (I to 6 inches thick.)
Bt1--2 to 7 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; few thin clay films lining pores; 45 percent pebbles; neutral (pH 7.0); clear wavy boundary. (3 to 5 inches thick.)
Bt2--7 to 11 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; common thin clay films on faces of peds; 45 percent pebbles; neutral (pH 7.0); (0 to 5 inches thick.)
R--11 inches; hard, fractured rhyolite.

Type location: Elko, County, Nevada; approximately 11 miles west of Midas; about 200 feet east and 700 feet south of the northwest corner of section 10, T. 38 N., R. 44 E.; 41 degrees, 11 minutes, 37 seconds north latitude, 117 degrees, 00 minutes, 28 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from July through October for 70 to 100 consecutive days
Soil temperature: 45 to 47 degrees F.
Mollic epipedon thickness: 4 to 12 inches.
Control section:
Clay content--18 to 28 percent.
Rock fragments--35 to 60 percent, mainly pebbles.
Depth to bedrock--4 to 12 inches.
Other features--In some pedons the mollic epipedon includes all of the Bt horizon and is underlain directly by rock.

A horizon:
Value--5 or 6 dry, 3 or 4 moist; when the upper 7 inches are mixed, value is less than 5.5 dry and is 3 moist.
Chroma--2 or 3.

Bt horizons:
Value--3 or 4 moist.
Chroma--3 or 4 moist.
Texture--Very gravelly loam or very gravelly clay loam.
Clay content--Averages 24 to 35 percent.
Rock fragments--35 to 60 percent, mainly pebbles.
Structure--Weak to moderate subangular blocky and angular blocky.
Other features--Some pedons have thin subhorizons of clay, modified by 35 to 65 percent rock fragments directly over bedrock.

Shively Series

The Shively series consists of deep, well drained soils that formed in colluvium and residuum primarily from tuffaceous sandstone, rhyolite and welded tuff. Shively soils are on concave mountain and hill side slopes with northerly aspects. Slopes are 15 to 75 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Coarse-loamy, mixed, frigid Pachic Haploxerolls

Typical pedon: Shively loam, 30 to 50 percent slopes, located in an area of map unit 1810. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent pebbles and 2 percent cobbles.

A1--0 to 2 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; soft, very friable; many fine roots; many fine tubular pores; 5 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (2 to 10 inches thick)
A1--2 to 9 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak medium subangular structure; soft, very friable, slightly sticky, slightly plastic; many very fine, common fine roots; many very fine tubular pores; 5 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (5 to 10 inches thick)
A3--9 to 21 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky, slightly plastic; many fine and very fine, few medium roots; many very fine tubular pores; 10 percent pebbles; mildly alkaline (pH 7.4); clear wavy boundary. (5 to 12 inches thick)
C--21 to 41 inches; light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 4/4) moist; common dark grayish brown (10YR 4/2) stains in ped and on faces of peds, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky, plastic; many fine and very fine, few medium roots; many very fine tubular pores; 5 percent pebbles, 5 percent cobbles, 4 percent stones; mildly alkaline (pH 7.4); abrupt wavy boundary. (10 to 25 inches thick)
Cr--41 inches; weathered tuff.

Type location: Elko County, Nevada; approximately 10 miles west of Tuscarora; about 1,400 feet south and 1100 feet east of the northwest corner of section 14, T. 40 N., R. 49 E.; 41 degrees, 20 minutes, 55 seconds north latitude, 116 degrees, 24 minutes, 40 seconds west longitude.

Range in Characteristics

Soil moisture: Moist winter and spring, dry late July through early October
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 20 to 35 inches.
Profile reaction: Neutral to mildly alkaline.
Depth to paralithic contact: 40 to 60 inches.
Control section:
Textures--Loam, sandy loam or fine sandy loam in the upper part, fine sandy loam, sandy loam or sandy clay loam in the lower part.
Clay content--10 to 18 percent.
Rock fragments--0 to 30 percent, mainly pebbles in any one horizon, but averages 0 to 15 percent.

A horizons:
Value--2 through 5 dry, 2 or 3 moist with value of 2 dry common only in the surface subhorizon of some pedons.

Chroma--1 through 3.

C horizon:
Value--5 or 6 dry, 3 through 5 moist.
Chroma--1 through 4.
Structure--Subangular blocky or is massive.

Cr horizon: (when present above 60 inches):
Other features--Reflects colors of parent material.

Short Creek Series

The Short Creek series consists of very deep, well drained soils that formed in alluvium from mixed rock sources. Short Creek soils are on fan piedmont remnants. Slopes are 30 to 50 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Xerollic Haplargids

Typical pedon: Short Creek gravelly clay loam, 30 to 50 percent slopes, located in the adjoining Tuscarora Mountain Area, Nevada soil survey. (Colors are for dry soil unless otherwise noted.)

A--0 to 2 inches; light brownish gray (10YR 6/2) gravelly clay loam, very dark grayish brown (10YR 3/2) moist; strong very fine granular structure; slightly hard, friable, sticky and plastic; many very fine, and few fine roots; many very fine tubular pores; 20 percent pebbles; neutral (pH 6.8); abrupt smooth boundary. (1 to 9 inches thick)

Bt1--2 to 8 inches; brown (10YR 5/3) very gravelly clay loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, friable, sticky and plastic; many very fine and fine roots; common very friable, sticky and plastic; many very fine and fine roots; common very fine tubular pores; common moderately thick clay films on peds, and continuous moderately thick clay films lining pores; 40 percent pebbles; neutral (pH 7.0); abrupt wavy boundary. (3 to 10 inches thick)

Bt2--8 to 15 inches; brown (10YR 5/3) gravelly clay, dark yellowish brown (10YR 4/4) moist; weak coarse prismatic structure; hard, firm, very sticky and very plastic; common very fine roots; common very fine tubular pores; continuous moderately thick clay films on peds and lining pores; 25 percent pebbles; neutral (pH 7.0); gradual smooth boundary. (5 to 14 inches thick)

Bt3--15 to 23 inches; brown (10YR 5/3) very gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; continuous moderately thick clay films on peds and in pores; 45 percent pebbles; neutral (pH 7.2); gradual wavy boundary. (6 to 21 inches thick)

Bt4--23 to 50 inches; brown (10YR 5/3) extremely gravelly sandy clay, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, very sticky and plastic; few very fine roots; common very fine tubular pores; continuous thick clay films bridging and coating sand grains and pebbles; 70 percent pebbles; moderately alkaline (pH 8.0); gradual irregular boundary; (0 to 30 inches thick)

Btk--50 to 60 inches; pale brown (10YR 6/3) extremely gravelly sandy clay, dark yellowish brown (10YR 4/4) moist, few medium and coarse dark reddish brown (5YR 3/3), strong brown (7.5YR 5/8), dark brown (7.5YR 3/2), and black (10YR 2/1) mottles; massive; hard, friable, very sticky and plastic; few very fine roots; many fine interstitial, and few fine tubular pores; many thin and few moderately thick clay films in pores, common moderately thick clay films bridging sand grains and coating pebbles; 70 percent pebbles; slightly effervescent; moderately alkaline (pH 8.3).

Type location: Elko County, Nevada; approximately 3 miles southwest of the Stampede Ranch of Maggie Creek; about 2,650 feet east of the northwest corner of section 16, T. 37 N., R. 52 E.; 41 degrees, 06 minutes, 19 seconds north latitude, 116 degrees, 08 minutes, 06 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry June through October
Soil temperature: 45 to 47 degrees F.
Depth to lime: 30 to 54 inches.
Depth to base of argillic horizon: 30 to 60 inches.
Control section:
Profile reaction: Neutral to strongly alkaline increasing with depth.
Clay content--40 to 50 percent.
Rock fragments--Averages 35 to 50 percent, mainly pebbles.

A horizon:
Value--5 to 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Other features--Thickness of this horizon with dry value of 5 is less than 1/3 of solum.

Upper Bt horizons:
Value--4 through 6 dry or moist.
Chroma--2 through 4.
Rock fragments--Averages 35 to 60 percent, mainly pebbles.
Structure--Weak to moderate, fine to coarse prismatic, weak to strong subangular blocky.
Consistence--Hard or very hard dry.

Other features--Upper boundary is abrupt or clear and if abrupt, it has less than 15 percent clay increase between the A and Bt subhorizons.

Lower Bt or Btk horizons:
Texture--Sandy clay loam, clay loam, sandy clay.
Clay content--30 to 40 percent.
Rock fragments--60 to 70 percent, mainly pebbles.

Skull Creek Series

The Skull Creek series consists of moderately deep, well drained soils that formed in loess high in volcanic ash over mixed alluvium. The Skull Creek soils are on fan piedmonts and fan piedmonts remnants. Slopes are 0 to 8 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Xerollic Durorthids

Typical pedon: Skull Creek, very fine sandy loam, 2 to 8 percent slopes, located in an area of map unit 1210. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; strong very thin platy structure; soft, very friable; many very fine and few fine roots; many very fine vesicular pores; mildly alkaline (pH 7.6); clear smooth boundary. (1 to 8 inches thick)
A2--2 to 6 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; moderate very thin platy structure; slightly hard, friable; common very fine and few fine and medium roots; common very fine vesicular and few very fine tubular pores; mildly alkaline (pH 7.8); clear smooth boundary. (1 to 5 inches thick)
Bw1--6 to 11 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky, slightly plastic; common very fine and fine roots; common very fine tubular pores; 5 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary. (0 to 5 inches thick)
Bw2--11 to 15 inches; very pale brown (10YR 7/3) gravelly loam, dark brown (10YR 4/3) moist; weak fine subangular blocky; slightly hard, friable, slightly sticky, slightly plastic; common very fine and fine roots; common very fine tubular pores; 15 percent pebbles; moderately alkaline (pH 8.2). (3 to 8 inches thick)
Bqk1--15 to 23 inches; light gray (10YR 7/2) gravelly sandy loam, dark brown (10YR 4/3) moist; massive; hard, friable, slightly sticky and slightly plastic; common very fine roots; few fine tubular pores; 15 percent 5 to 15 millimeter durinodes; effervescent with common fine lime filaments; 25 percent pebbles; moderately alkaline (pH 8.4); clear smooth boundary. (5 to 12 inches thick)
Bqk2--23 to 34 inches; very pale brown (10YR 7/3) gravelly sandy loam, dark brown (10YR 4/3) moist; massive; hard, friable; few very fine roots, few fine tubular pores; 25 percent 5 to 15 millimeter durinodes; strongly effervescent with common medium lime filaments; 20 percent pebbles; moderately alkaline (pH 8.4); abrupt wavy boundary. (0 to 11 inches thick)
Bqkm--34 inches; white (10YR 8/2) indurated duripan; strongly effervescent.

Type location: Elko County, Nevada; approximately 3.5 miles south of Rock Creek Ranch, about 1,600 feet north and 1,600 feet west of the southeast corner of section 6, T. 36 N., R. 47 E.; 41 degrees, 10 minutes, 04 seconds north latitude, 116 degrees, 42 minutes, 25 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry June through October
Soil temperature: 47 to 52 degrees F.
Depth to duripan: 20 to 40 inches.
Control section:
Clay content--8 to 18 percent.

A horizons:
Value--6 or 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Mildly alkaline or moderately alkaline.

Bw horizons:
Value--6 or 7 dry, 3 or 4 moist.
Chroma--3 or 4.
Texture--Loam, sandy loam, gravelly loam or gravelly sandy loam.
Rock fragments--0 to 30 percent, mainly pebbles.
Structure--Weak or moderate, fine or medium subangular blocky or it is massive.
Reaction--Moderately alkaline or strongly alkaline.

Bqk or Bqkm horizons:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--3 through 6.
Durinodes--0 to 30 percent.
Reaction--Moderately alkaline or strongly alkaline.

Snowmore Series

The Snowmore series consists of moderately deep to a duripan, well drained soils that formed in loess over residuum from basalt and rhyolite. Snowmore soils are on plateaus, calderas, structural benches and hills. Slopes are 0 to 30 percent. The mean annual

precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Xerollic Durargids

Typical pedon: Snowmore cobbly fine sandy loam, 2 to 4 percent slopes, located in an area of map unit 2780. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 10 percent pebbles and 15 percent cobbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) cobbly fine sandy loam, dark grayish brown (10YR 4/2) moist; weak fine platy structure parting to weak fine granular; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many fine and very fine vesicular pores; 10 percent pebbles, 15 percent cobbles, 1 percent stones; mildly alkaline (pH 7.6); abrupt smooth boundary. (2 to 4 inches thick)

A2--2 to 4 inches; light brownish gray (10YR 6/2) cobbly fine sandy loam, dark brown (10YR 4/3) moist; moderate fine platy structure; slightly hard, very friable, nonsticky and nonplastic; few medium and many very fine roots; common very fine vesicular pores; 10 percent pebbles, 10 percent cobbles; mildly alkaline (pH 7.8); abrupt smooth boundary. (0 to 4 inches thick)

Bt1--4 to 8 inches; light brownish gray (10YR 6/2) loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and plastic; common fine and very fine roots; common fine tubular and interstitial pores; few thin clay films lining pores; 10 percent pebbles; mildly alkaline (pH 7.8); abrupt wavy boundary. (2 to 9 inches thick)

Bt2--8 to 13 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; few medium and coarse, common fine and very fine roots; few very fine interstitial pores; common moderately thick clay films on faces of peds and lining pores; 5 percent pebbles; mildly alkaline (pH 7.0); abrupt wavy boundary. (3 to 8 inches thick)

Bq--13 to 16 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; few very fine interstitial pores; continuous weak silica cementation; 15 percent brittle durinodes; 5 percent pebbles; moderately alkaline (pH 8.4); abrupt wavy boundary. (0 to 8 inches thick)

Bqk--16 to 22 inches; very pale brown (10YR 7/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; massive; hard, firm and brittle, slightly sticky and slightly plastic; few very fine roots; continuous brittle matrix; 20 percent brittle durinodes; 20 percent pebbles, 5 percent cobbles; common fine lime in soft masses and filaments; strongly effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary. (0 to 20 inches thick)

Bqkm--22 to 28 inches; white (10YR 8/2) indurated duripan, dark grayish brown (10YR 4/2) moist; massive; extremely hard, extremely firm; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary. (3 to 10 inches thick)

R--28 inches; rhyolite bedrock.

Type location: Elko County, Nevada; in an unsectionized area of the Owyhee Desert, about 23 miles northwest of Midas; 41 degrees, 31 minutes, 25 seconds north latitude, 116 degrees, 58 minutes, 30 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry in June through October
Soil temperature: 47 to 52 degrees F.
Depth to Bq horizons: 11 to 18 inches.
Depth to duripan: 20 to 34 inches.
Depth to bedrock: 21 to 40 inches.
Control section:
Clay content--20 to 35 percent.
Rock fragments--0 to 15 percent, mainly pebbles.

A horizons:
Value--5 or 6 dry, 3 or 4 moist, the upper 7 inches after mixing does not have both value of 5 dry, and 3 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

Bt horizons:
Value--5 or 6 dry.
Chroma--2 through 4.
Texture--Loam, silt loam, clay loam or sandy clay loam.
Consistence--Slightly sticky or sticky and slightly plastic or plastic, wet.
Reaction--Mildly or moderately alkaline.

Bq, Bqk horizons:
Value--6 or 7 dry, 4 or 5 moist.
Chroma--3 or 4
Texture--loam, gravelly or cobbly fine sandy loam, gravelly loam or gravelly clay loam.
Reaction--moderately alkaline or strongly alkaline.
Effervescence--noneffervescent through strongly effervescent.

Bqkm horizon:
Value--7 or 8 dry, 4 or 5 moist.
Chroma--2 or 3.

Sodhouse Series

The Sodhouse series consists of shallow over a duripan, well-drained soils that formed in alluvium from mixed rock sources with some influence from loess and volcanic ash. These soils are on dissected fan piedmont remnants and plateaus. Slopes are 0 to 15 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Typic Durorthids

Typical pedon: Sodhouse silt loam, 0 to 2 percent slopes, is located in an area of map unit 3020. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by 10 percent pebbles.

A--0 to 6 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; strong very thick platy structure parting to weak thin platy; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine and fine vesicular pores; 5 percent pebbles, moderately alkaline (pH 8.2); abrupt smooth boundary. (1 to 6 inches thick)

Bw--6 to 10 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, and few medium roots; many very fine and fine tubular pores; 5 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); clear smooth boundary. (3 to 7 inches thick)

Bq--10 to 19 inches; light yellowish brown (10YR 6/4) loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, slightly sticky and slightly plastic; common fine and few medium roots; few fine interstitial pores; 5 percent pebbles; 20 percent durinodes in a weakly brittle matrix; moderately alkaline (pH 8.0); abrupt smooth boundary. (0 to 9 inches thick)

2Bqkm--19 to 25 inches; white (10YR 8/2) indurated duripan, very pale brown (10YR 7/3) moist; massive; extremely hard, extremely firm; 1 to 2 millimeters continuous laminar cap; violently effervescent; clear wavy boundary. (6 to 24 inches thick)

2Bqk--25 to 61 inches; very pale brown (10YR 7/4) gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, firm, nonsticky and nonplastic; many fine interstitial pores; 30 percent pebbles; discontinuous brittle matrix; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; in the Owyhee Desert, in an unsectionized area, about 35 miles northwest of Wilson Reservoir; 41 degrees, 53 minutes, 47 seconds north latitude, 116 degrees, 59 minutes, 18 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist for short periods in winter and spring, dry from June through November
Soil temperature: 47 to 53 degrees F.
Depth to indurated duripan: 14 to 20 inches.
Depth to 2Bqk horizon: 25 to 44 inches.
Reaction: Moderately alkaline or strongly alkaline usually increasing with depth.
Other features: Durinodes and lime accumulations are common in subhorizons immediately above the duripan of some pedons.
Control section:
Clay content--8 to 15 percent.

A horizon:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 or 3.
Other features--Normally noneffervescent, but some pedons are slightly effervescent due to lime recharge from dust.

Bw horizon:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--3 or 4.
Texture--Very fine sandy loam, fine sandy loam, silt loam, loam or gravelly loam.
Consistence--Slightly hard or hard dry, friable or firm moist.
Rock fragments--5 to 35 percent, mainly pebbles.

2Bqkm horizon:
Hue--10YR or 2.5Y.
Value--6 through 8 dry, 4 through 7 moist.
Chroma--2 through 4.
Structure--Platy or is massive.

2Bqk horizons:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--3 or 4.
Texture--Extremely gravelly sandy loam, gravelly loam, gravelly sandy loam, very gravelly loamy sand or very gravelly loamy coarse sand.
Consistence--Slightly hard to very hard dry; friable to very firm, moist.

Sonoma Series

The Sonoma series consists of very deep, poorly drained soils that formed in silty alluvium from mixed rocks with a component of volcanic ash. Sonoma soils are on flood plains, stream terraces, and basin floor remnants. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Aeric Fluvaquents

Typical pedon: Sonoma silt loam, 0 to 2 percent slopes, is located in an area of map unit 161. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; light gray (2.5Y 7/2) silt loam, dark grayish brown (2.5Y 4/2) moist; strong thick platy structure; slightly hard, very friable, very sticky and slightly plastic; common very fine roots; common very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary. (2 to 10 inches thick)

A2--3 to 7 inches; light gray (10YR 7/2) silt loam, brown (10YR 4/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; few very fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (0 to 4 inches thick)

AC--7 to 12 inches; light gray (2.5Y 7/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, very friable, sticky and slightly plastic; common very fine, fine and medium roots; common very fine and fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (3 to 12 inches thick)

C1--12 to 26 inches; light gray (2.5Y 7/1) silty clay loam, dark grayish brown (2.5Y 4/2) moist; common fine prominent dark yellowish brown (10YR 4/4) moist mottles; moderate medium subangular blocky structure; slightly hard, very friable, very sticky and plastic; common very fine and fine roots; many very fine tubular and interstitial pores; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (5 to 14 inches thick)

C2--26 to 36 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; common fine prominent dark yellowish brown (10YR 4/4) moist mottles; moderate medium subangular blocky structure; slightly hard, friable sticky and plastic; common very fine roots; few very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (8 to 25 inches thick)

C3--36 to 44 inches; light gray (10YR 7/2) silt loam, grayish brown (2.5Y 5/2) moist; common fine prominent dark yellowish brown (10YR 4/4) moist; and brown (10YR 5/3) moist mottles; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (0 to 10 inches thick)

C4--44 to 54 inches; light gray (10YR 7/2) silty clay loam, dark grayish brown (10YR 4/2) moist; few fine distinct brown (10YR 4/3) moist mottles, moist; weak very thin platy structure; hard, friable, very sticky and very plastic; few very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary. (0 to 16 inches thick)

C5--54 to 60 inches; light gray (10YR 7/2) silty clay loam, dark grayish brown (10YR 4/2) moist; few fine distinct strong brown (7.5YR 5/6) moist mottles; massive; very hard, firm, very sticky and very plastic; few very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 4 miles south of Rock Creek; about 900 feet east and 600 feet south of the northwest corner of section 7, T. 36 N., R. 47 E.; 41 degrees, 01 minutes, 04 seconds north latitude, 116 degrees, 43 minutes, 02 seconds west longitude.

Range in Characteristics

Soil moisture: Saturated during spring and early summer with the water table at depths below 40 inches during the remainder of the year, unless drained

Soil temperature: 49 to 53 degrees F.

Carbonates: Calcium carbonate equivalent is 3 to 12 percent throughout the profile and is strongly or violently effervescent.

Control section:
Clay content--25 to 35 percent.
Texture--Stratified silt loam to silty clay loam with strata of clay or silty clay in some pedons.

A horizons:
Hue--2.5Y or 10YR.
Value--6 or 7 dry, 3 through 5 moist.
Chroma--1 or 2.
Reaction--Moderately alkaline through very strongly alkaline; buried A horizons are moderately alkaline or strongly alkaline.

C horizons:
Hue--10YR to 5Y.
Value--6 through 8 dry, 3 through 6 moist.
Chroma--1 or 2. Subhorizons in some pedons have chroma of 3 or 4.
Structure--Platy, prismatic, granular, subangular blocky or the horizon is massive.
Reaction--Moderately alkaline through very strongly alkaline.
Other features--Fresh-water crustacean shells and 1/4 to 1/2 inch diameter lime concretions in most pedons.

Soonaker Series

The Soonaker series consists of moderately deep, well drained soils that formed in tuffaceous sandstone, rhyolitic tuff. The Soonaker soils are on hills. Slopes are 2 to 8 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine-loamy, mixed, frigid Mollic Haploxeralfs

Typical pedon: Soonaker fine sandy loam, 2 to 8 percent slopes, located in an area of map unit 210. (Colors are for dry soil unless otherwise noted.)

A--0 to 3 inches; light brownish gray (10YR 6/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate thick platy structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine tubular pores; neutral (pH 6.8); abrupt smooth boundary. (2 to 8 inches thick)
BA--3 to 7 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine tubular pores; neutral (pH 6.8); clear smooth boundary. (3 to 9 inches thick)
Bt1--7 to 12 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; common thin clay films bridging sand grains; neutral (pH 7.2); clear smooth boundary. (4 to 9 inches thick)
Bt2--12 to 16 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine through coarse roots; few very fine tubular pores; many moderately thick clay films bridging sand grains and lining pores; neutral (pH 7.2); clear smooth boundary. (3 to 10 inches thick)
BC--16 to 24 inches; pale brown (10YR 6/3) gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine through coarse roots; few very fine tubular pores; 25 percent pebbles; mildly alkaline (pH 7.4). (6 to 12 inches thick)
R--24 inches; fractured tuffaceous sandstone with some pockets of weathered tuff.

Type location: Elko County, Nevada; approximately 18 miles southwest of Owyhee; about 50 feet south and 1,000 feet west of the southeast corner of section 36, T. 46 N., R. 50 E.; 41 degrees, 50 minutes, 09 seconds north latitude, 116 degrees, 18 minutes, 30 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry July through October
Soil temperature: 43 to 47 degrees F.
Depth to bedrock: 20 to 40 inches.
Profile reaction: Neutral or mildly alkaline.
Other features: Some pedons have a Bw horizons directly above the Bt horizon.
Control section:
Clay content--18 to 25 percent.

A horizon:
Chroma--2 or 3 moist or dry.

Bt horizons:
Chroma--3 or 4 moist or dry.
Rock fragments--0 to 15 percent, mainly pebbles.

BC horizon:
Value--6 or 7 dry.
Chroma--3 or 4 moist or dry.
Rock fragments--15 to 35 percent, mainly pebbles.

Soughe Series

The Soughe series consists of shallow, well drained soils that formed in residuum and colluvium from various rocks. Soughe soils are on rock core areas of fan piedmont remnant side slopes, hills, plateaus and mountains. Slopes are 2 to 75 percent. Mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids

Typical pedon: Soughe very cobbly loam, 15 to 30 percent slopes, is located in an area of map unit 623. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 20 percent pebbles and 30 percent cobbles.

A--0 to 3 inches; pale brown (10YR 6/3) very cobbly loam, dark brown (10YR 4/3) moist; weak thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine vesicular pores; 20 percent pebbles, 30 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary. (3 to 10 inches thick)
A2--3 to 10 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; 30 percent pebbles, 15 percent cobbles; mildly alkaline (pH 7.8); clear smooth boundary. (0 to 10 inches thick)
Bt--10 to 19 inches; pale brown (10YR 6/3) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky and plastic; few very fine and fine roots; common very fine tubular pores; common thin clay films on faces of peds; 40 percent pebbles, 10 percent cobbles; moderately

alkaline (pH 8.2); abrupt wavy boundary. (3 to 10 inches thick)
R--19 inches; hard andesite bedrock.

Type location: Elko County, Nevada; approximately 7 miles southwest of Midas; about 1,500 feet west and 750 feet north of the southeast corner of section 7, T. 37 N., R. 45 E.; 41 degrees, 5 minutes, 39 seconds north latitude, 116 degrees, 56 minutes, 17 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry mid June through October
Soil temperature: 47 to 50 degrees.
Depth to bedrock: 10 to 20 inches.
Reaction: Neutral through moderately alkaline.
Control section:
Clay content--25 to 35 percent.
Rock fragments--35 to 60 percent, mainly pebbles with 0 to 10 percent cobbles.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.

Bt horizon:
Value--4 through 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Texture--Very gravelly clay loam, very gravelly sandy clay loam, or very gravelly loam.
Structure--Weak to strong, very fine to very coarse subangular blocky or moderate to strong, medium angular blocky.
Consistence--Soft to hard, dry; very friable or friable, moist; sticky or very sticky and plastic or very plastic, wet.

Stampede Series

The Stampede series consists of well drained soils that are moderately deep to an indurated duripan. These soils formed in alluvium from tuff and other mixed rock sources. Stampede soils are on fan piedmont remnants and mountain valley fans. Slopes are 2 to 15 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Aridic Durixerolls

Typical pedon: Stampede silt loam, 2 to 8 percent slopes, is located in an area of map unit 464. (Colors are for dry soils unless otherwise noted.)

A1--0 to 5 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak thick platy structure parting to moderate very thin platy; hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine interstitial pores; 5 percent pebbles; neutral (pH 6.8); abrupt smooth boundary. (2 to 5 inches thick)
A2--5 to 12 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, very friable, sticky and plastic; common very fine and medium roots; many very fine interstitial pores; 5 percent pebbles; neutral (pH 7.3); abrupt smooth boundary. (3 to 8 inches thick)
Bt1--12 to 16 inches; pale brown (10YR 6/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium prismatic structure; slightly hard, friable, very sticky and very plastic; common very fine and medium exped roots; few very fine interstitial pores; few moderately thick clay films on faces of peds; 5 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary. (5 to 13 inches thick)
Bt2--16 to 37 inches; yellowish brown (10YR 5/4) silty clay, dark yellowish brown (10YR 4/4) moist; strong medium prismatic structure; very hard, firm, very sticky and very plastic; common very fine, few fine and medium roots; continuous pressure faces; 5 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary. (0 to 13 inches thick)
2Bqkm--37 to 60 inches; very pale brown (10YR 8/3) indurated duripan, brown (10YR 5/3) moist; 1/2 to 2 millimeter thick continuous laminar caps throughout the horizons:; moderately alkaline (pH 8.0).

Type location: Elko County, Nevada; approximately 25 miles southeast of Wilson Reservoir; about 1,300 feet west of the northeast corner of section 7, T. 43 N., R. 51 E.; 41 degrees, 38 minutes, 50 seconds north latitude, 116 degrees, 17 minutes, 05 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring; dry July to October
Soil temperature: 44 to 47 degrees F.
Depth to duripan: 20 to 37 inches.
Mollic epipedon thickness: 7 to 13 inches, may include upper of Bt horizon of some pedons.
Control section:
Clay content--40 to 55 percent.
Rock fragments--0 to 10 percent pebbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist. (6 dry and 4 moist common in the lower subhorizon).
Chroma--2 or 3.
Reaction--Slightly acid or neutral.

Bt horizons:
Hue--10YR or 7.5YR.
Value--4 through 6 dry, 3 through 5 moist.
Chroma--2 through 4.

Rock fragments--Up to 15 percent in any one horizon.
Structure--Moderate or strong medium or coarse prismatic or fine to coarse subangular or angular blocky.
Reaction--Neutral to moderately alkaline.

Bqkm horizon:
Reaction--Mildly alkaline or moderately alkaline.
Other features--Noneffervescent to strongly effervescent in the matrix.

Sumine Series

The Sumine series consists of moderately deep, well drained soils that formed in residuum and colluvium from mixed rocks. The Sumine soils are on hills, mountains and plateau side slopes. Slopes are 9 to 75 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Aridic Argixerolls

Typical pedon: Sumine very gravelly loam, 15 to 50 percent slopes, is located in an area of map unit 570. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by 60 percent pebbles.

A1--0 to 4 inches; brown (10YR 5/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 45 percent pebbles; neutral (pH 7.2); clear wavy boundary. (2 to 5 inches thick)
Bt1--4 to 10 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few coarse roots; many very fine and common fine pores; 45 percent pebbles; few thin clay films lining tubular pores and on faces of peds; neutral (pH 7.3); clear wavy boundary. (3 to 15 inches thick)
Bt2--10 to 21 inches; yellowish brown (10YR 5/4) very gravelly clay loam, brown (10YR 4/3) moist; strong medium subangular block structure; hard, firm, sticky and plastic; common very fine and few fine roots; many very fine and common fine tubular pores; 45 percent pebbles, 5 percent cobbles; common moderately thick clay films lining pores and on faces of peds; neutral (pH 7.2); clear wavy boundary. (5 to 15 inches thick)
Bt3--21 to 29 inches; light yellowish brown (10YR 6/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and few fine roots; many very fine and few fine tubular pores; 45 percent pebbles and 5 percent cobbles; common moderately thick clay films lining pores and on faces of peds; neutral (pH 7.2); abrupt wavy boundary. (0 to 12 inches thick)
R--29 inches; hard, unweathered bedrock.

Type location: Elko County, Nevada; approximately 6 miles west of Tuscarora, about 2,500 feet west and 1,500 feet north of the southeast corner of section 33, T. 40 N., R. 50 E.; 41 degrees, 18 minutes, 02 seconds north latitude, 116 degrees, 14 minutes, 22 seconds west longitude.

Range in Characteristics

*Soil moisture: Usu*ally dry; moist in the winter and spring, dry from early July through mid October
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 8 to 17 inches thick.
Depth to bedrock (lithic contact): 20 to 40 inches.
Combined thickness of the A and Bt horizons: 20 to 40 inches.
Profile reaction: Neutral or mildly alkaline.
Control section:
Clay content--25 to 35 percent, when mixed.
Rock fragments--35 to 60 percent, when averaged.

A horizon:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Hue--10YR or 7.5YR.
Value--4 through 6 dry, 2 through 4 moist.
Chroma--2 through 4.
Texture--Dominantly clay loam, but some pedons have thin horizons of loam or clay.
Structure--Weak or moderate, very fine to medium angular or subangular blocky structure. The lower Bt horizons may be massive.

Susie Creek Series

The Susie Creek series consists of deep, well drained soils that formed in residuum from weakly consolidated tuff and andesite with some influence from loess and volcanic ash. Susie Creek soils are on plateaus, foothills and fan piedmont remnants with a rock core. Slopes are 2 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Durargidic Argixerolls

Typical pedon: Susie Creek loam, 4 to 15 percent slopes, is located an area of map unit 3100. (Colors are for dry soil unless other noted. The soil surface is covered by 5 percent pebbles.

A1--0 to 3 inches; brown (10YR 5/3) loam, very dark brown (10YR 2/2) moist; moderate medium platy structure; slightly hard, friable, sticky, plastic; common very fine roots; few fine and very fine tubular pores; 5 percent pebbles; neutral (pH 7.2); clear smooth boundary. (1 to 4 inches thick)

A2--3 to 10 inches; brown (10YR 5/3) clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure parting to moderate fine granular; slightly hard, friable, sticky, plastic; few fine and very fine roots; common very fine tubular pores; 5 percent pebbles; neutral (pH 7.2); clear smooth boundary. (4 to 9 inches thick)

Bt1--10 to 15 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, firm, sticky, plastic; few fine and very fine roots; few fine tubular pores; common thin clay films on faces of peds and lining pores; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary. (5 to 12 inches thick)

Bt2--15 to 24 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; few very fine roots; common moderately thick clay films on faces of ped strongly effervescent; 5 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary. (4 to 11 inches thick)

Btk--24 to 30 inches; yellowish brown (10YR 5/4) clay, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; very hard, very firm, very sticky, very plastic; few very fine roots; common moderately thick clay films on faces of peds; strongly effervescent; few fine soft masses of lime; 5 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary. (0 to 8 inches thick)

Bqk1--30 to 40 inches; very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; massive; very hard, firm, slightly sticky, plastic; weak discontinuous silica and lime cementation; 20 percent brittle durinodes; violently effervescent; 5 percent pebbles, 5 percent cobbles; continuous brittle matrix; moderately alkaline (pH 8.0); gradual wavy boundary. (5 to 20 inches thick)

Bqk2--40 to 60 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; massive; slightly hard, friable, slightly sticky, plastic; 10 percent durinodes; violently effervescent; 5 percent pebbles; moderately alkaline (pH 8.0)

Type location: Elko County, Nevada; in an unsectionized area, about 15 miles northwest of Midas; 41 degrees, 25 seconds, 47 seconds north latitude, 116 degrees, 56 minutes, 07 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in some part during the winter and spring
Soil temperature: 45 to 47 degrees F.
Mollic epipedon thickness: 7 to 12 inches thick.
Depth to base of Bt horizons: 20 to 30 inches.
Depth to weak silica-cementation: 20 to 36 inches.
Depth to paralithic or lithic contact: 40 to 60 inches.
Other features: Some pedons have thin AB or BA horizons with common or many uncoated sand grains on faces of peds.
Control section:
Clay content--35 to 50 percent, when mixed.
Rock fragments--0 to 15 percent.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.
Reaction--Neutral or mildly alkaline.

Bt horizons:
Value--5 through 7 dry, 3 through 6 moist.
Chroma--3 or 4.
Structure--Moderate or strong, fine or medium prismatic or subangular blocky.
Consistence--Hard to extremely hard dry; friable to very firm, moist; sticky or very sticky, plastic or very plastic wet.
Reaction--Neutral to moderately alkaline.
Texture--Clay, silty clay, sandy clay or clay loam.

Bqk horizons:
Hue--2.5Y or 10YR.
Value--5 through 8 dry, 3 through 7 moist.
Chroma--2 through 4.
Texture--Loam, sandy loam, loamy sand, or coarse sandy loam.
Reaction--Moderately alkaline or strongly alkaline.
Cementation--Continuously brittle matrix. Some pedons have durinodes in a friable matrix in lower subhorizons.
Consistence--Very firm or firm and brittle when moist, some pedons are friable moist in lower subhorizons. Some pedons have Bq subhorizons that are brittle and lack secondary carbonates.

Thwoop Series

The Thwoop series consists of moderately deep, well drained soils that formed in residuum and colluvium from rhyolite and shallow intrusive rocks. The Thwoop soils are on hills and mountains. Slopes are 4 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Aridic Durixerolls

Typical pedon: Thwoop gravelly silt loam, 8 to 15 percent slopes, located in an area of map unit 1980. (Colors are for dry soils unless otherwise noted.) The soil surface is covered with 20 percent pebbles and 5 percent cobbles.

A1--0 to 4 inches; brown (10YR 5/3) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine and fine tubular pores; 15 percent pebbles; neutral (pH 7.2); clear smooth boundary. (3 to 6 inches thick)

A2--4 to 10 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and plastic; common medium and few very fine and fine roots; many very fine and fine tubular pores; 5 percent pebbles; neutral (pH 7.2); clear smooth boundary. (4 to 8 inches thick)

Bt--10 to 16 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 4/4); moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; common medium and few very fine and fine roots; many very fine, fine, and few medium tubular pores; common moderately thick clay films on faces of peds and lining pores; 10 percent cobbles, 30 percent pebbles; neutral (pH 7.2); clear wavy boundary. (5 to 9 inches thick)

Btk--16 to 25 inches; dark yellowish brown (10YR 4/6) very gravelly clay, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; slightly hard, firm, sticky and very plastic; common medium roots; common fine and medium tubular pores; many thick clay films on faces of peds and lining pores; common fine soft lime masses and filaments, 10 percent cobbles, 40 percent pebbles, noneffervescent matrix, strongly effervescent in spots; mildly alkaline (pH 7.4); clear wavy boundary. (7 to 12 inches thick)

Bqkm--25 to 27 inches; indurated duripan with 1 to 2 millimeter laminar cap; extremely hard, very firm; violently effervescent; clear wavy boundary. (I to 4 inches thick)

R--27 inches; hard, fractured rhyolite.

Type location: Elko County, Nevada; approximately 8 miles southwest of Midas; about 2,550 feet west and I,950 feet north of the southeast corner of section 12, T. 37 N., R. 45 E.; 41 degrees, 5 minutes, 50 seconds north latitude, 116 degrees, 50 minutes, 40 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry July through October
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 7 to 14 inches.
Depth to bedrock: 21 to 32 inches.
Depth to duripan: 20 to 30 inches.
Control section:
Clay content--35 to 45 percent.
Rock fragments--35 to 60 percent, mainly pebbles.
Soil reaction--Neutral or mildly alkaline.

A horizons:
Value--4 or 5 dry.
Chroma--2 or 3.
Structure--Weak or moderate, subangular blocky.

Bt and Btk horizons:
Value--4 or 5 dry, 3 or 4 moist.
Chroma--4 to 6.
Texture--Very gravelly clay or very gravelly clay loam.
Carbonates--Noneffervescent or slightly effervescent matrix with strong effervescence in spots, generally increasing with depth.

Troughs Series

The Troughs series consists of shallow to a duripan, well drained soils on plateaus. They formed in residuum, alluvium and loess from basalt and rhyolite. Permeability is moderately slow. Slopes are 2 to 15 percent. The average annual precipitation is about 10 inches and the average annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic, shallow Xerollic Durargids

Typical pedon: Troughs gravelly loam, 2 to 4 percent slopes, located in an area of map unit 2790. Colors are for dry soil unless otherwise noted.) The soil surface is covered with 15 percent pebbles and 5 percent cobbles.

A1--0 to 2 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; weak medium platy structure; soft, very friable, slightly sticky, plastic; few very fine roots; common very fine vesicular pores; 15 percent pebbles, 5 percent cobbles; mildly alkaline (pH 7.4); abrupt smooth boundary. (1 to 8 inches thick)

A2--2 to 6 inches; pale brown (10YR 6/3) gravelly clay loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, friable, sticky, plastic; common very fine roots; few very fine tubular pores; 15 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (0 to 7 inches thick)

Bt--6 to 14 inches; pale brown (10YR 6/3) very cobbly clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; hard, firm sticky, plastic; few very fine roots; few very fine tubular pores; common moderately thick clay films on faces of peds; 5 percent pebbles, 35 percent cobbles; mildly alkaline (pH 7.2); clear smooth boundary. (4 to 11 inches thick)
Bqkm--14 to 20 inches; very pale brown (10YR 8/3) continuous indurated duripan, very pale brown (10YR 7/3) moist; massive; extremely hard, extremely firm. (2 to 20 inches thick)
R--20 inches; hard rhyolite.

Type location: Elko County, Nevada; in an unsectionized area, approximately 18 miles north of Midas; 41 degrees, 29 minutes, 04 seconds north latitude, 116 degrees, 58 minutes, 37 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry June through October
Soil temperature: 47 to 52 degrees F.
Depth to duripan: 12 to 20 inches
Depth to bedrock: 20 to 40 inches
Control section:
Clay content--27 to 35.
Rock fragments--averages 35 to 50 percent

A horizons:
Value--4 through 7 dry, 3 through 5 moist
Chroma--2 or 3
Reaction--Moderately alkaline

Bt horizon:
Value--6 or 7 dry, 3 through 5 moist
Chroma--3 or 4
Texture--Cobbly clay loam, very cobbly clay loam, very gravelly clay loam.
Rock fragments--25 to 50 percent
Reaction--Mildly alkaline through strongly alkaline
Effervescence--Noneffervescent through strongly effervescent in the lower part.

Trunk Series

The Trunk series consists of moderately deep, well drained soils that formed in residuum and colluvium from mixed rocks. The Trunk soils are on mountains, hills and side slopes of plateaus. Slopes are 4 to 50 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Xerollic Haplargids

Typical pedon: Trunk cobbly loam, 4 to 15 percent slopes, located in an area of map unit 1833. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 10 percent pebbles and 5 percent cobbles.

A--0 to 5 inches; pale brown (10YR 6/3) cobbly loam, dark brown (10YR 4/3) moist; moderate very fine platy structure; soft, very friable, slightly sticky, slightly plastic; many very fine and few fine roots; many very fine and few fine vesicular pores; 10 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary. (3 to 6 inches thick)
Bt1--5 to 11 inches; brown (10YR 5/3) gravelly clay, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky, plastic; common very fine and fine roots; many very fine tubular pores; many thin clay films on faces of peds and lining pores; 15 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary. (6 to 12 inches thick)
Btk1--11 to 15 inches; yellowish brown (10YR 5/4) gravelly clay, dark yellowish brown (10YR 3/4) moist; moderate medium prismatic structure parting to weak fine and medium subangular blocky; hard, firm, sticky, plastic; common very fine and fine, few medium roots; common very fine and fine tubular pores; many moderately thick clay films on faces of peds and lining pores; 25 percent pebbles, 5 percent cobbles; slightly effervescent, lime is disseminated; moderately alkaline (pH 8.2); clear smooth boundary. (4 to 12 inches thick)
Btk2--15 to 23 inches; pale brown (10YR 6/3) gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky, plastic; common very fine and fine, few medium roots; common very fine and fine tubular pores; common thin clay films on faces of peds and lining pores; 25 percent pebbles, 5 percent cobbles; strongly effervescent, lime is disseminated; moderately alkaline (pH 8.4); abrupt wavy boundary.
R--23 inches; rhyolite.

Type location: Elko County, Nevada; approximately 18 miles southwest of Midas; about 1,500 feet north and 1,000 feet west of the southeast corner of section 27, T. 37 N., R. 48 E.; 41 degrees, 03 minutes, 07 seconds north latitude, 116 degrees, 32 minutes, 03 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in the late fall, winter and early spring months, dry late May through October
Soil temperature: 47 to 53 degrees.
Depth to bedrock: 20 to 40 inches.
Depth to lime: 10 to 20 inches.

A horizon:
Value--5 or 6 dry, 3 through 5 moist.
Chroma--2 or 3.
Reaction--Neutral through mildly alkaline.
Structure--Granular or platy.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--3 or 4.
Texture--Gravelly clay loam or gravelly clay with more than 30 percent sand.
Clay content--35 to 50 percent.
Rock fragments--15 to 35 percent, mainly pebbles.
Reaction--Neutral or mildly alkaline in noncalcareous upper sub horizon, moderately or strongly alkaline in calcareous lower subhorizon.
Consistence--Slightly hard to very hard, dry; friable or firm, moist.

Tuffo Series

The Tuffo series consists of very shallow, and shallow somewhat excessively drained soils that formed in residuum from tuff, welded tuff, and tuffaceous sandstone. Tuffo soils are on rock core areas of fan piedmont remnants and hills. Slopes are 4 to 50 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Ashy, nonacid, mesic, shallow Vitrandic Torriorthents

Typical pedon: Tuffo fine sandy loam, 4 to 15 percent slopes, located in an area of map unit 1852. (Colors are for dry soil unless otherwise noted.)

A--0 to 6 inches; light gray (10YR 7/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate fine and medium platy structure; slightly hard, friable, slightly sticky, slightly plastic; many very fine and fine, common medium, few coarse roots; many very fine and fine tubular, few very fine interstitial pores; 5 percent pebbles; neutral (pH 6.8); clear wavy boundary. (1 to 6 inches thick)
C--6 to 13 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; weak fine subangular block structure; soft, very friable, slightly sticky, slightly plastic; many very fine, few fine roots; many very fine interstitial, and few very fine tubular pores; 5 percent pebbles; neutral (pH 7.0); abrupt wavy boundary. (3 to 9 inches thick)
Cr--13 to 20 inches; soft tuffaceous sandstone with few, fine lime seams along fractures. Many very fine and fine roots matted on bedrock interface.

Type location: Elko County, Nevada; in an unsectionized area, about 1 mile west of Deep Creek Reservoir; 41 degrees, 35 minutes, 50 seconds north latitude, 116 degrees, 19 minutes, 40 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry from late June through October
Soil temperature: 47 to 52 degrees F.
Depth to paralithic contact: 4 to 14 inches.
Pyroclastic material: 60 to 75 percent.
Reaction: Neutral or mildly alkaline.
Control section:
Clay content--5 to 15 percent.
Rock fragments--5 to 25 percent, mainly pebbles.

A horizon:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 through 4 dry or moist.
Structure--Weak or moderate, fine to coarse platy.

C horizon:
Hue--2.5Y or 10YR.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 through 4 dry or moist.
Texture--Dominantly very fine sandy loam or fine sandy loam with gravelly sandy loam common in some pedons.
Structure--Weak or moderately fine or medium subangular blocky or it is massive.

Cr horizon:
Carbonates--Few to common lime seams along fracture planes.

Tusel Series

The Tusel series consists of deep and very deep well drained soils that formed in residuum and colluvium weathered from quartzite, welded tuff, conglomerate, chert and shale with a component of loess high in pyroclastic material. Tusel soils are on side slopes of hills and mountains. Slopes are 4 to 75 percent. The mean annual precipitation is about 17 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed Argic Pachic Cryoborolls

Typical pedon: Tusel very gravelly loam, 15 to 30 percent slopes, located in an area of map unit 1742. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by 35 percent pebbles.

A1--0 to 3 inches; brown (10YR 4/3) very gravelly loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine interstitial and few fine tubular pores; 35 percent pebbles; neutral (pH 6.8); clear wavy boundary. (2 to 10 inches thick)
A2--3 to 17 inches; brown (10YR 4/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; many very fine and few fine tubular pores; 35 percent pebbles; neutral (pH 6.8); clear wavy boundary. (7 to 14 inches thick)
Bt1--17 to 28 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium angular blocky structure; hard, friable, slightly sticky and plastic; many very fine and common fine roots; many fine and common medium and very fine tubular pores; 45 percent pebbles and 10 percent cobbles; few thin clay films on faces of peds and lining pores; neutral (pH 6.8); abrupt wavy boundary. (0 to 12 inches thick)
Bt2--28 to 58 inches; yellowish brown (10YR 6/4) extremely gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and plastic; common very fine and few fine roots; common very fine and few fine tubular pores; 45 percent pebbles, 10 percent cobbles; common thin clay films on faces of peds and lining pores; neutral (pH 6.6); abrupt irregular boundary. (12 to over 25 inches thick)
R--58 inches; hard siltstone.

Type location: Elko County, Nevada; approximately 2 miles south of Bull Run Reservoir; about 2,100 feet east and 2,800 feet south of the northwest corner of section 20, T. 43 N., R. 52 E.; 41 degrees, 36 minutes, 40 seconds north latitude, 116 degrees, 09 minutes, 25 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist in the late fall through early summer, dry late July through September
Soil temperature: 43 to 47 degrees F.
Average summer soil temperature: 58 to 59 degrees F.
Depth to bedrock: 40 to over 80 inches.
Depth to base of Bt horizon: 36 to over 50 inches.
Mollic epipedon thickness: 16 to 22 inches, includes the upper argillic horizon of some pedons.
Control section:
Clay content--25 to 35 percent.
Rock fragments--50 to 75 percent, mainly pebbles.
Reaction--Slightly acid or neutral.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.
Structure--Weak to strong, very fine to medium granular or subangular blocky.

Bt horizons:
Hue--10YR or 7.5YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Very gravelly or extremely gravelly sandy clay loam or very gravelly or extremely gravelly clay loam, with 40 to 60 percent sand.
Clay content--25 to 35 percent, when averaged.
Rock fragments--40 to 60 percent pebbles and 10 to 25 percent cobbles and 0 to 10 percent stones.
Consistence--Slightly sticky or sticky and slightly plastic or plastic.
Structure--Weak to strong subangular blocky or angular blocky. Some pedons have lower subhorizons that are massive.

Tusk Series

The Tusk series consists of very deep, well drained soils formed in colluvium from rhyolite and other volcanic rocks. Tusk soils are on side slopes of hills and mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine-loamy, mixed, frigid Pachic Argixerolls

Typical pedon: Tusk gravelly loam, 8 to 15 percent slopes, located in an area of map unit 1640. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 10 percent pebbles and 10 percent cobbles.

A1--0 to 2 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak very fine platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 10 percent pebbles, 5 percent cobbles; neutral (pH 7.2); clear smooth boundary. (2 to 4 inches thick)
A2--2 to 5 inches; brown (10YR 5/3) loam, very dark brown (10YR 2/2) moist; moderate very fine platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; common very fine tubular pores; 10 percent pebbles, neutral (pH 7.2); clear smooth boundary. (2 to 9 inches thick)
A3--5 to 14 inches; brown (10YR 4/3) loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine, few fine and medium roots; common very fine tubular

pores; 10 percent pebbles, neutral (pH 7.2); clear smooth boundary. (0 to 10 inches thick)
Bt1--14 to 23 inches; brown (10YR 4/3) clay loam; very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and few fine and medium roots; common very fine tubular pores; several krotovinas less than 15 millimeters in size; few thin films on faces of peds and lining pores; 10 percent gravel, neutral (pH 7.2); clear irregular boundary. (6 to 15 inches thick)
Bt2--23 to 38 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky and plastic; common very fine and few fine roots; common very fine tubular pores; common thin clay films on faces of peds and lining pores; 15 percent pebbles; 10 percent cobbles; mildly alkaline (pH 7.6); clear wavy boundary. (8 to 15 inches thick)
Bt3--38 to 60 inches; very pale brown (10YR 7/4) extremely cobbly loam, dark yellowish brown (10YR 3/4) moist; massive; slightly hard; friable, sticky and plastic; common very fine and few fine roots; common very fine and fine tubular pores; few clay films on rock fragment surfaces; 40 percent pebbles, 30 percent cobbles, mildly alkaline (pH 7.4).

Type location: Elko County, Nevada; about 7 miles west of Midas; 41 degrees, 16 minutes, 00 seconds north latitude, 116 degrees, 54 minutes, 23 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from mid July to October
Soil temperature: 43 to 47 degrees F.
Mollic epipedon thickness: 20 to 35 inches. Includes the upper part of the argillic horizon.
Solum thickness: 40 to over 60 inches.
Reaction: Neutral or mildly alkaline.
Control section:
Rock fragments--15 to 35 percent, mainly pebbles.
Clay content--27 to 35 percent.

A horizons:
Value--2 or 3 moist.
Chroma--2 or 3.
Structure--Platy, granular or subangular blocky.

Bt horizons:
Value--4 through 7 dry.
Chroma--2 through 4.
Texture--The upper part is clay loam and gravelly clay loam, with a mixed average of gravelly clay loam. Lower subhorizons are very gravelly clay loam to extremely cobbly loam.
Reaction--Neutral to mildly alkaline.

Tweba Series

The Tweba series consists of very deep, very poorly drained soils that formed in loamy alluvium from mixed rock sources. Tweba soils are on flood plains, stream flood plains and inset fans. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Aeric Fluvaquents

Typical pedon: Tweba very fine sandy loam, located in an area of map unit 1290. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; weak very thin platy structure; slightly hard, very friable, slightly sticky, slightly plastic; many very fine and fine roots; many very fine vesicular and few fine tubular pores; mildly alkaline (pH 7.6); clear smooth boundary. (1 to 7 inches thick)
C1--4 to 15 inches; light gray (10YR 7/2) very fine sandy loam, grayish brown (10YR 5/2) moist; massive; slightly hard, very friable, slightly sticky, slightly plastic; many very fine roots; many very fine tubular pores; strongly effervescent; few fine lime filaments; moderately alkaline (pH 8.4); clear smooth boundary. (3 to 14 inches thick)
C2--15 to 27 inches; light brownish gray (10YR 6/2) fine sandy loam, grayish brown (10YR 5/2) moist; few fine faint mottles; massive; slightly hard, friable, slightly sticky, slightly plastic; common very fine roots; many very fine tubular pores; strongly effervescent; few fine lime filaments; moderately alkaline (pH 8.4); clear smooth boundary. (5 to 10 inches thick)
C3--27 to 37 inches; pale brown (10YR 6/3) sandy loam, dark brown (10YR 4/3) moist; few fine faint mottles; massive; slightly hard, very friable, slightly sticky, slightly plastic; common very fine roots; common very fine tubular pores; strongly effervescent; few fine lime filaments; strongly alkaline (pH 8.6); clear smooth boundary. (5 to 10 inches thick)
C4--37 to 60 inches; light brownish gray (10YR 6/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; few fine faint mottles; massive; slightly hard, friable, slightly sticky, slightly plastic; few very fine roots; common fine tubular pores; strongly effervescent; few fine lime filaments; moderately alkaline (pH 8.4)

Type location: Eureka County, Nevada; approximately 18 miles south of Willow Creek Reservoir; about 1,000 feet north and 500 feet east of the southwest corner of section 20, T. 36 N., R 48 E.; 40 degrees, 58 minutes, 51 seconds north latitude,

116 degrees, 35 minutes, 02 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist; dry in midsummer and early fall, apparent seasonal water table is between a depth of 14 to 20 inches for some time during most years usually February to June. Drained phases are recognized
Soil temperature: 47 to 52 degrees F.
Other features: In some pedons, one or more buried A horizons with hue of 10YR or 5Y, value of 5 or 6 dry and 3 moist, chroma of 1 or 2 are below a depth of 30 inches.
Control section:
Clay content--10 to 18 percent, when mixed.
Texture--Average fine sandy loam or very fine sandy loam, but includes stratified very fine sandy loam, fine sandy loam, loam or silt loam in the upper subhorizons and very fine sandy loam, fine sandy loam, sandy loam, loamy fine sand or loamy sand in the lower subhorizons. Loamy fine sand and loamy sand are more common below 35 inches.

A horizon:
Hue--2.5Y or 10YR.
Value--5 through 7 dry, 3 through 5 moist.
Chroma--2 or 3.
Structure--Very fine angular blocky or very thin platy structure or it is massive.
Reaction--Mildly alkaline through strongly alkaline.
Effervescence--Noneffervescent through strongly effervescent.

C horizons:
Hue--2.5Y or 10YR.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--1 through 3 dry, and 2 or 3 moist.
Reaction--Mildly alkaline to very strongly alkaline.
Effervescence--Slightly effervescent to strongly effervescent to a depth of 30 to 45 inches and noneffervescent to strongly effervescent below.

Tweener Series

The Tweener series consists of very shallow and shallow, well drained soils that formed in residuum and colluvium from welded tuff, rhyolite, chert, shale and conglomerate. The Tweener soils are on hills and mountains. Slopes are 4 to 75 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Tweener very cobbly sandy loam, 4 to 15 percent slopes, located in an area of map unit 1933. (Colors are for dry soils unless otherwise noted.) The surface is covered with 10 percent pebbles and 25 percent cobbles.

A--0 to 5 inches; dark grayish brown (10YR 4/2) very cobbly sandy loam, very dark brown (10YR 2/2) moist; weak medium and coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine through coarse roots; few very fine tubular pores; 5 percent stones, 20 percent cobbles, 10 percent pebbles; neutral (pH 7.2); clear wavy boundary. (3 to 8 inches thick)
Bt--5 to 8 inches; brown (10YR 4/3) very cobbly clay loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine, few medium roots; common very fine tubular pores; common thin clay films as bridges; common colloidal stains on faces of peds; 15 percent stones, 30 percent cobbles, 10 percent pebbles; neutral (pH 7.2); abrupt smooth boundary (3 to 6 inches thick)
R--8 inches; hard, fractured welded tuffs.

Type location: Elko County, Nevada; approximately 2 miles northeast of St. Johns ranch buildings; in an unsectionized area, about 5,200 feet east and 2,400 feet south of the southeast corner of section 32, T. 38 N., R. 50 E.; 41 degrees, 12 minutes, 00 seconds north latitude, 116 degrees, 20 minutes, 18 seconds west longitude.

Range in Characteristics

Soil moisture: Moist in winter and spring, dry from late July through October for 70 to 100 consecutive days
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 7 to 14 inches and includes all of the argillic horizon.
Depth to bedrock: 7 to 14 inches.
Control section:
Clay content--18 to 35 percent.
Rock fragments--35 to 60 percent; mainly cobble and stone size fragments of tuff and rhyolite.

A horizon:
Value--4 or 5 dry; 2 or 3 moist.

Bt horizon:
Value--4 or 5 dry; 2 or 3 moist.
Chroma--2 or 3.
Texture--Very cobbly clay loam or very cobbly loam.
Clay content--25 to 40 percent.

Upville Series

The Upville series consists of very deep, well drained, moderately permeable soils that formed in alluvium from mixed volcanic and granitic rocks. The Upville soils are on alluvial fans, fan piedmont remnants and fan skirts. Slopes are 0 to 4 percent. Mean annual precipitation is about 12 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Sandy-skeletal, mixed, frigid Aridic Haploxerolls

Typical pedon: Upville gravelly loam, 0 to 2 percent slopes, located in an area of map unit 140. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky, slightly plastic; many very fine roots; common very fine tubular pores; 25 percent pebbles; neutral (pH 6.8); clear smooth boundary. (2 to 5 inches thick)

A2--3 to 10 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky, slightly plastic; common very fine and fine roots; common very fine tubular pores; 25 percent pebbles; neutral (pH 7.0); clear smooth boundary. (4 to 10 inches thick)

Bw1--10 to 19 inches; yellowish brown (10YR 5/4) very gravelly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, sticky plastic; common very fine and fine roots; very fine tubular pores; 35 percent pebbles; neutral (pH 7.0); clear smooth boundary. (5 to 12 inches thick)

Bw2--19 to 21 inches; yellowish brown (10YR 5/4) very gravelly loam, dark yellowish brown (10YR 3/4) moist; moderate medium and coarse subangular blocky structure; hard, friable, sticky, plastic; common very fine and fine roots; common very fine tubular pores; 40 percent pebbles, 15 percent cobbles; neutral (pH 7.0); abrupt wavy boundary. (0 to 9 inches thick)

2C--21 to 60 inches; brown (10YR 4/3) extremely gravelly coarse sand, dark brown (10YR 3/3) moist; single grained; loose, nonsticky, nonplastic; few very fine roots; many very fine interstitial pores; 55 percent pebbles, 25 percent cobbles; neutral (pH 7.0).

Type location: Elko County, Nevada; approximately 10 miles northeast of Tuscarora; about 800 feet east and 2,300 feet south of the northwest corner of section 22, T. 41 N., R. 52 E.; 41 degrees, 26 minutes, 15 seconds north latitude, 116 degrees, 07 minutes, 15 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist during the winter and spring, but are dry mid-June through October
Soil temperature: 43 to 47 degrees F.
Mollic epipedon thickness: 10 to 15 inches.
Depth to 2C horizons: 15 to 27 inches.
Control section:
Clay content--Averages 5 to 12 percent.
Rock fragments--Averages 50 to 75 percent, mainly pebbles.

A horizons:
Chroma--2 or 3.
Structure--Platy, granular, subangular or angular blocky.

Bw horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Texture--Very gravelly loam or very gravelly sandy loam with thin subhorizons of gravelly coarse sandy loam common in some pedons.
Clay content--15 to 22 percent.
Rock fragments--20 to 55 percent, mainly pebbles and some cobbles.

2C horizon:
Hue--2.5Y or 10YR.
Value--5 or 6 dry, 4 or 5 moist.
Chroma--4 through 6 dry.
Texture--Extremely cobbly loamy sand, extremely cobbly sand, extremely gravelly coarse sand.
Clay content--0 to 5 percent.
Rock fragments--60 to 85 percent, mainly pebbles and cobbles.

Vanwyper Series

The Vanwyper series consists of moderately deep, well drained soils that formed in residuum and colluvium weathered from mixed rock sources. Vanwyper soils are on crests and side slopes of hills, plateaus and mountains. Slopes are 2 to 50 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Xerollic Haplargids

Typical pedon: Vanwyper very stony loam, 15 to 50 percent slopes, is located in map unit 1830. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 30 percent pebbles, 5 percent cobbles.

A1--0 to 5 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; weak thin platy structure; soft, very friable,

slightly sticky, slightly plastic; many very fine and fine roots; many very fine tubular pores; 20 percent pebbles; neutral (pH 6.6); clear smooth boundary. (1 to 5 inches thick)

A2--5 to 10 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky, slightly plastic; common very fine and fine roots; common very fine tubular pores; 25 percent pebbles; neutral (pH 6/8); clear smooth boundary. (4 to 8 inches thick)

Bt1--10 to 12 inches; reddish brown (5YR 5/4) very gravelly clay loam, reddish brown (5YR 4/4) moist; weak medium subangular blocky structure; slightly hard, fraible, sticky, plastic; few very fine roots; few very fine tubular pores; common thin clay films on faces of peds; 50 percent pebbles; neutral (pH 6.8); clear smooth boundary. (0 to 5 inches thick)

2Bt2--12 to 25 inches; reddish brown (5YR 4/4) very cobbly clay, reddish brown (5YR 4/4) moist; weak fine prismatic structure; hard, firm; sticky, very plastic; few very fine roots; few very fine tubular pores; continuous thin clay films on faces of peds; 20 percent pebbles, 30 percent cobbles; neutral (pH 6.8); abrupt smooth boundary. (6 to 20 inches thick)

R--25 inches; andesitic rock.

Type location: Elko County, Nevada; approximately 5 miles east of Rock Creek Ranch; about 1,400 feet north and 1,700 feet east of the southwest corner of section 14, T. 37 N., R. 47 E.; 41 degrees, 04 minutes, 53 seconds north latitude, 116 degrees, 08 minutes, 12 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in the winter and spring, dry from late June through mid October

Soil temperature: 47 to 50 degrees F.

Depth to bedrock: 20 to 40 inches.

Reaction: Neutral or mildly alkaline.

Control section:

Percent clay--35 to 55 percent.

Rock fragments--35 to 60 percent dominated by cobbles.

A horizons:

Value--3 or 4 moist.

Chroma--2 through 4.

Structure--Weak to strong, very thin through medium platy or very fine through medium subangular blocky.

Consistence--Very friable or friable, moist; slightly sticky or sticky and slightly plastic or plastic, wet.

Bt horizons:

Hue--10YR, 7.5YR or 5YR.

Value--4 through 6 dry, 3 through 5 moist.

Chroma--3 or 4.

Textures--Very cobbly loam, very cobbly clay, very gravelly clay loam in the upper part of some pedons.

Structure--Angular or subangular blocky or prismatic structure in the lower part.

Other features--Some pedons have a thin coat of carbonates on the undersides of rock fragments.

Welch Series

The Welch series consists of very deep, very poorly drained soils that formed in alluvium from mixed volcanic rock sources with a component of vitric pyroclastic materials. Welch soils are on flood plains, stream terraces, inset fans and in narrow hill and mountain valleys, bottomland, and drainageways. Slopes are 0 to 15 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Fine-loamy, mixed, frigid Cumulic Haplaquolls

Typical pedon: Welch silt loam, drained, 0 to 2 percent slopes, is located in an area of map unit 690. (Colors for dry soils unless otherwise noted).

A1--0 to 2 inches; gray (10YR 5/1) silt loam, black (10YR 2/1) moist; strong fine and medium gravelly structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine and fine tubular pores; neutral (pH 7.3) clear wavy boundary. (2 to 15 inches thick)

A2--2 to 10 inches; gray (10YR 5/1) silt loam, black (10YR 2/1) moist; moderate fine and medium gravelly structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; common very fine and fine tubular pores; neutral (pH 7.2; clear wavy boundary. (2 to 14 inches thick)

A3--10 to 30 inches; gray (10YR 5/1) clay loam, black (10YR 2/1) moist; few fine distinct strong yellowish brown (10YR 5/6) mottles; weak coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and few medium roots; many very fine and fine, and few medium tubular pores; neutral (pH 7.2); clear wavy boundary. (8 to 22 inches thick)

Cg--30 to 60 inches; gray (5Y 5/1) sandy clay loam, gray (10YR 5/1) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many fine, common very fine and few medium tubular pores; neutral (pH 7.2).

Type location: Elko County, Nevada; approximately 5 miles northwest of Midas; about 300 feet west and 2,000 feet north of the southeast corner of section

35, T. 40 N., R. 45 E.; 41 degrees, 18 minutes, 04 seconds north latitude, 116 degrees, 16 minutes, 15 seconds west longitude.

Range in Characteristics

Soil moisture: Welch soils are saturated at or near the surface for a least one month during most years, mainly during the late winter and early spring months, then drops to a depth of 18 to 36 inches from early spring through September. Drained phases are recognized

Soil temperature: 41 to 46 degrees F.

Mollic epipedon thickness: 26 to over 60 inches, organic matter decreases irregularly with increasing depth.

Other features: Buried A horizons are common. Some pedons have gravelly strata or strata of silty clay loam, silt loam, clay, loam, very fine sandy loam or sandy loam.

Control section:
Clay content--27 to 35 percent, when mixed.
Texture--Stratified dominantly sandy clay loam or clay loam.
Mineralogy--Mixed, but the parent material has a large component of vitric pyroclastic materials.

A horizons:
Hue--10YR through 5Y or neutral.
Value--3 through 5 dry, 2 or 3 moist.
Chroma--0 through 3 in the upper part and 0 through 2 in the lower part.
Reaction--Slightly acid or neutral.
Other features--Some pedons have high chroma iron mottles.

C horizon:
Hue--10YR, 2.5Y, 5Y or neutral.
Value--5 through 8 dry, 3 through 5 moist.
Chroma--0 through 2.
Reaction--Slightly acid to mildly alkaline.
Mottles--High chroma iron mottles are common in many pedons.

Weso Series

The Weso series consists of very deep, well drained soils that formed in alluvium from mixed rock sources, with a loess mantle high in volcanic ash. Weso soils are on beach plains, relic lagoons, fan skirts, inset fans and fan piedmont remnants. Slopes are 0 to 8 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Duric Camborthids

Typical pedon: Weso very fine sandy loam, 0 to 2 percent slopes, located in an area of map unit 1572. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; very pale brown (10YR 7/3) very fine sandy loam, brown (10YR 5/3) moist; moderate very fine platy structure; slightly hard, friable, slightly sticky, slightly plastic; many very fine roots; many very fine and fine vesicular pores; 2 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary. (1 to 5 inches thick)

A2--3 to 6 inches; pale brown (10YR 6/3) very fine sandy loam, brown (10YR 5/3) moist; weak very fine and fine platy structure; slightly hard, friable, slightly sticky, slightly plastic; common very fine and fine roots; many fine vesicular and common very fine tubular pores; moderately alkaline (pH 8.2); clear smooth boundary. (0 to 5 inches thick)

Bw--6 to 12 inches; very pale brown (10YR 7/3) fine sandy loam, brown (10YR 5/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; common fine roots; common very fine and fine tubular pores; 1 percent pebbles; moderately alkaline (pH 8.4); clear wavy boundary. (6 to 10 inches thick)

Bqk1--12 to 25 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; massive; hard, firm, and brittle, nonsticky, nonplastic; common very fine roots; few very fine tubular pores; continuous brittle matrix; strongly effervescent; common fine lime filaments; strongly alkaline (pH 8.8); clear wavy boundary. (1 to 14 inches thick)

Bqk2--25 to 41 inches; very pale brown (10YR 7/3) fine sandy loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky, nonplastic; common very fine roots; few very fine tubular pores; 30 percent durinodes; slightly effervescent; common fine lime filaments; 3 percent pebbles; strongly alkaline (pH 8.8); clear wavy boundary. (8 to 17 inches thick)

Bqk3--41 to 50 inches; very pale brown (10YR 7/4) fine sandy loam, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky, nonplastic; common very fine roots; few very fine tubular pores; 20 percent durinodes; slightly effervescent; common fine lime filaments; 2 percent pebbles; strongly alkaline (pH 8.6); clear wavy boundary. (0 to 10 inches thick)

Bqk4--50 to 60 inches; very pale brown (10YR 7/3) fine sandy loam, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky, nonplastic; few very fine roots; few very fine tubular pores; 35 percent durinodes; strongly effervescent; common fine lime filaments; 1 percent pebbles; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 22 miles west of Midas; about 800 feet west and 2,200 feet north of the southeast corner of section

22, T. 37 N., R. 44 E.; 41 degrees, 04 minutes, 08 seconds north latitude, 116 degrees, 59 minutes, 29 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist for short periods in winter and spring, dry from late May through November
Soil temperature: 47 to 53 degrees F.
Depth to base of Bw horizons: and upper boundary of silica cementation: 10 to 18 inches.
Other features: Some pedons are underlain by skeletal material below depths of 40 inches.
Control section:
Clay content--5 to 15 percent.
Rock fragments--0 to 25 percent, mainly pebbles.
Textures--Dominantly fine sandy loam, very fine sandy loam or loam. Some pedons include minor strata of sandy loam, coarse sandy loam, or silt loam.

A horizons:
Value--6 or 7 dry, 3 through 5 moist.
Chroma--2 or 3.
Reaction--Moderately alkaline through very strongly alkaline.

Bw horizon:
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 through 4.
Reaction--Moderately alkaline through very strongly alkaline.
Other features--The Bw is noncalcareous.

Bqk horizon:
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 or 3.
Cementation--Ranges from continuously brittle matrix to several weakly cemented plates up to 1 inch thick with firm and brittle or friable material between plates. Subhorizons in some pedons have durinodes in a friable matrix.
Reaction--Moderately alkaline through very strongly alkaline.

Wickahoney Series

The Wickahoney series consists of shallow, well drained soils that formed in residuum derived from rhyolite. Wickahoney soils are on summits and sideslopes of hills and plateaus and have slopes of 2 to 8 percent. The average annual temperature is about 42 degrees F., and the average annual precipitation is about 15 inches.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Lithic Mollic Haploxeralfs

Typical pedon: Wickahoney extremely stony loam, 2 to 8 percent slopes in an area of map unit 241. (Colors are for dry soil unless otherwise noted.) The surface is covered with 25 percent pebbles, 15 percent cobbles and 10 percent stones.

A1--0 to 2 inches; light brownish gray (10YR 6/2) extremely stony loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine roots; few very fine tubular pores; 10 percent pebbles, 35 percent cobbles and 5 percent stones; neutral (pH 7.0); abrupt smooth boundary. (2 to 5 inches thick)
BA--2 to 5 inches; pale brown (10YR 6/3) very cobbly clay loam, very dark grayish brown (10YR 3/2) moist; moderate thin platy structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; few thin clay films bridging sand grains; 10 percent pebbles, 40 percent cobbles and 5 percent stones; neutral (pH 6.8); abrupt smooth boundary. (0 to 7 inches thick)
Bt1--5 to 6 inches; brown (10YR 5/3) very cobbly clay loam, dark brown (7.5YR 3/4) moist; moderate fine platy structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; common moderately thick clay films bridging sand grains and lining pores; 10 percent pebbles, 40 percent cobbles and 5 percent stones; neutral (pH 6.8); abrupt smooth boundary. (0 to 3 inches thick)
Bt2--6 to 14 inches; brown (7.5YR 4/4) very cobbly clay, dark brown (7.5YR 3/4) moist; moderate thin subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; many moderately thick clay films on faces of peds and bridging sand grains; 15 percent pebbles and 25 percent cobbles; neutral (pH 6.8). (3 to 12 inches thick)
R--14 inches; rhyolite.

Type location: Elko County, Nevada; approximately 8 miles southwest of Owyhee; about 1,100 feet south and 500 feet west of the southeast corner of section 36, T. 46 N., R. 51 E.; 41 degrees, 49 minutes, 58 seconds north latitude, 116 degrees, 11 minutes, 40 seconds west longitude.

Range in Characteristics

Soil temperature: 41 to 47 degrees F.
Summer soil temperature: 61 to 67 degrees F.
Depth to bedrock: 10 to 20 inches
Other features: Dry color value 5 does not occur in combination with moist color 3/3 at depths of 7 inches or more. Btq horizons with high percentage of rock fragments occur in some pedons

A horizon:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 2 to 4 moist
Chroma--2 or 3 dry or moist
Reaction--Slightly acid or neutral

Bt horizons:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 3 or 4 moist
Chroma--3 or 4
Texture--Very cobbly clay, very gravelly clay or very gravelly clay loam
Clay content--35 to 55 percent
Rock fragments--35 to 60 percent
Reaction--Slightly acid through mildly alkaline
Other features--Thin, discontinuous silica deposits often appear on the undersides of rocks at the lower boundary

Wieland Series

The Wieland series consists of very deep, well drained soils that formed in alluvium from mixed rock sources with a component of loess and volcanic ash. Wieland soils are on summits and sideslopes of partial ballenas and fan piedmont remnants and plateaus. Slopes are 0 to 30 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Durixerollic Haplargids

Typical pedon: Wieland loam, 2 to 4 percent slopes, is found in an area of map unit 2775. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; moderate thin platy structure; slightly hard, soft, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine interstitial pores; 5 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary. (1 to 8 inches thick)

Bt1--4 to 8 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, friable, sticky and plastic; common very fine, few fine and medium roots; many very fine interstitial and few very fine tubular pores; 5 percent pebbles; few thin clay films on faces of peds and lining pores; mildly alkaline (pH 7.6); clear smooth boundary. (0 to 6 inches thick)

Bt2--8 to 18 inches; light yellowish brown (10YR 6/4) clay, dark brown (10YR 3/3) moist; moderate medium angular blocky structure; hard, firm, very sticky and plastic; common very fine roots; common very fine interstitial pores; 10 percent pebbles; many moderately thick clay films on faces of peds and lining pores; moderately alkaline (pH 7.9); clear smooth boundary. (2 to 6 inches thick)

Btk3--18 to 30 inches; light yellowish brown (10YR 6/4) clay, yellowish brown (10YR 5/4) moist; moderate medium angular blocky structure; very hard, very firm, very sticky and very plastic; common very fine roots; few very fine interstitial pores; 5 percent pebbles; many stress surfaces; few fine filaments of lime; strongly effervescent; moderately alkaline (pH 7.9); clear smooth boundary. (0 to 10 inches thick)

Bqk1--30 to 38 inches; light yellowish brown (10YR 6/4) loam, yellowish brown (10YR 5/4) moist; moderate fine and medium subangular blocky structure; hard, firm and brittle, slightly sticky and slightly plastic; few fine roots; few very fine interstitial pores; 10 percent pebbles; 25 percent, hard, firm, 10 to 20 millimeter durinodes; continuous brittle matrix, lime segregated into common fine filaments, violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary. (6 to 19 inches thick)

Bqk2--38 to 60 inches; very pale brown (10YR 7/3) loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm and brittle, nonsticky and nonplastic; 10 percent pebbles; continuous brittle matrix; few fine filaments of lime; violently effervescent; moderately alkaline (pH 8.4); gradual smooth boundary. (0 to 16 inches thick)

Type location: Elko County, Nevada; in an unsectionized area, about 7 miles north of Desert Ranch Reservoir; 41 degrees, 47 minutes, 55 seconds north latitude, 116 degrees, 32 minutes, 52 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist from mid fall through spring, dry summer through fall
Soil temperature: 47 to 52 degrees F.
Depth to continuous brittle matrix: 19 to 30 inches.
Depth to base of Bt horizons: 17 to 30 inches.
Other features: Gravelly substratum phases are recognized that have variegated colored Bqk horizons with textures of very gravelly loamy sand at a depth of 40 or more inches. The Cqk horizon ranges from 50 to 65 percent pebbles. Some pedons have thin BA horizons.
Control section:
Clay content--40 to 55 percent, when mixed.
Rock fragments--5 to 35 percent pebbles, when mixed.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Structure--Weak to moderate, very thin to very thick platy or subangular blocky.
Reaction--Mildly alkaline or moderately alkaline.

Bt1 horizons (when present):
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Structure--Weak or moderate very fine to medium subangular blocky or prismatic.
Consistence--Slightly hard or hard, dry very friable to friable moist, sticky or very sticky and plastic or very plastic wet.
Reaction--Mildly alkaline or moderately alkaline.

Other Bt horizons:
Value--5 through 7 dry, 3 through 5 moist.
Chroma--2 through 4 dry, and 3 or 4 moist.
Clay content--40 to 55 percent, when mixed, some pedons have subhorizons with up to 60 percent clay.
Rock fragments--5 to 35 percent pebbles, when mixed.
Structure--Weak or moderate, fine to coarse prismatic or very fine to medium angular blocky.
Reaction--Moderately alkaline or strongly alkaline.
Other features--Some pedons are slightly effervescent to strongly effervescent and commonly have lime filaments in the lower Bt horizons.

Bqk and Cqk horizons:
Hue--10YR, 7.5YR or 2.5Y.
Value--6 through 8 dry, 4 through 6 moist.
Chroma--1 through 6.
Texture--Clay loam, sandy clay loam, loam, or sandy loam.
Rock fragments--5 to 35 percent, mainly pebbles.
Consistence--Slightly hard to very hard dry, very friable to firm moist; nonsticky or slightly sticky and nonplastic or slightly plastic, wet.
Effervescence--Slightly effervescent through violently effervescent.
Cementation--Some pedons have thin discontinuous weakly cemented Bqk subhorizons above the continuously brittle horizon.
Gypsum--Is absent in the lower part of some pedons.
Relict Mottles--Present in many pedons at any depth below 30 inches.
Reaction--Moderately alkaline through strongly alkaline.

Willhill Series

The Willhill series consists of moderately deep, well drained soils on plateaus. They formed in alluvium and residuum from welded rhyolitic tuff. Slopes are 4 to 15 percent. The mean annual precipitation is about 12 inches, and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Durixerollic Haplargids
Typical pedon: Willhill gravelly loam, 4 to 15 percent slopes, located in an area of map unit 2783. (Colors are for dry soil unless otherwise noted.)

A--0 to 6 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; weak medium subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky, plastic; many very fine and fine, few medium roots; many very fine tubular and interstitial pores; 20 percent pebbles, 5 percent cobbles; neutral (pH 7.3); gradual wavy boundary. (2 to 6 inches thick)
Bt--6 to 11 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, sticky, plastic; common very fine and fine, few medium roots; common very fine and fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 25 percent pebbles, 10 percent cobbles; mildly alkaline (pH 7.4); gradual wavy boundary. (3 to 8 inches thick)
Bqk1--11 to 17 inches; light yellowish brown (10YR 6/4) extremely cobbly loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky, plastic; common very fine, few fine roots; many very fine, few fine tubular pores; many silica and lime coats on undersides of pebbles; 10 percent pebbles, 60 percent cobbles; strongly effervescent; moderately alkaline (pH 8.1); abrupt irregular boundary. (0 to 28 inches thick)
Bqk2--17 to 23 inches; light yellowish brown (10YR 6/4) extremely cobbly loam, dark yellowish brown (10YR 4/4) moist; massive; hard, firm, sticky and plastic; 80 percent indurated duripan fragments and lenses with a 2 to 10 millimeter laminar cap on fragments; 10 percent pebbles, 60 percent cobbles; strongly effervescent; moderately alkaline (pH 8.2). (6 to 20 inches thick)
R--23 inches; hard fractured rhyolite.

Type location: Elko County, Nevada; Owyhee Desert, approximately 43 miles west of Owyhee; 41 degrees, 59 minutes, 28 seconds north latitude, 116 degrees, 55 minutes, 12 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist winter and spring, dry June to October
Soil temperature: 47 to 53 degrees F.
Depth to discontinuous pan: 8 to 34 inches.
Depth to bedrock: 21 to 40 inches.
Control section:
Clay content--27 to 35.
Rock fragments--35 to 60 percent.

A horizon:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 through 4 dry or moist.
Reaction--Neutral or mildly alkaline.

Bt horizon:
Value--5 through 7 dry, 4 or 5 moist.
Chroma--3 or 4 dry or moist.
Texture--Very gravelly clay loam, gravelly clay loam, very cobbly clay loam.
Clay content--27 to 35 percent.
Rock fragments--35 to 50 percent.
Reaction--Neutral or mildly alkaline.

Bqk horizons:
Rock fragments--60 to 80 percent mostly cobbles and gravel.
Effervescence--Slightly through violently effervescent.
Reaction--Moderately or strongly alkaline.

Wilsor Series

The Wilsor series consists of deep, well drained soils that formed in residuum and colluvium from tuff with a component of loess and volcanic ash. Wilsor soils are on shoulders of hills. Slopes are 4 to 30 percent. Mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine-loamy, mixed, frigid Durixerollic Haplargids

Typical pedon: Wilsor loam, 4 to 15 percent slopes, located in an area of map unit 2741. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3); weak medium platy structure; soft, very friable, slightly sticky and slightly plastic; few fine and very fine roots; many fine vesicular pores; 5 percent pebbles; neutral (pH 7.2); abrupt smooth boundary. (2 to 3 inches thick)
A2--2 to 7 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and plastic; few fine and very fine roots; few fine tubular pores; 5 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary. (4 to 6 inches thick)
Bt1--7 to 12 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; weak coarse prismatic structure parting to moderate medium subangular blocky; hard, firm, sticky and plastic; few fine and very fine roots; few fine tubular pores; common thin clay films on faces of peds and lining pores; 5 percent pebbles; mildly alkaline (pH 7.6); gradual smooth boundary. (4 to 9 inches thick)
Bq--12 to 17 inches; very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and plastic; 20 percent brittle durinodes; 10 percent pebbles; moderately alkaline (pH 8.2); gradual wavy boundary. (0 to 6 inches thick)
Bqk1--17 to 30 inches; very pale brown (10YR 7/3) gravelly loam, pale brown (10YR 6/3) moist; massive; slightly hard, friable, slightly sticky and plastic; 20 percent brittle durinodes; common fine lime in seams; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary. (12 to 14 inches thick)
Bqk2--30 to 46 inches; very pale brown (10YR 8/3) gravelly sandy loam, pale brown (10YR 6/3) moist; massive; soft, friable, slightly sticky and slightly plastic; 15 percent brittle durinodes; common fine lime in seams; violently effervescent; 15 percent pebbles; strongly alkaline (pH 9.0); gradual wavy boundary. (15 to 17 inches thick)
Cr--46 inches; soft weathered tuff bedrock.

Type location: Elko County, Nevada; Owyhee Desert, in an unsectionized area, approximately 15 miles northwest of Midas; 41 degrees, 22 minutes, 51 seconds north latitude, 116 degrees, 53 minutes, 27 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry from early July through October
Soil temperature: 44 to 47 degrees F.
Depth to Bq or Bqk horizons: 11 to 20 inches.
Control section:
Clay content--25 to 35 percent.
Texture--Loam, clay loam.
Rock fragments--0 to 15 percent, mainly pebbles.
Depth to bedrock--40 to 60 inches.
Depth to lime--14 to 20 inches.

A horizons:
Value--3 or 4 moist.
Chroma--2 or 3.
Structure--Thin or medium platy, or subangular blocky in the lower subhorizons only.

Bt horizon:
Value--5 or 6 dry.
Chroma--3 or 4.
Clay content--25 to 35 percent.
Rock fragments--0 to 15 percent, mainly pebbles.

Bq and Bqk horizons:
Rock fragments--10 to 30 percent, mainly pebbles.

Cementation--Commonly has durinodes in a friable matrix, with some pedons weakly discontinuously silica cemented.

Xeric Torriorthents

Xeric Torriorthents consists of very shallow, well drained soils that formed in residuum from tuff. The Xeric Torriorthents are on side slopes of hills. Slopes are 15 to 50 percent. The mean annual temperature is about 47 degrees F.

Taxonomic class: Xeric Torriorthents

Typical pedon: Xeric Torriorthents, 15 to 50 percent slopes, is located in an area of map unit 1855. (Colors are for dry soil unless otherwise noted.)

C--0 to 4 inches; light olive brown (2.5Y 5/4) gravelly fine sandy loam, dark grayish brown (2.5Y 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; many fine interstitial pores; 20 percent pebbles; moderately alkaline (pH 8.0); abrupt smooth boundary. (2 to 10 inches thick)

Cr--4 inches; tuff; lime coating in fractures.

Type location: Elko County, Nevada; approximately 12 miles southwest of Midas; about 2,200 feet north and 1,500 feet east of the southeast corner of section 15 T. 38 N., R.44 E.; 41 degrees, 10 minutes, 12 seconds north latitude, 116 degrees, 58 minutes, 35 seconds west longitude.

Range in Characteristics

Soil moisture: Moist winter and spring, dry June through October

Soil temperature: 47 to 52 degrees F.

Depth to paralithic contact: 4 to 10 inches.

Texture: Gravelly fine sandy loam, very gravelly fine sandy loam or gravelly loamy fine sand.

Control section:

Rock fragments--15 to 45 percent, mostly pebbles with 0 to 5 percent cobbles.

C horizon:

Hue--10YR or 2.5Y.

Value--5 or 6 dry, 3 or 4 moist.

Yuko Series

The Yuko series consist of very shallow and shallow, well drained soils that formed in residuum and colluvium from andesite, tuff, tuffaceous sandstone and siltstone. Yuko soils are on side slopes of uplands, hills and rock core areas of fan piedmont remnant side slopes. Slopes are 2 to 50 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Haplargids

Typical pedon: Yuko sandy loam, 4 to 15 percent slopes, is located in an area of map unit 2778. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light brownish gray (10YR 6/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak platy structure; massive; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine roots; many very fine and fine, and common medium vesicular pores; 10 percent pebbles, neutral (pH 7.2); abrupt smooth boundary. (2 to 6 inches thick)

A2--2 to 4 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine tubular pores; neutral (pH 7.0); clear wavy boundary. (0 to 3 inches thick)

Bt1--4 to 8 inches; light yellowish brown (10YR 6/2) clay loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, firm, slightly sticky and plastic; common fine and few fine roots; few fine and many very fine tubular pores; 10 percent pebbles; many moderately thick clay films lining pores and on faces of peds; moderately alkaline (pH 8.0); abrupt wavy boundary. (3 to 8 inches thick)

Bt2--8 to 14 inches; yellowish brown (10YR 5/4) clay loam, dark brown (10YR 4/3) moist; strong medium subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; few very fine interstitial pores; common moderately thick clay films on faces of peds; moderately alkaline (pH 8.0); abrupt wavy boundary. (0 to 6 inches thick)

2Cr--14 to 20 inches; soft tuff bedrock.

Type location: Elko County, Nevada; in an unsectionized area, about 28 miles north of Midas; 41 degrees, 39 minutes, 19 seconds north latitude, 116 degrees, 51 minutes, 42 seconds west longitude.

Range in Characteristics

Soil moisture: Usually moist in winter and spring, dry from June through October

Soil temperature: 47 to 52 degrees F.

Depth to paralithic contact: 6 to 14 inches.

Control section:

Clay content--Averages 27 to 35 percent, with less than 45 percent sand.

Rock fragments--Average 5 to 15 percent, mainly pebbles and cobbles.

A horizons:

Value--4 through 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Slightly acid or neutral.

Bt horizons:
Hue--7.5YR or 10YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--3 through 6 dry or moist.
Texture--Dominantly silty clay loam or clay loam.
Clay content--30 to 40 percent.
Rock fragments--Averages less than 15 percent.
Reaction--Slightly acid through moderately alkaline
Other features--Some pedons have a 1 to 4 inch thick clay subhorizon.

Zevadez Series

The Zevadez series consists of very deep, well drained soils that formed in alluvium from mixed rock sources with a component of loess and volcanic ash. The Zevadez soils are on fan piedmont remnants and plateaus. Slopes are 0 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Durixerollic Haplargids

Typical pedon: Zevadez very fine sandy loam, 0 to 2 percent slopes, located in an area of map unit 2776. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; light brownish gray (10YR 6/2) very fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; slightly hard, very friable, slightly sticky, slightly plastic; few very fine roots; many fine vesicular pores; mildly alkaline (pH 7.8); abrupt smooth boundary. (2 to 4 inches thick)
A2--3 to 10 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky, plastic; few fine and very fine roots; common very fine tubular pores; mildly alkaline (pH 7.8); clear smooth boundary. (2 to 7 inches thick)
2Bt--10 to 19 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 4/3) moist; strong angular blocky structure; hard, firm, sticky, plastic; few fine and very fine roots; few fine and very fine tubular pores; common moderately thick clay films on faces of peds; moderately alkaline (pH 8.4); gradual smooth boundary. (6 to 14 inches thick)
2Bq--19 to 26 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, firm, brittle matrix, slightly sticky, slightly plastic; few fine roots; few fine and very fine tubular pores; continuous silica cementation; moderately alkaline (pH 8.4); abrupt smooth boundary. (5 to 20 inches thick)
3Bqk1--26 to 39 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; massive; very hard, firm, nonsticky, nonplastic; few fine interstitial pores; continuous brittle matrix; 30 percent brittle durinodes; strongly effervescent; lime is in common fine filaments; moderately alkaline (pH 8.0); gradual wavy boundary. (0 to 21 inches thick)
3Bqk2--39 to 60 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; massive; hard, firm, nonsticky, nonplastic; common very fine tubular pores; continuous brittle matrix; 5 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4).

Type location: Elko County, Nevada; in an unsectionized area, approximately 1,000 feet south of Silver Lake; 41 degrees, 39 minutes, 44 seconds north latitude, 116 degrees, 40 minutes, 07 seconds west longitude.

Range in Characteristics

Soil moisture: Usually dry; moist in winter and spring, dry early June through November
Soil temperature: 47 to 52 degrees F.
Depth to the base of the argillic horizon and depth to continuous brittle matrix: 12 to 20 inches.
Depth to carbonates: 24 to 36 inches.

A horizons:
Value--5 through 7 dry, 3 or 4 moist when mixed, the upper 7 inches averages lighter than 5.5 dry.
Chroma--2 or 3.
Structure--Platy in the upper subhorizon and platy or subangular blocky in lower subhorizons.
Reaction--Neutral to moderately alkaline.

Bt horizons:
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Sandy clay loam, clay loam or loam.
Clay content--20 to 30 percent.
Rock fragments--0 to 15 percent.
Structure--Subangular blocky or angular blocky.
Consistence--Very friable to firm, moist; slightly sticky or sticky and slightly plastic or plastic, wet.
Reaction--Mildly alkaline or moderately alkaline.

Bq horizon:
Value--6 or 7 dry, 4 or 5 moist.
Chroma--3 or 4.
Texture--Fine sandy loam or very fine sandy loam; clay loam is common in some pedons.
Clay content--12 to 30 percent.
Rock fragments--0 to 15 percent, mainly pebbles.
Structure--Massive with platy or subangular blocky common in some pedons.

Consistence--Hard or very hard, dry, slightly sticky or sticky and slightly plastic or plastic, wet.
Cementation--Continuous brittle matrix with up to 40 percent durinodes in a firm and brittle matrix.

Bqk horizons:
Hue--10YR or 2.5Y.
Value--6 through 8 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Loamy sand, loamy fine sand, fine sandy loam or very fine sandy loam.
Clay content--8 to 12 percent.
Rock fragments--0 to 15 percent, mainly pebbles.
Consistence--Slightly hard to very hard dry, and friable or firm moist.
Reaction--Mildly alkaline or moderate alkaline.
Effervescence--Slightly or strongly.
Other features--20 to 60 percent durinodes in a friable matrix or has a continuous brittle matrix.

Formation of the Soils

This section relates the soils in the survey area to the major factors of soil formation.

Soil is a natural body on the earth's surface in which plants grow. It is a mixture of varying proportions of mineral material, organic matter, water, and air. The mineral material is variable in size and is partly or wholly weathered. Soils have distinctive layers, or horizons, that are the product of environmental forces acting upon material deposited or accumulated through geologic activity.

Soils differ from one another in different localities and within short distances. The differences are the result of the interaction of five soil-forming factors to the kind of soil that develops. These factors are (1) climate, mainly the temperature and kind and amount of precipitation that have existed since accumulation of the parent material; (2) topography or relief, mainly as it affects the internal and external soil properties, such as drainage, aeration, susceptibility to erosion, and exposure to sun and wind; (3) biological forces, including the plant cover and the organisms living in and on the soil; (4) parent material, including texture and structure of the material as well as its mineralogical and chemical composition; and (5) the length of time that the other soil-forming factors have been active.

In general, the landscape of the area is comprised mainly of mountains and valleys that are the result of geologic stratigraphic and structural control. The present topography and landforms, however, are primarily the result of events during Quaternary time. The kinds of soil that formed are indicative of the stability and age of the surfaces of the landforms on which they occur.

Climate

The climate of the survey area is characterized by warm, dry summers and cool, moist winters. The average annual precipitation ranges from about 7 inches in the lowest elevations of the western part of the survey area to about 20 inches or more at the highest elevations in Tuscarora and Bull Run Mountains. The average annual air temperature ranges from about 50 degrees F in the lower elevation areas to about 40 degrees F or lower in some of the high mountain ranges. Major climatic variations are the result of the effects of topography relief. Temperature decreases with increasing elevation. Precipitation increases with increasing elevation and is highest in the mountainous areas. As a consequence, the soils in the survey area reflect a general zonation with respect to elevation and latitudinal location.

At the lower elevations of 4,500 to 5,400 feet within the survey area, the average annual precipitation is about 7 to 8 inches. In this arid part of the area, weathering of parent material is slow, leaching is incomplete, and eluviation and illuviation proceed at a very slow rate. The plant cover is sparse and consists mainly of drought and salt-tolerant shrubs. Typically, the soils are low in organic matter content, and have a thin light colored A horizon. Soluble salts and calcium carbonate accumulate in the soil profile at a relatively shallow depth. Duric Haplargids (Kortty series), Duric Camborthids (Weso series), and Typic Durorthids (Sodhouse series) characterize soils that reflect soil formation in this climatic zone.

With increasing elevation, there is an accompanying increase in precipitation which results in deeper leaching of salts and calcium carbonate, and a thicker and darker A horizon. Haploxerollic Durorthids (Shabliss series), and Durixerollic Camborthids (Clurde, Enko and Orovada series) represent soils formed at lower elevations where precipitation is about 10 inches. Aridic Durixerolls (Stampede series), and Abruptic Aridic Durixerolls (Donna series) are examples of soils that have formed at mid-elevation in this zone.

At the highest elevations, up to about 8,500 feet, precipitation is 12 to over 16 inches. Leaching of salts and carbonates is more intensive. The soils are neutral or slightly acid with a thick A horizon that is high in organic matter content. Pachic Haploxerolls (Shively series), Pachic Cryoborolls (Hapgood series), and Argic Pachic Cryoborolls (Tusel series) are typical of these soils.

In winter, freezing and thawing generally occur throughout the survey area, except in those areas that generally are insulated by snow cover. The effects of frost action are discernible by the heaving of plants, development of miniature stone rings, and erosion of the surface soils. At some of the higher elevations,

freezing and thawing has fractured and displaced the bedrock.

Living Organisms

Plants, animals, insects, and microorganisms are important biological forces that affect soil formation in the survey area. Animals, such as badgers and ground squirrels, and insects, such as cicadas, have had some effect on soil development, although plants and various microorganisms appear to have been the major biological influence on the soils in this survey area.

The vegetation in the area has been a particularly important factor in reducing erosion. This factor has helped to maintain the stability of the land surfaces so that normal soil formation could take place.

Because of climatic differences, plants vary considerably in kinds and amounts with differences in landform and elevation. On flood plains, stream terraces and inset fans at low elevations, the main plants are drought and salt-tolerant shrubs and grasses. Because of the scarcity of available moisture, plants cover only a small part of the surface. Therefore, very little organic matter is added to the soil and the scarcity of plants or litter provides little protection from the wind and sun. This is common on the Aquic Xerofluvents (Placeritos series) and Duric Camborthids (Creemon and Relley series).

On the flood plains where drainage is restricted, the dense growth of meadow vegetation has supplied the organic matter that gives the Cumulic Haplaquolls (Crooked Creek series) a thick, dark-colored A horizon.

The piedmonts and low hills at low and medium elevations support a plant cover of shrubs and grass that is transitional from desert shrubs. The density of plants increases gradually with elevations and soluble salts are deeper in the soil profile. The A horizons of these soils have accumulated slight to moderate amounts of organic matter depending on soil stability. Xerollic Durargids (Hunnton series) and Aridic Argixerolls (Cotant series) are typical of these soils.

The mountainous areas support fairly dense stands of shrubs, grasses, and in some places, trees. Because of the more abundant vegetation, the A horizons of most of the soils, such as the Pachic Cryoborolls (Hapgood series), are thick, high in organic matter, and dark in color.

Topography

Topography, through its effects on drainage, runoff, erosion, and exposure to the sun and wind, has had an important effect on soil formation in the survey area. The mountain ranges, valleys, and flood plains reflect the gross variations in relief within the area.

The mountain ranges are mainly characterized by excessive relief. Runoff is rapid or very rapid, and the hazard of erosion is high. The removal of material by erosion inhibits or prevents soil development. Development in soils on unstable mountain surfaces that are subject to a high rate of geologic erosion is primarily limited to accumulation of organic matter to form a dark-colored A horizon. A cambic or an argillic horizon has formed in the soils on more stable mountain surfaces where the rate of geologic erosion has been slower. Lithic Xerollic Haplargids (Soughe series) and Aridic Calcic Argixerolls (Carstump series) are examples of soils that formed on the more stable mountain slopes and have an argillic horizon. Lithic Haploxerolls (Gando series) are examples of soils on less stable mountain slopes where soil formation has been unable to act on parent material long enough for calcic or argillic horizons to develop.

Concave and northfacing mountain slopes commonly have snow pockets that remain into late spring and early summer. The effect of temperature and moisture is enhanced in these areas resulting in dense stands of shrubs and grass. The soils in these areas have developed a thick, dark-colored A horizon with a high content of organic matter. Pachic Cryoborolls (Hapgood series) are examples of these soils.

The valleys receive drainage water primarily from the surrounding mountain ranges. Within the survey area, the valleys are characterized by a series of level or nearly level basin floors bordered by a piedmont slope consisting of alluvial fans, fan skirts, and fan piedmonts remnants *(16)*. They consist of Tertiary-Quaternary valley-fill material *(4)*. Small playas or intermittent lakes are located in the Owyhee Desert.

In Independence Valley, Squaw Valley, the valley along Evans Creek, and the Owyhee Desert areas, stream erosion has dissected parts of the alluvial fill. Downcutting has been interrupted several times and these events are marked by the development of fan piedmonts. The dissection patterns in some of these areas have resulted in fan piedmont remnant summits

and sideslopes with inset fans and flood plains along drainageways. The fan piedmont areas have been relatively stable over a long period of time as a result of the bypassing of drainage water from hills and mountains through dissecting channels. Xerollic Durargids (Hunnton series), Xerollic Durorthids (Chiara series), and Durixerollic Haplargids (Wieland series) are examples of soils on stable fan piedmont remnants. Durixerollic Camborthids (Orovada series), drained Cumulic Haplaquolls (Welch series), and Cumulic Haplaquolls (Crooked Creek series) are examples of soils on inset fans and flood plains.

Associated with Independence Valley are low hills bordering the mountains. They are strongly dissected and consist of low hill crests and sideslopes. Aridic Argixerolls (Cotant series) and Lithic Argixerolls (Graley series) are examples of soils found on the low hills.

The nearly level axial-stream flood plains along the South Fork of the Owyhee River in Independence Valley have a high water table. Runoff is very slow and some of the soils are subject to flooding. The soils in these areas support dense stands of meadow vegetation that have contributed a large amount of organic matter to the soils, producing a dark-colored A horizon. Cumulic Haplaquolls (Crooked Creek series) are examples of these soils. In some areas, where stream channel entrenchment is common, the water table is at a greater depth. The soils in these areas support good stands of irrigated meadow vegetation. These soils also have dark-colored A horizons. The drained Cumulic Haplaquolls (Clementine series) are examples of soils found on flood plains where channel entrenchment is common along Rock Creek and Willow Creek in Squaw Valley.

Parent Material

Parent material is the weathered rock or unconsolidated material from which soils form. The hardness, grain size, and porosity of the parent material and its mineralogical and chemical composition greatly influence soil formation. The main sources of parent material in the survey area are intrusive and extrusive igneous rock, sedimentary rock, and colluvium and alluvium, including loess and volcanic ash. Minor amounts of metasedimentary and metavolcanic rocks are common in localized areas.

The igneous rock of the hills and mountains of the survey area includes andesite, rhyolite, and welded and non-welded tuff. Volcanic rock contains appreciable quantities of minerals that weather to clay. The more siliceous rock, particularly tuff, is also a source of silica for the cementation of soil horizons. Because of the ability of material derived from volcanic rock to produce clay upon weathering, soils that formed in this material on sufficiently stable landforms for long periods of time have developed argillic horizons. Aridic Argixerolls (Sumine series), Lithic Argixerolls (Cleavage series), Xerollic Durargids (Hunnton series), and Lithic Xerollic Haplargids (Bregar series) are examples of these soils.

Colluvium has accumulated on steep mountain slopes as a result of gravitational forces and is soil parent material. The colluvium generally is poorly sorted, contains many rock fragments, and frequently includes minerals that weather to clay. Many of the colluvial landscapes have not been stable long enough for an argillic horizon to have formed in soils such as the Pachic Cryoborolls (Hapgood and Hackwood series).

Paleozoic sedimentary and metasedimentary rocks occur primarily in the Tuscarora Mountains and the Columbia Basin. This bedrock consists of relatively thick sequences of chert, shale, siltstone, sandstone, quartzite, and conglomerate. Aridic Argixerolls (Rugar series) are examples of soils that have developed argillic horizons in this material.

Late Tertiary and early Quaternary sedimentary and metasedimentary rocks occur primarily in the Tuscarora Mountains and the Snowstorm Mountains. The bedrock consists primarily of older alluvium and lakebed deposits containing interbedded tuffaceous shale, tuffaceous sandstone, siltstone, and mudstone. Xeric Torriorthents (Puett series) and Lithic Torriorthents (Puett variant) are examples of shallow undeveloped soils on unstable surfaces where soil formation is minimal.

Alluvium deposited on fan piedmont remnants, inset fans, fan aprons, fan skirts, alluvial fans, alluvial flats, and flood plains consists mostly of silty, loamy, and clayey material of generally mixed mineralogy that has been eroded from surrounding hills and mountains.

Alluvium deposited from mixed rock sources on fan piedmonts, fan aprons, and fan skirts are mostly loamy textured and generally contain pebbles, cobbles, and stones. It is porous and contains minerals that, when weathered, produce clay and soluble silica for cementation of duripans. Xerollic Durargids (Hunnton series) and Aridic Durixerolls (Stampede series) are examples of soils with an argillic horizon and silica cementation that formed on stable fan piedmont remnants. Durixerollic Camborthids (Orovada series) are examples of soils with a cambic horizon and some silica cementation on fan aprons and fan skirts.

Alluvium deposited on flood plains consists of silty and clayey material. Although these materials contain weatherable minerals, the soils are young and exhibit little soil development. Aeric Fluvaquents (Sonoma

series) and Fluvaquentic Haplaquolls (Humboldt series) are examples of these soils.

Volcanic ash has been instrumental as a source of silica in the formation of durinodes and duripans in the soils of the area. Volcanic ash has been preserved in some of the soils on fan skirts, inset fans, stream terraces, and adjacent flood plains. These occur as strata. Duric Camborthids (Creemon series) on stream terraces and Duric Camborthids (Relley series) on inset fans are examples of soils influenced by volcanic ash.

Time

Time is required for the formation of soil horizons. The amount of time required depends upon the other soil-forming factors. Thickness and other characteristics of surface and subsoil horizons and of other horizons reflect the relative age of soils *(10)*. The age of the soil horizons reflects the amount of weathering of parent material resulting from the interaction of moisture, temperature, biological activity, and the local relief.

The soils in this survey area range from a few years to, possibly, many thousands of years in age. This range in age is a major reason for the many kinds of soil in the area.

The influence of time and other soil-forming factors are not well understood by soil scientists and geologists working in this field. Many soil scientists and some geologists feel that weathering of parent material and soil profile development have been essentially continuous, with little change in rate, throughout Quaternary time *(14)*, *(15)*, *(17)*, *(21)*.

Recently, geologists concerned with differentiating Quaternary deposits have proposed that soil development has not proceeded continuously at the same rate, but has taken place intermittently at rapid rates *(11)*, *(12)*, *(13)*, *(17)*. These geologists have developed the technique of mapping soil stratigraphic units which use weathering profiles as stratigraphic markers to differentiate and correlate Quaternary deposits. The concept of soil development is based on the assumption that weathering profiles formed in response to infrequent combinations of climatic factors that induces minimal erosion and deposition and a greatly accelerated rate of chemical weathering.

Although disagreements exist in regard to the relative influences of time and other soil-forming factors, the concept of intermittency of soil formation has been supported by numerous studies and provides a practical technique to discuss the age of soil in the survey area in relation to geologic climatic units in Quaternary time. For the purpose of this discussion, time-stratigraphic names will be as set forth by Birkeland *(3)*. These are Holocene (0-10,000 years), Late Wisconsin (10,000 - 30,000 years), Middle Wisconsin (30,000 - 40,000 years), Early Wisconsin (40,000 - 130,000 years), and Pre-Wisconsin (130,000+ years).

The kinds of diagnostic subsurface horizons and other subsurface diagnostic properties *(20)*, *(18)*, together with their strength of expression, provide general clues to the age of the soils in the area. Important subsurface diagnostic horizons present in soils within the area include argillic, natric, and cambic horizons, and horizons exhibiting silica cementation.

Strongly expressed argillic horizons in this area generally occur in soils that formed primarily during Wisconsin and Pre-Wisconsin. This concept has been established by studies in the Southwest *(6)*, *(7)*, and is further supported in Soil Taxonomy *(20)*. With increasing age and constancy of other conditions, argillic horizons become finer in texture, become somewhat thicker, and tend to develop abrupt upper boundaries. Weakly expressed, thin argillic horizons may have formed during very Late Wisconsin or Early Holocene time.

Natric horizons are special kinds of argillic horizons that formed under the influence of high exchangeable sodium content. The effect of sodium on the dispersion of clay may tend to accelerate the rate of formation of argillic horizons. This is not believed to be significant, however, except in weakly expressed natric horizons that formed on Holocene surfaces. Following earlier development as argillic horizons, prominent natric horizons may have developed their present characteristics as a result of sodium supplied from eolian deposits. Transportation and deposition of sodium salts with eolian deposits are believed to be an important present day process that affects the physical and chemical properties of soils in the area.

The volcanic glass in sediment derived from pyroclastic material and in alluvial and eolian deposits of volcanic ash is a source of silica for the formation of duripans and durinodes in many of the soils in the survey area. Duripans are massive or platy horizons that are cemented with silica, and in most instances, with accessory carbonates. Because of their association with prominent argillic horizons, massive duripans capped with silica and lime cemented laminar layers are probably the oldest kind of duripan in the area and are of Pre-Wisconsin age. Thin duripans lacking overlying laminar layers, weak discontinuous silica cementation, and/or durinodes have apparently developed on Holocene surfaces in loess or loamy alluvium generally deposited on gravelly material. These forms of silica cementation apparently are

capable of forming during a relatively short period of time.

The degree of development of diagnostic subsurface horizons in the soils of the area indicates a sequence of soils that ranges in age from present time to Pre-Wisconsin.

The youngest soils in the area are those that formed in recently aggraded material or in material recently exposed by erosion. Included among these soils are Aeric Fluvaquents (McCleary and Tweba series) and Aquic Xerofluvents (Placeritos series) formed in recent alluvium; and shallow Xeric Torriorthents (Puett series) formed in Tertiary sediments on low hills where geologic erosion has been active.

Somewhat older than these soils are those soils that formed in alluvium on wet flood plains, slowly aggrading inset fans and soils on relatively recently eroded mountain slopes. These soils have been stable long enough to have accumulated organic matter and formed a dark-colored A horizon. They do not have an argillic, natric, cambic, or calcic horizon. Cumulic Haplaquolls (Crooked Creek series) are examples of soils that formed on wet flood plains. Aridic Haploxerolls (Loncan series) and Pachic Cryoborolls (Hapgood series) are examples of soils that formed on mountain slopes.

Stable Holocene land surfaces less than about 10,000 years and more than 2,000 years old are extensive in the survey area. The soils that formed on these surfaces have a cambic horizon. Original stratification is absent, and carbonates and some silica have been removed and redeposited in underlying horizons. Investigations in southern New Mexico indicate that cambic horizons in that region are less than about 5,000 years old *(5)*, *(8)*. Cambic horizons in the survey area and in other areas in Nevada have been generally thought to be less than 10,000 years old, and possibly less than 7,000 years. This age has been determined mostly as a result of soil mapping in areas located below the last high stage of Pleistocene Lake Lahontan *(9)*, *(11)*, *(12)*, *(13)*. Durixerollic Camborthids (Clurde and Orovada series) are examples of soils with cambic horizons on inset fans.

The soils in some areas have been stripped by erosion during the Late Wisconsin exposing relict duripans. Subsequent redeposition, during middle to early Holocene, of loess and loamy alluvium derived from surrounding land surfaces covered these relict subsurface horizons to a shallow depth. Soil development of the surface alluvium is minimal. Typic Durorthids (Sodhouse series) and Xerollic Durorthids (Chiara series) are examples of these soils on fan piedmont remnants.

Soils that have a relict argillic horizon are believed to be of Late Wisconsin to Pre-Wisconsin age. These soils occur extensively on mountains, hills, and fan piedmonts. The fact that extensive areas of these kinds of soils exist today is evidence that major erosional and depositional events have not taken place in the area since late Pleistocene time.

Stable Late Wisconsin or Middle Wisconsin land surfaces are extensive. Soils on these surfaces have dominantly fine-loamy or loamy-skeletal argillic horizons. Durixerollic Haplargids (Zevadez series) are examples of soils with argillic horizons on hill and mountain slopes. Pachic Argixerolls (Bullump series) are examples of soils on mountain slopes.

During this same period, thin and moderately thick duripan were formed in some soils with argillic horizons on the older landscapes of the area. Haploxerollic Durargids (Cherry Spring series) are examples of these soils on fan piedmont remnants.

Stable Early Wisconsin or Early-Middle Wisconsin land surfaces are extensive. These soils have well developed, fine textured argillic horizons. They occupy older, stable land surfaces where the original subsurface horizons have been neither stripped by erosion or deeply buried by sediment. Aridic Durixerolls (Stampede series) and Xerollic Durargids (Hunnton series) are examples of such soils on fan piedmont remnants. Aridic Argixerolls (Quarz series) are examples of these soils on mountain slopes.

Stable very Early Wisconsin and Pre-Wisconsin surfaces are moderately extensive in the area. Soils on these surfaces are relatively stable, deeply dissected, and have fine and very fine textures with an argillic horizon that has an abrupt upper boundary. It is because of these characteristics that these soils are considered to be the oldest in the area. Abruptic Aridic Durixerolls (Donna series) are examples of these soils on fan piedmont remnants. Aridic Palexerolls (Pie Creek series) and Xerollic Paleargids (Mahala series) are examples of these soils on hill slopes.

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Glossary

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone. The material washed down the sides of mountains and hills by ephemeral streams and deposited at the mouth of gorges in the form of a moderately steep, conical mass descending equally in all directions from the point of issue.

Alluvial fan. The fanlike deposit of a stream where it issues from a narrow valley upon a plain, or of a tributary stream near or at its junction with its main stream.

Alluvial flat. A nearly level, graded, alluvial surface in bolsons and semi-bolsons. Commonly, an alluvial flat does not manifest terraces or floodplain levels.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Argillite. Weakly metamorphosed mudstone or shale.

Arroyo. The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in alluvium.

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 3.5
Low	3.5 to 5
Moderate	5 to 7.5
High	more than 7.5

Avalanche chute. The track or path formed by an avalanche.

Back slope. The geomorphic component that forms the steepest inclined surface and principal element of many hillsides. Back slopes in profile are commonly steep, are linear, and may or may not include cliff segments.

Backswamp. A flood-plain landform of extensive, marshy, or swampy, depressed areas of floodplains between natural levees and valley sides or terraces.

Badland. Steep or very steep, commonly nonstony, barren land dissected by many intermittent drainage channels. Badland is most common in semiarid and arid regions where streams are entrenched in soft geologic material. Local relief generally ranges from 25 to 500 feet. Runoff potential is very high, and geologic erosion is active.

Ballena. A fan remnant having a distinctively-rounded surface of fan alluvium. The ballena's broadly rounded shoulders meet from either side to form a narrow summit and merge smoothly with concave, short pediments which form smoothly-rounded drainageways between adjcent ballenas. A partial ballena is a fan remnant large enough to retain some relict fan surface on a remnant summit.

Barrier beach. A wide gently sloping portion of a bolson floor comprising numerous, parallel, relict longshore-bars and lagoons built by a receding pluvial lake.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, K), expressed as a percentage of the total cation-exchange capacity.

Basin floor. A general term for the nearly level, lowermost part of intermontane basins (i.e., bolson, semi-bolsons). The basin floor includes all of the alluvial, eolian, and erosional landforms below the piedmont slope.

Beach terrace. The relict shorelines from pluvial lakes, generally restricted to valley sides.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level, or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts, the water table is exposed.

Board foot. A unit of measure of the wood in lumber, logs, or trees. The amount of wood in a board one foot wide, one foot long, and one inch thick before finishing.

Bolson. A landscape term for an internally drained intermontane basin into which drainages from surrounding mountains converge inward toward a central depression.

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.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

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.

Butte. An isolated small mountain or hill with steep or precipitous sides and a top variously flat, rounded, or pointed that may be a residual mass isolated by erosion or an exposed volcanic neck.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caldera. A large, more or less circular depression, formed by explosion and/or collapse, which surrounds a volcanic vent or vents, and whose diameter is much greater than that of the included vent, or vents.

Caliche. A more or less cemented deposit of calcium carbonate in soils of warm-temperate, subhumid to arid areas. Caliche occurs as soft, thin layers in the soil or as hard, thick beds directly beneath the solum, or it is exposed at the surface by erosion.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of a standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow, very steep sided valley with high, precipitous walls in an area of high local relief.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. 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.

Channeled. Refers to a drainage area in which natural meandering or repeated branching and convergence of a streambed have created deeply incised cuts, either active or abandoned, in alluvial material.

Channery soil material. Soil material that is, 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.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clayey soil. Silty clay, sandy clay, or clay.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Clearcut. A method of forest harvesting that removes the entire stand of trees in one cutting. Reproduction is achieved artificially or by natural seeding from adjacent stands.

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.

Closed depression. A low area completely surrounded by higher ground and having no natural outlet.

Coarse fragments. Mineral or rock particles larger than 2 millimeters in diameter.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded, partly rounded or angular fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that is 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 is 35 to 60 percent of these rock fragments, and extremely cobbly soil material is more than 60 percent.

Codominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above but comparatively little from the sides.

Colluvium. Unconsolidated, unsorted earth material moved and deposited by mass movement on sideslopes and at the base of slopes.

Commercial forest. Forest land capable of producing 20 cubic feet or more per acre per year at the culmination of mean annual increment.

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.

Compressible (in tables). Excessive decrease in volume of soft soil under load.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane that typically takes the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse grained, clastic rock composed of rounded to 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 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."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

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.

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

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.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cuesta. A hill or ridge that has a gentle slope on one side and a steep slope on the other; specifically, an asymmetric, homoclinal ridge capped by resistant rock layers of slight or moderate dip.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deep soil. A soil that is 40 to 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

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.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

Desert pavement. On a desert surface, a layer of gravel or larger fragments that was emplaced by upward movement of the underlying sediments or that remains after finer particles have been removed by running water or the wind.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Dominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above and from the sides.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are: recognized = excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. An area of ground at a lower elevation than the surrounding ground and in which water collects and is drained to a closed depression or lake or to a drainageway at a lower elevation. A drainageway may or may not have distinctly incised channels at its upper reaches or throughout its course.

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.

Dune. A mound, ridge, or hill of loose, windblown granular material (generally sand), either bare or covered with vegetation.

Ecological Site. A distinctive kind of rangeland or grazed forestland that has a unique historic potential native plant community. Ecological sites are the products of all the environmental factors that affect their development. An ecological site is capable of supporting a native plant communty that has a unique kind and/or proportion of species or tatol vegetative production. Ecological sites in grazed forestland include both overstory and understory vegetation.

Effervescence. The quality of a soil measured when drops of diluted (1:10) hydrochloric acid (HC1) are added to the soil. The ratings are as follows:

Very slightly effervescent ..... few bubbles
Slightly effervescent.....bubbles readily
Strongly effervescent ..... bubbles form low foam
Violently effervescent.....bubbles form thick foam quickly

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.
Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.
Erosion (accelerated). Erosion that is much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

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.

Even aged. Refers to a stand of trees in which only small differences in age occur between the individuals. A range of 20 years is allowed.

Excess alkali (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess lime (in tables). Excess carbonates in the soil that restrict the growth of some plants.

Excess salts (in tables). Excess water-soluble salts in the soil that restrict the growth of most plants.

Excess sodium (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess sulfur (in tables). Excessive amount of sulfur in the soil. The sulfur causes extreme acidity if the soil is drained, and the growth of most plants is restricted.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

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 apron. A sheet-like mantle of relatively young alluvium covering part of an older fan piedmont surface. It somewhere buries a soil that can be traced to the edge of the fan apron.

Fan piedmont. The most extensive landform on piedmont slopes, formed by the coalescence of alluvial fans or accretions of fan aprons into one generally smooth slope.

Fan remnant. A general term for landforms that are remaining parts of older fan-landforms, that either have been dissected or partially buried.

Fan skirt. The zone of smooth, laterally-coalescing, small alluvial fans that issue from gullies cut into the fan piedmont or that are the coalescing extensions of inset fans of the fan piedmont, and that merge with the basin floor.

Fast intake (in tables). The rapid movement of water into the soil.

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.*

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of fire fighters and

equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that is, by volume, 15 to 35 percent flagstones. Very flaggy soil material is 35 to 60 percent flagstones, and extremely flaggy soil material is 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.

Foot slope. The inclined surface at the base of a hill.

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.

Fragile (in tables). A soil that is easily damaged by use or disturbance.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai. The microrelief of clayey soils that shrink and swell considerably with changes in moisture content. Usually manifested as a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

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 is 15 to 50 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 underlying 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.

Gypsum. A mineral consisting of hydrous calcium sulfate.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

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.

Heavy metal. Inorganic substances that are solid at ordinary temperatures and are not soluble in water. They form oxides and hydroxides that are basic. Examples are copper, iron, cadmium, zinc, manganese, lead, and arsenic.

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.

Holocene. The epoch of the Quaternary Period of geologic time, extending from the end of the Pleistocene Epoch (about 10 to 12 thousand years ago) to the present.

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. 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.

Inset fan. A special case of the flood plain of an ephemeral stream that is confined between fan remnants, basin-floor remnants, ballenas, or closely opposed fan toeslopes.

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 groundwater discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Intermontane basin. A generic term for wide structural depressions between mountain ranges that are partly filled with alluvium. They may be drained internally (bolsons) or externally (semi-bolsons).

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.

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lagoon. The nearly level, filled depression behind the longshore bar on a barrier beach.

Lake plain. A surface marking the floor of an extinct lake, filled in by well sorted, stratified sediments.

Lake terrace. The narrow shelf produced along a lake shore and later exposed when the water recedes.

Lamella. A thin, generally horizontal layer of fine material illuviated within a very much thicker, coarser, eluviated layer.

Landform. Any recognizable form or feature on the earth's surface, having a characteristic shape, and produced by natural causes that provide an empirical description of similar portions of the earth's surface.

Landscape. A collection of related, natural landforms.

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.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

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.

Loamy soil. Coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, silt, clay loam, sandy clay loam, or silty clay loam.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Longshore bar. A narrow, elongate, coarse-textured ridge, built by the wave action of a pluvial lake, that extends parallel to the shore and separated it from a lagoon; both the bar and lagoon are now relict features.

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.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

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.

Mean annual increment (MAI). The average annual increase in volume of a tree during the entire life of the tree.

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.

Merchantable trees. Trees that are of sufficient size to be economically processed into wood products.

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.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately deep soil. A soil that is 20 to 40 inches deep over bedrock or to other material that restricts the penetration of plant roots.

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.

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.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

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.

Observed rooting depth. Depth to which roots have been observed to penetrate.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Overstory. The trees in a forest that form the upper crown cover.

Oxbow. The horseshoe-shaped channel of a former meander, remaining after the stream formed a cutoff across a narrow meander neck.

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.

Parna dune. An eolian dune built of sand size aggregates of clayey material that commonly occurs leeward of a playa.

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.

Pediment. A gently sloping erosional surface developed at the foot of a receding hill or mountain slope.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher lying areas of the erosion surface.

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 downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

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	0.00 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.)

Piedmont slope. The dominant slope at the foot of a mountain. Main components of the piedmont slope include pediments, alluvial fans, fan piedmonts, fan skirts and inset fans.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

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.

Plateau. An extensive upland mass with relatively flat summit area that is considerably elevated (more than 100 meters) above adjacent lowlands and separated from them on one or more sides by escarpments.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressional areas, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff.

Pleistocene. The epoch of the Quaternary Period of geologic time preceding the Holocene (from aproximately 2 million to 10 thousand years ago).

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Pluvial. Relating to former periods of abundant rains.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

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.

Poor outlets (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

Potential native plant community. See Climax plant community.

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.

Quartzite, metamorphic. Rock consisting mainly of quartz that formed through recrystallization of quartz-rich sandstone or chert.

Quaternary. The period of geologic time extending from about 2 million years ago to the present and comprising two epochs, the Pleistocene (Ice Age) and Holocene (Recent).

Quartzite, sedimentary. Very hard but unmetamorphosed sandstone consisting chiefly of quartz grains.

Range condition. The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

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.

Range site. An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range 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 range sites in kind or proportion of species or total production.

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 . (mildly alkaline)	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regeneration. The new growth of a natural plant community, developing from seed.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relict stream terrace. One of a series of platforms in or adjacent to a stream valley that formed prior to the current stream system.

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 is generally a few inches deep and not wide enough to be an obstacle to farm machinery.

Riverwash. Unstable areas of sandy, silty, clayey, or gravelly sediments. These areas are flooded, washed, and reworked by rivers so frequently that they support little or no vegetation.

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.

Rock outcrop. Exposures of bare bedrock other than lava flows and rock-lined pits.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Rubble land. Areas that have more than 90 percent of the surface covered by stones or boulders. Voids contain no soil material and virtually no vegetation other than lichens. The areas commonly are at the base of mountain slopes, but some are on mountain slopes as deposits of cobbles, stones, and boulders left by Pleistocene glaciation or by periglacial phenomena.

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 groundwater runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs the growth of plants. A saline soil does not contain excess exchangeable sodium.

Salinity. The electrical conductivity of a saline soil. It is expressed, in millimhos per centimeter, as follows:

Nonsaline	0 to 2
Very slightly saline	2 to 4
Slightly saline	4 to 8
Moderately saline	8 to 16
Strongly saline	More than 16

Salty water (in tables). Water that is too salty for consumption by livestock.

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.

Sand sheet. A large, irregularly shaped, surficial mantle of eolian sand.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sandy soil. Sand or loamy sand.

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.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

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.

Sawlogs. Logs of suitable size and quality for the production of lumber.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Scribner's log rule. A method of estimating the number of board feet that can be cut from a log of a given diameter and length.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Semi-bolson. An intermontane basin that is drained externally by an intermittent stream.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, 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.

Shallow soil. A soil that is 10 to 20 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shelterwood system. A forest management system requiring the removal of a stand in a series of cuts so that regeneration occurs under a partial canopy. After regeneration, a final cut removes the shelterwood and allows the stand to develop in the open as an even-aged stand. The system is

well suited to sites where shelter is needed for regeneration, and it can aid regeneration of the more intolerant tree species in a stand.

Shoulder slope. The uppermost inclined surface at the top of a hillside. It is the transition zone from the back slope to the summit of a hill or mountain. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). 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.

Shrub-coppice dune. A small dune that forms around shrubs or small trees.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

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.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site class. A grouping of site indexes into five to seven production capability levels. Each level can be represented by a site curve.

Site curve (50-year). A set of related curves on a graph that shows the average height of dominant or dominant and codominant trees for the range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and codominant trees that are 50 years old or are 50 years old at breast height.

Site curve (100-year). A set of related curves on a graph that shows the average height of dominant or dominant and codominant trees for a range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and codominant trees that are 100 years old or are 100 years old at breast height.

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.

Skid trails. Pathways along which logs are dragged to a common site for loading onto a logging truck.

Slash. The branches, bark, treetops, reject logs, and broken or uprooted trees left on the ground after logging.

Slickens. Accumulations of fine-textured material, such as material separated in placer mine and ore mill operations. Slickens from ore mills commonly consist of freshly ground rock that has undergone chemical treatment during the milling process.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slippage (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

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 the following slope classes are recognized:

Nearly level	0 to 2 percent
Gently sloping	2 to 4 percent
Moderately sloping	4 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 30 percent
Steep	30 to 50 percent
Very steep	50 to 75 percent
Extremely steep	75 percent and higher

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Very slight	5-12:1
Slight	13-30:1
Moderate	31-45:1
Strong	46-90:1
Very strong	more than 90:1

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Species. A single, distinct kind of plant or animal having certain distinguishing characteristics.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

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.

Strath terrace. A surface cut formed by the erosion of hard or semiconsolidated bedrock and thinly mantled with stream deposits.

Stream channel. The hollow bed where a natural stream of surface water flows or may flow; the deepest or central part of the bed, formed by the main current and covered more or less continuously by water.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel. It originally formed near the level of the stream and is the dissected remnants of an abandoned flood plain, streambed, or valley floor that were produced during a former stage of erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to soil blowing 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 grain* (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 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. Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

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. A general term for the top, or highest level, of an upland feature, such as a hill or mountain. It commonly refers to a higher area that has a gentle slope and is flanked by steeper slopes.

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.

Tailwater. The water directly downstream of a structure.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside

the range defined for the family of the series for which the soils are named.

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 is generally 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). A step-like surface, ordinarily flat or undulating, bordering a river, a lake, or the sea representing a former flood plain.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material too thin for the specified use.

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.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

Too arid (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

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.

Toxicity (in tables). Excessive amount of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Trafficability. The degree to which a soil is capable of supporting vehicular traffic across a wide range in soil moisture conditions.

Tread. The relatively flat terrace surface that was cut or built by stream or wave action.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Understory. Any plants in a forest community that grow to a height of less than 5 feet.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley. An elongated depressional area primarily developed by stream action.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Very deep soil. A soil that is more than 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Very shallow soil. A soil that is less than 10 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Waterspreading. Diverting runoff from natural channels by means of a system of dams, dikes, or ditches and spreading it over relatively flat surfaces.

Water supplying capacity. The total amount of water available in the soil for plant growth in a normal year from precipitation and from runon from higher areas. Runoff and water lost to deep percolation are not included.

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.

Windthrow. The uprooting and tipping over of trees by the wind.

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Soil Survey of Northwest Elko County Area, Nevada,
Parts of Elko and Eureka Counties

Part II, Volume I

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Soil Survey of Northwest Elko County Area, Nevada, Parts of Elko and Eureka Counties

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 woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for 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.

Interpretative ratings help engineers, planners, and others to understand how soil properties influence important nonagricultural uses, such as building site development and construction materials. The ratings indicate the most restrictive soil features affecting the suitability of the soils for these uses.

Soils are rated in their natural state. No unusual modification of the soil site or material is made other than that which is considered normal practice for the rated use. Even though soils may have limitations, it is important to remember that engineers and others can modify soil features or can design or adjust the plans for a structure to compensate for most of the limitations. Many of these practices, however, are costly. The final decision in selecting a site for a particular use generally involves weighing the costs of site preparation and maintenance.

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 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, trees, and shrubs.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The system of land capability classification used by the Natural Resources Conservation Service is explained. The estimated yields of the main crops and pasture plants are listed for each soil in table 6 at the back of this publication.

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" in Part I of this Publication and in the "Soil Properties" portion of Part II. Specific information can be obtained from the local office of the Natural Resources Conservation Service or Nevada Cooperative Extension.

Cropland Limitations and Hazards

The management concerns affecting the use of the detailed soil map units in this survey area are shown in table 5, "Main Cropland Limitations and Hazards." The main concerns in managing irrigated cropland are efficient water use, control of soil blowing and water erosion, maintenance of soil fertility, pest and weed control, and timely planting and harvesting.

Efficient water use consists primarily of optimizing the water intake rate and reducing the runoff and evaporation rates. An irrigation system that provides optimum control and distribution of water is essential. Excessive irrigation wastes water, causes erosion, leaches plant nutrients, and increases the potential for ground water pollution. It also can create drainage problems, raise the water table, and increase soil salinity. Applying conservation tillage and conservation crop rotation, farming on the contour, stripcropping, establishing field windbreaks, and leaving crop residue on the surface conserve moisture.

Generally, a combination of several practices is needed to control *soil blowing* and *water erosion*. Conservation crop rotation, stripcropping, field windbreaks, tall grass barriers, contour farming, residue management, diversions, and grassed waterways help to prevent excessive soil loss.

Measures that are effective in maintaining *soil fertility* include applying fertilizer, both organic and inorganic, including manure; incorporating crop residue or green manure crops into the soil; and using proper crop rotations. Controlling erosion helps to prevent the loss of organic matter and plant nutrients and thus helps to maintain productivity, although the level of fertility can be reduced even in areas where erosion is controlled.

All soils used for irrigated crops respond well to applications of fertilizer.

Some of the limitations and hazards shown in the table cannot be easily overcome. These are *channels, flooding, depth to rock, ponding,* and *gullies*.

Additional limitations and hazards are as follows:

Excessive permeability.--This limitation allows deep leaching of nutrients and pesticides. The capacity of the soil to retain moisture for plant use is poor.

Potential for ground water pollution pollution.--This is a hazard in soils with excessive permeability, hard bedrock, or a water table within the profile.

Lime content, poor tilth, restricted permeability, and *surface crusting*.--These limitations can be overcome by incorporating green manure crops, manure, or crop residue into the soil; applying a system of conservation tillage; and using conservation cropping systems. Also, crops may respond well to additions of phosphate fertilizer to soils that have a high content of lime. Applications of sulfur may be useful in minimizing crusting.

Short frost-free season.--If the growing season is less than 90 days, short-season crops or grasses should be grown.

Surface rock fragments.--This limitation causes rapid wear of tillage equipment. It cannot be easily overcome.

Slope.--Where the slope is more than 8 percent, water erosion may be accelerated unless conservation farming practices are applied.

Surface stones.--Stones or boulders on the surface can hinder normal tillage unless they are removed.

Salt and sodium content.--In areas where this is a limitation, only salt- and sodium-tolerant crops should be grown.

Following is an explanation of the criteria used to determine the limitations or hazards:

Channeled.--The word "channeled" is included in the name of the map unit.

Depth to rock.--Bedrock is within a depth of 40 inches.

Erosion by water.--The surface K factor multiplied by the upper slope limit is more than 2 (same as prime farmland criteria).

Excessive permeability.--The upper limit of the permeability range is more than 6 inches per hour within the soil profile.

Flooding.--The component of the map unit is occasionally flooded or frequently flooded.

Gullied.--The word "gullied" is included in the name of the map unit.

Lime content.--The component is assigned to wind erodibility group 4L or has more than 5 percent lime in the upper 10 inches.

Limited available water capacity.--The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 4.5 inches or less.

Ponding.--Ponding duration is assigned to the component of the map unit.

Potential for ground water pollution.--The soil has a water table within a depth of 4 feet or hard bedrock within the profile, or permeability is more than 6 inches per hour within the soil.

Poor tilth.--The component of the map unit has more than 35 percent clay in the surface layer.

Restricted permeability.--Permeability is 0.06 inch per hour or less within the soil profile.

Salt content.--The component of the map unit has an electrical conductivity of more than 4 in the surface layer or more than 8 within a depth of 30 inches.

Short frost-free season.--The component of the map unit has a growing season of less than 90 frost-free days.

Slope.--The upper slope range of the component of the map unit is more than 8 percent.

Sodium content.--The sodium adsorption ratio of the component of the map unit is more than 13 within a depth of 30 inches.

Soil blowing.--The wind erodibility index multiplied by the selected C factor and then divided by the T factor is equal to or more than 8 for the component of the map unit.

Surface rock fragments.--The terms describing the texture of the surface layer include any rock fragment modifier except for gravelly or channery, and "surface stones" is not already indicated as a limitation.

Surface crusting.--The sodium adsorption ratio in the surface layer is 5 or more for any texture and 4 or more if the texture is silt, silt loam, loam, or very fine sandy loam.

Surface stones.--The terms describing the texture of the surface layer include any stony or bouldery modifier, or the soil is a stony or bouldery phase.

Water table.--The component of the map unit has a water table within a depth of 60 inches.

Crop Yield Estimates

The average yields per acre that can be expected of the principal irrigated crops under a high level of management are shown in table 6, "Land Capability and Yields per Acre of Crops." 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 each map unit 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 are also considered.

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 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.

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 the table 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 Nevada Cooperative Extension can provide information about the management and productivity of the soils for those crops.

Pasture and Hayland Interpretations

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants to maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation also are important management practices.

Yield estimates are often provided in animal unit months (AUM), or the amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Information about forage yields other than those shown in the table "Land Capability and Yields per Acre of Crops" can be provided by the local office of the Natural Resources Conservation Service or Nevada Cooperative Extension.

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 woodland, or for engineering purposes.

In the capability system, as described in "Land Capability Classification" *(19)*, soils generally are grouped at three levels: capability class, subclass, and unit. These levels indicate the degree and kinds of limitations affecting mechanized farming systems that produce the more commonly grown field crops, such as corn, small grain, cotton, hay, and field-grown vegetables. Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use.

If properly managed, soils in classes I, II, III, and IV are suitable for the mechanized production of commonly grown field crops and for pasture and woodland. The degree of the soil limitations affecting the production of cultivated crops increases progressively from class I to class IV. The limitations can affect levels of production and the risk of permanent soil deterioration caused by erosion and other factors.

Soils in classes V, VI, and VII are generally not suited to the mechanized production of commonly grown field crops without special management, but they are suitable for plants that provide a permanent cover, such as grasses and trees. The severity of the soil limitations affecting crops increases progressively from class V to class VII. The local office of the Cooperative Extension or Natural Resources Conservation Service can provide guidance on the use of these soils as cropland.

Areas in class VIII are generally not suitable for crops, pasture, or woodland without a level of management that is impractical. These areas may have potential for other uses, such as recreational facilities and wildlife habitat.

Capability subclasses indicate the dominant limitations in the class. They are designated by adding a small letter, *e, w, s,* or *c*, to the class numeral, for example, IIe. The letter *e* shows that the main hazard is the risk of erosion unless a 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* shows that the chief limitation is a climate that is very cold or very dry.

There are no subclasses in class I because the soils of this class have few limitations. Class V contains only the subclasses indicated by *w, s,* or *c* because the soils in class V are subject to little or no erosion. They have other limitations that restrict their use mainly to pasture, rangeland, woodland, wildlife habitat, or recreation.

The capability classification of each irrigated map unit is given in table 6, "Land Capability and Yields per Acre of Crops."

Erosion Factors

Soil erodibility factors Kw and Kf quantify the susceptibility of soil to detachment by water. A wind erodibility group (WEG) is a grouping of soils that have similar properties affecting their resistance to soil blowing. The Wind Erodibility Index (I) is based on the WEG and is used in the wind erosion equation. Soil erodibility factors Kw and Kf are used in the Revised Universal Soil Loss Equation. The procedure for predicting soil loss is useful in guiding the selection of soil and water conservation practices.

Soil Erodibility Factors Kw and Kf

Factor Kw shows the erodibility of the whole soil, and factor Kf shows the erodibility of only the fine-earth fraction, the material less than 2.0 millimeters in diameter. The soil erodibility factor indicates the susceptibility of a soil to sheet and rill erosion by water. The soil properties that influence erodibility are those that affect the infiltration rate, the movement of water through the soil, and the water storage capacity of the soil and those that allow the soil to resist dispersion, splashing, abrasion, and the transporting forces of rainfall and runoff. The most important soil properties are the content of silt plus very fine sand, the content of sand coarser than very fine sand, the content of organic matter, soil structure, and permeability.

Wind Erodibility Groups

Soils are assigned wind erodibility groups on the basis of the properties of the surface layer. The properties that are most important with respect to soil blowing are soil texture, content of organic matter, calcium carbonate, reaction, content of rock fragments, and aggregate stability. Wind erodibility is inversely related to the percentage of dry surface soil aggregates larger than 0.84 millimeter in diameter. From this percentage, the wind erodibility index factor (I) is determined.

Soil Loss Tolerance (T) Factor

The annual Soil Loss Tolerance (T) is an estimate of the maximum rate of erosion that can occur without affecting crop productivity. The T factor is expressed in tons of soil loss per acre per year. Values of 1 to 5 are used. T values are assigned according to properties of limiting subsurface soil layers. The designation of a limiting layer implies that the material above the layer has more favorable properties for crop production. The criteria for assigning T are based on the severity of

physical or chemical properties of subsurface layers, the climatically influenced properties of soil moisture and temperature, the economic feasibility of utilizing management practices to overcome limiting layers or conditions, and the depth to the limiting layer.

Additional information about wind erodibility groups and I, Kw, Kf, and T factors can be obtained from local offices of the Natural Resources Conservation Service or Nevada Cooperative Extension.

RANGELAND AND GRAZEABLE WOODLAND RESOURCE MANAGEMENT

In this soil survey report, the term "rangeland" refers to a kind of land rather than a land use. Areas of rangeland provide many important resource values. They act as vast watersheds and provide habitat for wildlife, livestock forage, and opportunities for recreation. The resource values of rangeland are intricately related to each other and are often directly affected by rangeland management. Because of the interrelationships among rangeland resources, rangeland managers should consider all resource values when planning range improvements.

Livestock grazing is the principal agricultural use of rangeland. Livestock operations are mostly cow-calf or cow-calf-sheep enterprises. Ranches range from a few hundred to several thousand acres in size. They rely heavily on permitted use of public lands. Most of the rangeland within the survey area is administered by the Bureau of Land Management.

Soil-Site Correlation

During the course of this soil survey, ecological sites were correlated with the soils identified within the survey area. These correlations are based on the current understanding of soil-plant-climate relationships in the survey area. Soil properties that affect moisture supply and plant nutrients have the greatest influence on the productivity of range plants. Soil reaction, content of salts or lime, and topographic position are also important. The relationship of climate to vegetation and soils is considered in the classification of soils and in soil mapping criteria. In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Ecological sites can generally be determined from soil maps and map unit legends developed for the survey area.

Range Condition

Mining is a major industrial use of rangeland in the survey area and has played an important role in the history of the area. During the mining booms of the 1800's, herds of cattle, sheep, oxen, horses, and burros were brought to the Northwest Elko County area to be used as a source of power and food for the developing mining communities. Heavy grazing pressure during these boom periods depleted native stands of forage throughout much of the survey area.

The early devastation of rangeland plant communities through uncontrolled livestock grazing has largely ended, but severely depleted areas still reflect the abuses of early settlement. In the most severely disturbed areas, palatable shrubs generally have been replaced by less desirable shrubs and many native perennial grasses and forbs have been replaced by alien or introduced annual grasses and forbs. Recovery of the plant community has been most evident where previous abuses were limited. The greater the level of deterioration, the longer the period of recovery. Although present day rangeland production and plant diversity in the survey area are generally less than optimal, the overall condition of the rangeland is much improved from what was common in the early 1900's.

Range condition is determined by a comparison of the present plant community with the natural potential plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential plant community, the higher the range condition. Range condition is an ecological rating only. It does not have a specific meaning that pertains to the present plant community for a given use. Ratings of range condition alone do not indicate whether the present plant community is improving or deteriorating in relation to its potential. The trend in range condition is a measure of the direction of change in the condition. It is an expression of the effects of current use. The present range condition is a reflection of the accumulated effects of past use. Once the potential plant communities have been identified and the present range condition has been determined, monitoring the trend in range condition over time can indicate whether management objectives are being met.

Rangeland Management

Range management requires a knowledge of the kinds of soil and of the natural potential plant communities the soils in a given area can support. It also requires an evaluation of the present range condition. For most rangeland plant communities, good management can improve the present condition and productivity of the range and can help to prevent accelerated erosion. Proper management of rangeland depends on many

factors. The season of grazing use, the kind of grazing animal, the intensity and distribution of grazing, and the range resource potential are important management considerations. Multiple-use management that meets present and future needs requires extensive knowledge of the capabilities and limitations of the range resources. An understanding of the soil properties and dynamics of native plant communities is fundamental in applying ecological principles to the evaluation and management of rangeland.

Generally, the objective of range management is to manage grazing so that the plants growing on a site are about the same in kind and amount as the natural potential plant community for that site. Such management generally results in the optimum production of vegetation, conservation of water, and control of erosion. To meet a special need or a specific use, however, it may be desirable to manage for a plant community other than the potential plant community for the site. Care must always be taken not to increase the susceptibility to erosion. Future uses and the relative ability of given sites to respond to management should be considered if the management objective is to establish a plant community other than the potential plant community.

Desirable forage plants of many plant communities within the survey area have been greatly depleted or even eliminated by excessive and untimely grazing. Generally, perennial grasses have decreased in abundance and woody plants have increased. The productivity of forage plants is below the production potential on many sites. Uneven livestock distribution has resulted in both overuse and underuse of the native forage.

An increase in the abundance and size of shrubs and an extensive invasion of cheatgrass (an introduced annual grass) have reduced the amount of soil moisture and nutrients available to perennial grasses and forbs. In areas where the range condition has not excessively deteriorated and an adequate population of desirable perennial grasses and forbs is available to respond to a release from plant competition, brush management can be effective in reversing the trend toward an increasing dominance of woody vegetation.

Abusive grazing of riparian vegetation by livestock can reduce water quality, eliminate streamside shrubs, cause soil compaction, accelerate erosion, and break down streambanks. Proper management of the rangeland in the survey area requires that special attention be given to riparian zones. Fortunately, riparian communities often respond to improved livestock management more rapidly than upland plant communities. Grazing treatments in riparian areas vary with the stability of the riparian plant community and the condition of the adjacent upland plant communities.

Rangeland Seeding

Rangeland seeding may be required following the removal of woody vegetation in areas where desirable understory plants are scarce or are not included in the present plant community. Revegetation also may be necessary for critical area treatment following a wildfire or another major disturbance. Maximum grazing capacity can be achieved in seeded stands where the objective of management is uniform grazing of the stands and prevention of the concentration of livestock. Additional water developments and fencing may be required to meet management objectives.

The success of range seeding depends on the amount of moisture available during the growing season. Even in areas where adapted species are planted and improved seeding and land treatment techniques are applied, the success of range seeding is strongly influenced by rainfall. The distribution and amount of precipitation in the survey area fluctuate widely from one year to the next. Years of below normal precipitation are relatively frequent, and the risk of seeding failure caused by the unpredictability of climate should be acknowledged in addition to critical soil properties that affect seeding success.

Each soil in the survey area is rated in the table "Suitability for Rangeland Seeding." The criteria used in the development of these ratings are available at the local offices of the Natural Resources Conservation Service in Nevada. Where critical area treatment is necessary, providing a plant cover that helps to prevent accelerated erosion may be advantageous on soils that are poorly suited to range seeding. The plants that are suited to the soils in the area to be treated should be selected for seeding.

More specific management concerns are addressed under the heading "Plant Communities in Northwest Elko County Area," later in this section. Additional information about rangeland management can be obtained from local offices of the Natural Resources Conservation Service or the Nevada Cooperative Extension.

Wildlife Considerations

Reducing the extent of brush cover can benefit many game and nongame wildlife species where the habitat needs of those animals are properly identified and planned for in the manipulation of vegetation. For instance, extensive areas dominated by big sagebrush provide marginal habitat for pronghorn antelope. The habitat can be improved by measures that decrease the density and height of the sagebrush. The habitat for mule deer can be improved by removing big sagebrush and thus enhancing the diversity of understory grasses and forbs or increasing the production of green forage on transitional range that has an excessive cover of shrubs.

For other species, however, brush removal may be detrimental. Sage grouse is a habitat-specific bird, relying primarily on sagebrush to meet its life requirements. Plans for the manipulation of sagebrush stands on range inhabited by sage grouse should provide for the maintenance of suitable grouse habitat, especially nesting habitat near strutting grounds. The

optimum nesting habitat for sage grouse is one in which the crown cover of sagebrush that is less than 30 inches high is 20 to 40 percent. Treatment of the sagebrush that reduces the cover from 40 to 20 percent may not seriously degrade the nesting habitat and commonly improves the quality of forage for sage grouse.

In an assessment of how the manipulation of vegetation affects wildlife, "edge" habitat is an important consideration. The structure and dominance of plants that remain after manipulation differ with the method of treatment. Fire removes all of the vegetation, including the skeletons or woody portions of shrubs, and thus eliminates the structure of woody vegetation from the treated area. Prescription burning may enhance the habitat for a number of wildlife species. Mule deer and many nongame species select recently burned areas for feeding. Brush treatment with herbicides leaves the dead skeletons of shrubs and retains the shrub structure. Herbicides may kill broad-leaved forbs in the shrub understory, which are staples in the diet of many game and nongame species. Chaining and, to a lesser degree, brush beating change the vegetative structure from tree/shrub or shrub to grassland, and the residue they leave on the ground creates habitat for small mammals.

Many wildlife species in the survey area depend on riparian plant communities during much of the year. These plant communities support wildlife not common to desert ecosystems, such as short-eared owls, Pacific tree frogs, and long-tailed weasels. Riparian communities also provide islands of habitat in desert environments for migrating birds. Nuthatches, warblers, and other species that nest in forest ecosystems migrate to desert riparian zones in spring and fall.

Livestock water developments can be beneficial to wildlife if the water is available when the wildlife species occupy the area. Forage for wildlife can be enhanced if adapted forbs are included in a rangeland seeding.

More specific wildlife management concerns are addressed under the heading "Plant Communities in Northwest Elko County Area." Additional information about wildlife management can be obtained from local offices of the Natural Resources Conservation Service, Nevada Cooperative Extension, or Nevada Division of Wildlife.

Plant Communities in Northwest Elko County Area

A rangeland ecological site is a distinctive kind of rangeland that differs from other kinds of rangeland in its ability to produce a characteristic natural plant community. An ecological site is the product of all environmental factors responsible for its development. It can support a native plant community typified by an association of species that differs from the potential plant community of other ecological sites in the kind or proportion of species or in total production. Disturbances, such as drought, fire, and grazing by native fauna, and the damage caused by insects and disease are recognized as natural factors in the development of native plant communities.

The tables in the section "Rangeland Plants and Woodland Understory" show the rangeland plants and woodland understory for each soil and contrasting inclusion in the detailed soil map units, the rangeland or woodland ecological site, the common plant name and scientific plant symbol for the characteristic vegetation, the average percent composition for each species in the potential plant community, the rangeland or woodland ecological site, and the total annual production of vegetation in favorable, normal, and unfavorable years. The characteristic vegetation, which consists of the grasses, forbs, shrubs, and immature trees that make up most of the potential plant community for each soil, is listed by common name. For rangeland, 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, the grazing season, and the availability of forage. Many plants, trees, and shrubs are inaccessible to foraging animals. For woodland, the percentage of the total annual production is not given because of a wide variation of production under different tree canopies. The presence of a plant species in the understory vegetation is shown by an "X" in the composition section of the table.

Total potential production is the amount of vegetation that can be expected to grow annually on well managed rangeland or woodland that supports the potential natural community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's production 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, above average amounts and optimum timing of precipitation during periods of warm 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.

Riparian areas or meadows are interspersed throughout the survey area. Riparian vegetation grows on the floodplains along perennial streams. Stringer meadows are along spring-fed stream channels where moisture is available to plants throughout most of the growing season. Meadow vegetation also grows on the periphery of seeps and springs. Although they make up a small acreage in the survey area, the riparian zones are important because they provide free water, which improves the productivity of the riparian vegetation and lengthens the growing season of the vegetation. The zones are characterized by diverse plant species and a structural diversity of vegetation. The zones along

stream channels are typically linear. The linear nature of the zones maximizes the edge effect between the zones and the adjacent uplands. An "edge," or ecotone, is a transition between plant communities or a joining of different vegetative structures within plant communities. It commonly is richer in wildlife than either of the adjoining communities.

Northwest Elko County Area is in the northwestern part of the Basin and Range Physiographic Province. The major plant associations in the survey area typify the general zonation of vegetation common in the Great Basin Region. Valley floors and the lower piedmont slopes are dominated by salt-desert shrub plant communities. Above the salt-desert shrub zone, sagebrush-grass plant communities are prevalent in areas where the mean annual precipitation is 8 inches or more.

Salt-desert shrub communities normally reflect either a climatically dry environment where the mean annual precipitation is less than 8 inches or physiologically dry soil conditions. High concentrations of salts that interfere with the uptake of water by plants can create physiologically dry soil conditions. Representative shrubs of the salt-desert shrub communities are shadscale, bud sagebrush, winterfat, and Douglas rabbitbrush. The common grasses include Indian ricegrass, bottlebrush squirreltail, and Sandberg bluegrass.

The salt-desert shrub plant communities in the survey area include stands that support relatively heterogeneous mixtures of shrubs and grasses. The vegetation is generally sparse, normally covering less than 20 percent of the surface. Wind erosion and water erosion are hazards because of the naturally sparse plant cover in most areas. The interspaces between plants in salt-desert shrub communities commonly are stabilized by surface pavements of rock fragments, by a puddled and crusted soil surface, or by microphytic (algae) surface crusts. These protective features can be damaged by livestock trailing or off-road vehicle traffic.

Salt-desert shrub plant communities are most valuable as winter range for livestock. They can produce high quality winter forage and are usually subject to only light snowfall. Most of the desirable forage species in these communities are adversely affected by grazing in late winter (March and April), heavy use, or both. Where native rangeland communities are grazed in winter, an emergency supply of feed should be readily available to carry livestock through periods of unusually severe weather.

Properly regulated grazing management can enhance the long-term productivity of salt-desert shrub plant communities. This management includes deferred grazing during critical growth periods in late winter, rotational grazing, and control of the intensity and season of use. Fencing, herding, water hauling, and controlling livestock access to watering facilities can achieve a better distribution of grazing. Because of the harsh environment of the salt-desert shrub zone, manipulation of vegetation and revegetation projects generally are not advisable.

Salt-desert shrub communities provide habitiat for a wide variety of nongame species, including whiptail lizards, antelope ground squirrels, loggerhead shrikes, and Pacific rattlesnakes. Plant communities that are dominated by shadscale or winterfat and associated forbs and grasses provide important winter range for pronghorn antelope. Fencing can deter the migration of pronghorn antelope because these animals commonly do not jump. As a result, the lower wire of the fences should be high enough for antelope to crawl under. Where feasible, the fence lines should be routed so that they cause the least disruption to antelope travel. Livestock water developments are beneficial to antelope and other wildlife if the water is available when the animals occupy the area. Few mule deer use salt-desert shrub communities, which generally are unimportant in deer management. Feral horses use these communities in winter.

Within the salt-desert shrub zone are low areas that commonly receive extra moisture as runoff from higher landscape positions and as shallow, low-velocity overflow during periods of runoff. Black greasewood, basin big sagebrush, and basin wildrye are important plants on these sites. When in good condition, these plant communites can produce more than 2,000 pounds of basin wildrye per acre. When in poor condition, however, they typically produce less than 500 pounds per acre. The potential for increasing the production of basin wildrye is good on many sites in poor or fair condition in the survey area. Basin wildrye provides standing dried forage during its fall and winter dormancy and can provide calving areas in late winter. Mule deer, pygmy rabbits, and northern harriers inhabit basin wildrye communities throughout the year.

Other plant communities that reflect extra moisture conditions are adjacent to valley floor playas. These areas may have a high water table during periods of runoff. Black greasewood, shadscale, inland saltgrass, and basin wildrye are the characteristic plants on these sites.

Plant communities that are dominated by black greasewood provide thermal cover for many species of wildlife but have limited value for big game. Because of its spines and coarse structure, black greasewood provides protective cover to nesting birds and small mammals. Although this species is not a preferred forage plant for livestock, cattle and sheep eat the succulent spring growth. On late fall and winter ranges, the fruit of black greasewood and shadscale provides nutritious and palatable feed. The soluble oxalates in black greasewood may be harmful to livestock, especially sheep, if the new growth is excessively grazed in spring.

As snow melts in spring, runoff commonly drains into valley floor basins. It remains for short periods, providing nesting and feeding habitat for some waterfowl. Playas containing water in spring are important resting places for migrating waterfowl.

Sagebrush-grass plant communities are at the lower elevations (about 5,000 feet) in the survey area. The average annual precipitation at these elevations is between 8 and 10 inches.

Wyoming big sagebrush and, to a lesser extent, basin big sagebrush are the dominant woody sagebrush plants at the lower elevations in the survey area. Cool-season perennial grasses are potentially the dominant herbaceous plants in the sagebrush-grass plant communities. Thurber needlegrass, Indian ricegrass, bottlebrush squirreltail, and Sandberg bluegrass are important cool-season bunch grasses. Grazing pressure has been severe on the sagebrush-grass plant communities at the lower elevations. These plant communities are the first to begin growth, or "greenup," during the warming periods of early spring and have traditionally been used for spring grazing by livestock. Close grazing spring after spring will eventually eliminate the perennial understory of grasses and forbs.

Grazing management practices can enhance the long-term productivity of sagebrush-grass communities. These practices include deferred grazing during critical growth periods in spring, rotational grazing, and control of the intensity and season of use. Fencing, herding, water hauling, and controlling livestock access to watering facilities can achieve a better distribution of grazing and facilitate grazing management.

Very few sources of perennial water are available in the sagebrush-grass zone at the lower elevations. Therefore, water developments and watering facilities are key elements in grazing management. Also, they can be of significant value to wildlife. Where the range condition has not deteriorated excessively and an adequate population of desirable perennial grasses and forbs is available to respond to a release from plant competition, brush management can greatly enhance the production of forage for livestock and wildlife.

The selection of plants available for rangeland seeding in the 8-to 10-inch precipitation zone is limited. Suitable species that are tolerant of early spring grazing, however, can be seeded. These species can play a key role in the management of grazing on the adjacent native sagebrush-grass and salt-desert shrub plant communities. Years of below normal precipitation are relatively frequent in this zone. Thus, the factors to be considered in managing rangeland seeding include the risk of seeding failure caused by climate.

Although the sagebrush-grass communities at the lower elevations may provide transitional spring range for pronghorn antelope moving from winter to summer ranges, plant communities that are dominated by big sagebrush are not heavily used by the antelope. Fencing can deter migration of the antelope because these animals commonly do not jump. As a result, the lower wire of the fences should be high enough for the antelope to crawl under. Where feasible, the fence lines should be routed so that they cause the least disruption to antelope travel. Livestock water developments are beneficial to wildlife, especially deer and antelope, if the water is available when the animals are in the area.

During severe winters in areas of the sagebrush-grass communities at the lower elevations, sage grouse may feed on sagebrush that has not been covered by snow. Heavy snow at the higher elevations forces chukar partridge to move into these areas in search of food. The sagebrush-grass communities at the lower elevations are used primarily by mule deer and feral horses as winter range or as transitional range in spring. Spring grazing by livestock in areas used by deer as winter range should be managed so that the turn out of livestock is delayed until after spring "greenup" and the migration of most of the deer.

Sagebrush-grass communities are at intermediate elevations (about 6,000 feet) in the survey area. The average annual precipitation at these elevations is between 10 and 14 inches.

Wyoming big sagebrush dominates the shrub canopy of the mid-elevation plant communities on the warmer, drier exposures. Basin big sagebrush is most common on the deeper soils at the lower elevations in this precipitation zone. Mountain big sagebrush is prevalent on the north aspects at the lower elevations of the zone and grows on all aspects at the higher elevations. Low sagebrush is the dominant dwarf sagebrush at the mid and upper elevations in the survey area. Bluebunch wheatgrass, Thurber needlegrass, Canby bluegrass, Sandberg bluegrass, and basin wildrye are the major perennial grasses associated with these mid-elevation sagebrush-grass communities. Antelope bitterbrush is an important shrub in many plant communities at these elevations.

The mid-elevation sagebrush-grass communities are suitable for grazing by livestock in summer and fall. Deferred grazing during critical growth periods in spring and early summer, rotational grazing, and control of the intensity and season of use can enhance the long-term productivity of these communities. Fencing, herding, and strategically locating livestock watering facilities help to achieve a better distribution of grazing and facilitate grazing management. Relatively few sources of perennial water are available in areas of the mid-elevation sagebrush-grass zone. As a result, water developments and watering facilities are key elements in grazing management and can be of significant value to wildlife.

Wyoming big sagebrush communities at mid elevations are used primarily as winter range by mule deer. They commonly provide habitat for Brewer's sparrow, black-tailed jackrabbits, and sagebrush lizards. They provide wintering areas for sage grouse. Low sagebrush communities provide important summer range for pronghorn antelope and brood-rearing habitat for sage grouse. Livestock water developments can be beneficial to wildlife, especially deer and antelope, if the water is available when the animals are in the area. Mountain big sagebrush and low sagebrush communities provide spring, summer, and fall range for mule deer and feral horses.

Seasonal grazing by livestock removes old grass residue and exposes the regrowth of succulent green stems and leaves that provide food for mule deer. The steep rock-faced cliffs common to these mid elevations have ledges, joints, cracks, and occasional caves and thus provide safe sites for birds and small mammals to nest and rear their young. The common nongame species are sage thrasher, the Great Basin gopher snake, and desert mouse. Areas of exposed lava flow rock, natural breaks in the cliffs, and the associated talus commonly are used as travel lanes by wildlife, including mule deer.

Brush management practices can be very effective in increasing the production of native forage in the mid-elevation sagebrush-grass zone. They can be beneficial to wildlife as well as livestock. Opening up large, homogeneous stands of sagebrush commonly improves the habitat for wildlife, such as mule deer and pronghorn antelope. Rangeland seeding may be required following the removal of woody vegetation where desirable understory plants are scarce or are not included in the present plant community. A number of forbs and grasses are suitable for dryland seeding in the 10-to 14-inch precipitation zone. Including suitable forbs in the seeding mixture helps to provide additional forage for wildlife, such as pronghorn antelope, mule deer, and sage grouse.

Livestock commonly concentrate on the woodland sites, taking advantage of the shade and shelter provided by the tree overstory. These sites also provide habitat for nongame wildlife species, including the bushy-tailed woodrat, the blue-grey gnat-catcher, and the American kestrel; thermal cover for mule deer; and habitat for small mammals and birds.

Areas that have a heterogeneous mixture of vegetative types, including grassland, low shrub, tall shrub, and tree-shrub communities, generally provide an optimum diversity of wildlife habitat. These types of vegetative complexes are common in the sagebrush-grass zones at the intermediate and upper elevations. Moderate browsing by cattle on antelope bitterbrush in fall can enhance the vigor and growth of the bitterbrush, which is later available for grazing by mule deer and antelope.

Stringer meadows are along spring-fed stream channels in the sagebrush-grass zones at the intermediate and upper elevations. Meadow vegetation also grows on the periphery of seeps and springs. Wet meadows adjacent to sagebrush stands are important as brood-rearing areas for sage grouse. During the first weeks after leaving the nest, sage grouse chicks eat mainly insects (ants and beetles) and the succulent forbs that are common in wet meadows. Grazing of the meadows by cattle can improve the quality of feed for sage grouse if a period of regrowth is provided for the key forb species. Grazing increases the succulence of the forbs by interrupting the maturation of the plant tissues. The succulent or young leaf tissue is higher in protein and lower in fiber than mature tissue. As they seek sources of succulent forbs, sage grouse select meadows that have been grazed by cattle. Sage grouse chicks find food and cover in properly grazed meadows, which appear patchy because of different stubble heights remaining after livestock have grazed the meadows.

Improper grazing of riparian vegetation by livestock can cause gully erosion. This erosion, in turn, can result in lower water tables, the drying out of meadows, and the loss of valuable wildlife and livestock forage. Grazing management strategies that are sensitive to the development and maintenance of healthy riparian areas are needed.

The uppermost elevations of the survey area (about 7000 feet and higher) typically support high-elevation sagebrush-grass plant communities. The average annual precipitation ranges from 14 to more than 18 inches. Mountain big sagebrush and low sagebrush dominate the shrub canopy of these plant communities. The shrub understory grasses include Idaho fescue, western needlegrass, mountain brome, Columbia needlegrass, Letterman needlegrass, basin wildrye, slender wheatgrass, and bluebunch wheatgrass. Mountain browse species, such as snowberry, serviceberry, and antelope bitterbrush, are common in the shrub overstory. Curlleaf mountainmahogany stands are at the highest elevations, on mountain summits and the upper side slopes. Areas of aspen woodland are common in concave pockets and along riparian zones.

Plant communities on the high-elevation sites are potentially very productive and normally respond rapidly to management. These sites remain cold and wet through spring and into early summer. They are used as summer range for livestock. Grazing should be delayed until the surface layer has dried sufficiently for compaction to be limited. Snow often blankets these sites by late fall, further restricting the period of livestock grazing. Steeply sloping areas are common throughout the high-elevation sagebrush-grass zone. Livestock tend to overuse the less sloping areas unless grazing is managed for an even distribution of grazing. Fencing, properly locating watering facilities, and herding force livestock to use areas that otherwise might remain ungrazed. Salt and mineral blocks should be placed away from water.

Mule deer use the high-elevation plant communities for summer range. North-facing slopes that have a patchwork of dense stands consisting of mountain browse are important deer-fawning areas. These dense stands should be maintained because they provide cover for wildlife. Areas of aspen woodland provide important cover for wildlife and are a source of shade for livestock and wildlife.

Seeps and springs are common at the high elevations. Water for livestock generally is readily available. Additional water developments may be needed, however, to distribute the livestock evenly. Developed springs, pipelines, and storage tanks are dependable means of supplying water. Seeps and springs developed to provide livestock water can also be beneficial to wildlife. Excluding livestock by fencing the meadow around a seep or spring and piping the water

to troughs or other storage facilities outside the exclosure help to protect the meadow vegetation grazed by wildlife. Enough water must be retained in the fenced seep or spring area to maintain the meadow vegetation. Small meadows can be developed and maintained by piping overflow water from livestock troughs into fenced areas.

Many naturally occurring meadows in the sagebrush-grass zones at the mid and higher elevations have been heavily invaded by big sagebrush. The sagebrush depletes moisture from the meadows. If the sagebrush is removed, the quantity of water and the duration of waterflow increase as grasses return to the meadows. Prescribed burning of dense sagebrush stands can be an economical means of brush management in the high-elevation sagebrush-grass zone. Brush management practices should be designed so that enough of the shrub canopy remains near meadows to provide cover for wildlife.

Rangeland seeding of the high-elevation plant communities is usually not necessary. In most areas, the remnant population of desirable forbs and grasses is sufficient to respond to grazing management and a release from shrub competition. Where rangeland seeding is needed, a wide variety of suitable species can be planted because of the relatively high annual precipitation in this zone.

Forest Land

Table 8, "Woodland Management and Productivity," can be used by forest managers in planning the use of soils for wood crops. Only those soils suitable for wood crops are listed.

Woodland Ordination System

Table 8, "Woodland Management and Productivity," lists the ordination (woodland suitability) symbol for each soil. The ordination system is a nationwide uniform system of labeling soils or groups of soils that are similar in use and management. The primary factors evaluated in the woodland ordination system are productivity of the forest overstory tree species and the principal soil properties resulting in hazards and limitations that affect forest management. There are three parts of the ordination system: class, subclass, and group. The class and subclass are referred to as the ordination symbol.

Ordination Class Symbol

The first element of the ordination symbol is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the indicator tree species. The larger the number, the greater the potential productivity. Potential productivity is based on site index and the corresponding culmination of mean annual increment. For example, the number 1 indicates a potential production of 1 cubic meter of wood per hectare per year (14.3 cubic feet per acre per year) and 10 indicates a potential production of 10 cubic meters of wood per hectare per year (143 cubic feet per acre per year).

Indicator species is a species that is common in the area and is generally, but not necessarily, the most productive on the soil. It is the species that determines the ordination class. It is the first species listed for a particular map unit in table 8. This table shows the productivity for all species where data have been collected.

Site index is determined by taking height measurements and determining the age of selected trees within stands of a given species. This index is the average height, in feet, that the trees attain in a specified number of years. This index applies to fully stocked, even-aged, unmanaged stands. The site indexes shown in table 8, "Woodland Management and Productivity," are averages based on measurements made at sites that are representative of the soil series. When the site index and forest land productivity of different soils are compared, the values for the same tree species should be compared. The higher the site index number, the more productive the soil for that species. Site index values are used in conjunction with yield tables to determine average annual yields. Indirectly, they are used to determine the productivity class in the ordination class symbol.

Ordination Subclass Symbol

The second element of the ordination symbol, or subclass, is a capital letter that indicates certain soil or physiographic characteristics that contribute to important hazards or limitations to be considered in management. The subclasses are defined as follows:

Subclass X indicates that forest land use and management are limited by stones or rocks.

Subclass W indicates that forest land use and management are significantly limited by excess water, either seasonally or throughout the year. Restricted drainage, a high water table, or flooding can adversely affect either stand development or management.

Subclass T indicates that the root zone has toxic substances. Excessive alkalinity, acidity, sodium salts, or other toxic substances impede the development of desirable species.

Subclass D indicates that forest land use and management are limited by a restricted rooting depth. The rooting depth is restricted by hard bedrock, a hardpan, or other restrictive layers in the soil.

Subclass C indicates that forest land use and management are limited by the kind or amount of clay in the upper part of the soil.

Subclass S indicates that the soil is sandy, has a low available water capacity, and normally has a low content of available plant nutrients. The use of equipment is limited during dry periods.

Subclass F indicates that forest land use and management are limited by a high content of rock fragments that are larger than 2 millimeters and smaller than 10 inches. This subclass includes flaggy soils.

Subclass R indicates that forest land use and management are limited by excessive slope.

Subclass A indicates that no significant limitations affect forest land use and management.

Forest Land Management and Productivity

Information about the productivity and management of the forested map units in the survey area is given in table 8, "Woodland Management and Productivity."

Management Concerns

In table 8, "Woodland Management and Productivity," the soils are rated for the erosion hazard, the equipment limitation, seedling mortality, the windthrow hazard, and plant competition.

The *erosion hazard* is *slight* if the expected soil loss is small; *moderate* if some measures are needed to control erosion during logging and road construction; and *severe* if intensive management or special equipment and methods are needed to prevent excessive soil loss.

The *equipment limitation* is *slight* if the use of equipment is not limited to a particular kind of equipment or time of year; *moderate* if there is a short seasonal limitation or a need for some modification in the management of equipment; and *severe* if there is a seasonal limitation, a need for special equipment or management, or a hazard in the use of equipment.

Seedling mortality ratings are for seedlings that are from a good planting stock and that are properly planted during a period of average rainfall. A rating of *slight* indicates that the expected mortality of the planted seedlings is less than 25 percent; *moderate*, 25 to 50 percent; and *severe*, more than 50 percent.

Windthrow hazard is *slight* if trees in wooded areas are not expected to be blown down by commonly occurring winds; *moderate* if some trees are blown down during periods of excessive soil wetness and strong winds; and *severe* if many trees are blown down during periods of excessive soil wetness and moderate or strong winds.

Plant competition is *slight* if there is little or no competition from other plants; *moderate* if plant competition is expected to hinder the development of a fully stocked stand of desirable trees; and *severe* if plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed for the control of undesirable plants.

Potential Productivity

The potential productivity of merchantable or *common trees* is expressed as a site index, which is described under the heading "Ordination Class Symbol." Commonly grown trees are those that forest land managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

Wildlife Habitat

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. If food, cover, or water is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area.

If the soils have potential for habitat development, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants. The soils in the survey area are rated in table 9, "Wildlife Habitat".

Elements of Wildlife Habitat

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants used by wildlife. Examples are wheat, rye, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes planted for wildlife food and cover. Examples are fescue, bromegrass, timothy, orchardgrass, clover, alfalfa, trefoil, and reed canarygrass.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds, that provide food and cover for wildlife. Examples are goldenrod, lambsquarters, arrowleaf balsamroot, dandelions, ragweed, wheatgrass, fescue, and nightshade.

The major soil properties affecting the growth of grain and forage crops and wild herbaceous plants are depth of the root zone, texture of the surface layer, the amount of water available to plants, wetness, salinity or sodicity, and flooding. The length of the growing season also is important.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage that wildlife eat. Examples are oak, cottonwood, quaking aspen, boxelder, maple, green ash, and willow. Examples of fruit-producing shrubs that are suitable for planting on soils that have good potential for these plants are hawthorn, honeysuckle, American plum, redosier dogwood, chokecherry, serviceberry, and silver buffaloberry.

Coniferous plants are cone-bearing trees, shrubs, or ground cover that provide habitat or supply food in the form of browse, seed, or fruitlike cones. Examples are pine, spruce, hemlock, fir, and juniper.

The major soil properties affecting the growth of hardwood and coniferous trees and shrubs are depth of root zone, the amount of water available to plants, and wetness.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Wetland plants produce food or cover for wetland wildlife. Examples of these plants are smartweed, rushes, sedges, bulrushes, and cattail.

The major soil properties affecting wetland plants are texture of the surface layer, wetness, acidity or alkalinity, and slope.

Shallow water areas have an average depth of less than 5 feet. They are useful as habitat for some wildlife species. They are naturally wet areas or are created by dams, levees, or water-control measures in marshes or streams. Examples are muskrat marshes, waterfowl feeding areas, wildlife watering developments, beaver ponds, and other wildlife ponds.

The major soil properties affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability.

Kinds of Wildlife Habitat

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, and shrubs. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The wildlife attracted to these areas include Hungarian partridge, pheasant, sage grouse, meadowlark, field sparrow, killdeer, cottontail rabbit, and red fox.

Habitat for woodland wildlife consists of areas of hardwoods or conifers or a mixture of these and associated grasses, legumes, and wild herbaceous plants. The wildlife attracted to this habitat include wild turkey, grouse, thrushes, woodpeckers, owls, porcupine, raccoon, deer, and elk.

Habitat for wetland wildlife consists of open, marshy or swampy, shallow water areas that support water-tolerant plants. The wildlife attracted to this habitat include ducks, geese, herons, bitterns, rails, kingfishers, muskrat, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. The wildlife attracted to rangeland include antelope, mule deer, sage grouse, meadowlark, and lark bunting.

Recreation

The soils of the survey area are rated in table 10, "Recreational Development," according to limitations that affect their suitability for recreation. The ratings 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, the ability of the soil to support vegetation, access to water, potential water impoundment sites, and either access to public sewer lines or the capacity of the soil to absorb septic tank effluent. Soils subject to flooding are limited, in varying degrees, for recreational uses by the duration of flooding and the season when it occurs. Onsite assessment of the height, duration, intensity, and frequency of flooding is essential in planning recreational facilities.

Camp areas are tracts of land used intensively as sites for tents, trailers, and campers and for outdoor activities that accompany such sites. These 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 soils are rated on the basis of soil properties that influence the ease of developing camp areas and performance of the areas after development. Also considered are the soil properties that influence trafficability and promote the growth of vegetation after heavy use.

Picnic areas are natural or landscaped tracts of land that are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The soils are rated on the basis of soil properties that influence the cost of shaping the site, trafficability, and the growth of vegetation after development. The surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry.

Playgrounds are areas used intensively for baseball, football, or similar activities. These areas require a nearly level soil that is free of stones and that can withstand heavy foot traffic and maintain an adequate cover of vegetation. The soils are rated on the basis of soil properties that influence the cost of shaping the site, trafficability, and the growth of vegetation. Slope and stoniness are the main concerns in developing playgrounds. The surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry.

Paths and trails are areas used for hiking and horseback riding. The areas should require little or no cutting and filling during site preparation. The soils are rated on the basis of soil properties that influence trafficability and erodibility. Paths and trails should remain firm under foot traffic and not be dusty when dry.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes and no stones or boulders on the surface. The suitability of the soil for tees or greens is not considered in rating the soils.

The interpretative ratings in this table help engineers, planners, and others to understand how soil properties influence recreational uses. Ratings for proposed uses are given in terms of limitations. Only the most restrictive features are listed. Other features may limit a specific recreational use.

The degree of soil limitation is expressed as slight, moderate, or severe.

Slight means that soil properties are favorable for the rated use. The limitations are minor and can be easily overcome. Good performance and low maintenance are expected.

Moderate means that soil properties are moderately favorable for the rated use. The limitations can be overcome or modified by special planning, design, or maintenance. During some part of the year, the expected performance may be less desirable than that of soils rated *slight*.

Severe means that soil properties are unfavorable for the rated use. Examples of limitations are slope, bedrock near the surface, flooding, and a seasonal high water table. These limitations generally require major soil reclamation, special design, or intensive maintenance. Overcoming the limitations generally is difficult and costly.

The information in table 10, "Recreational Development," can be supplemented by other information in this survey, for example, interpretations for dwellings without basements and for local roads and streets in table 11, "Building Site Development," and interpretations for septic tank absorption fields in table 12, "Sanitary Facilities."

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 within a depth of 5 or 6 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 grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, 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 kind 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

Table 11, "Building Site Development," shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features generally are favorable for the indicated use and limitations are minor and 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 increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock, a cemented pan, or a very firm dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and depth to the water table.

Dwellings and *small commercial buildings* are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements, for dwellings with basements, and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance

of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

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 stabilized soil material; and a flexible or rigid surface. Cuts and fills generally are limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock or to a cemented pan, a high water table, flooding, large stones, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), shrink-swell potential, potential for frost action, and depth to a high water table affect the traffic-supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, a high water table, depth to bedrock or to a cemented pan, the available water capacity in the upper 40 inches, and the content of salts, sodium, and sulfidic materials affect plant growth. Flooding, wetness, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established.

Sanitary Facilities

Table 12, "Sanitary Facilities," shows the degree and the kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and sanitary landfills. It also shows the suitability of the soils for use as a daily cover for landfill.

Soil properties are important in selecting sites for sanitary facilities and in identifying limiting soil properties and site features to be considered in planning, design, and installation. Soil limitation ratings of *slight, moderate,* or *severe* are given for septic tank absorption fields, sewage lagoons, and trench and area sanitary landfills. Soil suitability ratings of *good, fair,* and *poor* are given for daily cover for landfill.

A rating of *slight* or *good* indicates that the soils have no limitations or that the limitations can be easily overcome. Good performance and low maintenance can be expected. A rating of *moderate* or *fair* indicates that the limitations should be recognized but generally can be overcome by good management or special design. A rating of *severe* or *poor* indicates that overcoming the limitations is difficult or impractical. Increased maintenance may be required.

Septic tank absorption fields are areas in which subsurface systems of tile or perforated pipe distribute effluent from a septic tank into the natural soil. The centerline of the tile is assumed to be at a depth of 24 inches. Only the part of the soil between depths of 24 and 60 inches is considered in making the ratings. The soil properties and site features considered are those that affect the absorption of the effluent, those that affect the construction and maintenance of the system, and those that may affect public health.

The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, a high water table, depth to bedrock or to a cemented pan, and flooding affect absorption of the effluent. Large stones and bedrock or a cemented pan interfere with installation.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

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, relatively impervious soil material. Aerobic lagoons generally are designed to hold the sewage within a depth of 2 to 5 feet. Relatively impervious soil material for the lagoon floor and sides is desirable to minimize seepage and contamination of local ground water.

Table 12, "Sanitary Facilities," gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, a high water table, depth to bedrock or to a cemented pan, flooding, large stones, and content of organic matter.

Excessive seepage resulting from rapid permeability in the soil or a water table that is high enough to raise the level of sewage in the lagoon causes a lagoon to function unsatisfactorily. Pollution results if seepage is excessive or if flood water 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.

Trench sanitary landfill is an area where solid waste is disposed of by placing refuse in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil that is excavated from the trench. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. Soil properties that influence the risk of pollution, the ease of excavation, trafficability, and

revegetation are the major considerations in rating the soils.

Area sanitary landfill is an area where solid waste is disposed of by placing refuse in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil that is imported from a source away from the site. A final cover of soil at least 2 feet thick is placed over the completed landfill. Soil properties that influence trafficability, revegetation, and the risk of pollution are the main considerations in rating the soils for area sanitary landfills.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of groundwater pollution. The ratings in table 12, "Sanitary Facilities," are based on soil properties, site features, and observed performance of the soils. Permeability, depth to bedrock or to a cemented pan, a high water table, slope, and flooding affect both types of landfill. Texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium affect trench type landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated slight or moderate may not be valid. Onsite investigation is needed.

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 suitability of a soil for use as cover is based on properties that affect workability and the ease of digging, moving, and spreading the material over the refuse daily during both wet and dry periods.

Soil texture, wetness, rock fragments, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils that are free of large stones or excess gravel are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to soil blowing.

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 final cover for a landfill should be suitable for plants. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Waste Management

Soil properties are important when organic waste is applied as fertilizer and wastewater is applied in irrigated areas. They also are important when the soil is used as a medium for the treatment and disposal of the organic waste and wastewater. Unfavorable soil properties can result in environmental damage.

The use of organic waste and wastewater as production resources results in energy and resource conservation and minimizes the problems associated with waste disposal. If disposal is the goal, applying a maximum amount of the organic waste or the wastewater to a minimal area holds costs to a minimum and environmental damage is the main hazard. If reuse is the goal, a minimum amount should be applied to a maximum area and environmental damage is unlikely.

Interpretations developed for waste management may include ratings for manure- and food-processing waste, municipal sewage sludge, use of wastewater for irrigation, and treatment of wastewater by slow rate, overland flow, and rapid infiltration processes.

Specific information regarding waste management is available at the local office of the Natural Resources Conservation Service or Nevada Cooperative Extension.

Construction Materials

Table 13, "Construction Materials," gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In table 13, "Construction Materials," 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 soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. Table 15, "Engineering Index Properties," provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by large stones, a high 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 engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel, or both. They have at least 5 feet of suitable material, a low shrink-swell potential, few cobbles and stones, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential, slopes of 15 to 25 percent, or many stones. Depth to the water table is 1 to 3 feet. Soils rated *poor* have one or more of the following characteristics: a plasticity index of more than 10, a high shrink-swell potential, many stones, slopes of more than 25 percent, or a water table at a

depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

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 13, "Construction Materials," only the probability of finding material in suitable quantity in or below the soil 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 engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the soil series descriptions. Gradation of grain sizes is given in table 15, "Engineering Index Properties."

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is as much as 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an improbable source. Fragments of soft bedrock, such as shale and siltstone, are not considered to be sand and gravel.

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.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by rock fragments, slope, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a water table, rock fragments, bedrock, and toxic material.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They are free of stones and cobbles, have little or no gravel, and have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, soils that have an appreciable amount of gravel, stones, or soluble salts, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey, have less than 20 inches of suitable material, have a large amount of gravel, stones, or soluble salts, have slopes of more than 15 percent, or have a seasonal high water table at or near the surface.

The surface layer of most soils generally is preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 14, "Water Management," 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 generally are 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.

This table also gives for each soil the restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

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 table 14, "Water Management," 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 more 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.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, or sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion, and conserve moisture by intercepting runoff.

Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of soil blowing or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of soil blowing, low available water capacity, restricted rooting depth, toxic substances such as salts or sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features listed in tables are explained on the following pages.

Soil properties are determined 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 grain-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 shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 15, "Engineering Index Properties," gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given in the series descriptions in Part I of this survey.

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 as much as 15 percent, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the "Glossary."

Classification of the soils is determined according to the system adopted by the American Association of State Highway and Transportation Officials *(1)* and the Unified soil classification system *(2)*.

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-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, SP-SM.

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 grain-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 grain-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 omitted in the table.

Physical and Chemical Properties

Table 16, "Physical Properties of the Soils," and table 17, "Chemical Properties of the Soils," show estimates of some characteristics and features that affect soil behavior. These estimates are given for the major 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. The range in depth and information on other properties of each layer are given in the series descriptions in Part I of this survey.

Clay as a soil separate, or component, consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine 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 earth-moving 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-bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In table 16, "Physical Properties of the Soils," the estimated moist bulk density of each major 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. A bulk density of more than 1.6 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 refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water 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 major soil layer. The capacity varies, depending on soil properties that affect the retention of water and the depth of the root zone. 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.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; and *high*, more than 6 percent. *Very high*, more than 9 percent, is sometimes used.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 16, "Physical Properties of Soils," 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 or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) to predict the average rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, very fine sand, sand, and organic matter (as much as 4 percent) and on soil structure and permeability. The estimates are modified by the presence of rock fragments. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion.

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 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 resistance to soil blowing in cultivated areas. The groups indicate the susceptibility of soil to soil blowing. Soils are grouped according to the following distinctions:

1. Coarse sands, sands, fine sands, and very fine sands. These soils generally are not suitable for crops. They are extremely erodible and vegetation is difficult to establish.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, and sapric soil material. These soils are very highly erodible. Crops can be grown if intensive measures to control soil blowing are used.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams. These soils are highly erodible. Crops can be grown if intensive measures to control soil blowing are used.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams that have more than 5 percent finely divided calcium carbonate. These soils are highly erodible. Crops can be grown if intensive measures to control soil blowing are used.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay. These soils are moderately erodible. Crops can be grown if measures to control soil blowing are used.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material. These soils have less than 5 percent finely divided calcium carbonate. These soils are moderately erodible. Crops can be grown if measures to control soil blowing are used.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay. These soils have less than 5 percent finely divided calcium carbonate. These soils are moderately erodible. Crops can be grown if ordinary measures to control soil blowing are used.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material. These soils have less than 5 percent finely divided calcium carbonate. These soils are very slightly erodible. Crops can be grown if ordinary measures to control soil blowing are used.
8. Soils that are not subject to soil blowing because of rock fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to soil blowing, or the tons per acre per year that can be expected to be lost to soil blowing. There is a close correlation between soil blowing and the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence soil blowing.

Cation-exchange capacity is 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. 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. Soils having a high cation-exchange capacity can retain cations. The ability to retain cations helps to prevent the pollution of ground water.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major 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 soil. 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 given as the percent, by weight, of hydrated calcium sulfates in the soil. Gypsum is partially soluble in water and can be dissolved and removed by water. Soils that have a high content of gypsum (more than 10 percent) 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 the soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio is the measure of sodium relative to calcium and magnesium in the water extract from saturated soil paste. Soils having a sodium adsorption ratio 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, "Water Features," gives estimates of several important water features used in land use planning that involves engineering considerations. These features are described in the following paragraphs.

Hydrologic soil groups are groups of soils that, when saturated, have the same runoff potential under similar storm and ground cover conditions. The soil properties that affect the runoff potential are those that influence the minimum rate of infiltration in a bare soil after prolonged wetting and when the soil is not frozen. These properties include the depth to a seasonal high

water table, the intake rate, permeability after prolonged wetting, and the depth to a very slowly permeable layer. The influences of ground cover and slope are treated independently and are not taken into account in hydrologic soil groups.

In the definitions of the hydrologic soil groups, the infiltration rate is the rate at which water enters the soil at the surface and is controlled by surface conditions. The transmission rate is the rate at which water moves through the soil and is controlled by properties of the soil layers.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist chiefly of very 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 or well drained soils that have a moderately fine 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 that have a moderately fine 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 clayey soils that have a high shrink-swell potential, soils that have a permanent 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.

Flooding, the temporary covering of the soil surface by flowing water, is caused by overflow from streams or by runoff from adjacent slopes. Shallow water standing or flowing for short periods after rainfall or snowmelt is not considered flooding. Standing water in marshes and swamps or in closed depressions is considered to be ponding.

Table 18, "Water Features," gives the frequency and duration of flooding and the time of year when flooding is most likely to occur. Frequency, duration, and probable dates of occurrence are estimated. Frequency generally is expressed as none, rare, occasional, or frequent. *None* means flooding is not probable; *rare* that it is unlikely but is possible under unusual weather conditions (the chance of flooding is nearly 0 percent 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); and *frequent* that it occurs often under normal weather conditions (the chance of flooding is 50 percent in any year). The term *common* includes both frequent and occasional flooding.

Duration is expressed as *very brief* (less than 2 days), *brief* (2 to 7 days), *long* (7 to 30 days), and *very long* (more than 30 days). The time of year that flooding is most likely to occur is expressed in months. About two-thirds to three-fourths of all flooding occurs during the stated period.

The information on flooding 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 level 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.

High water table (seasonal) is a zone of saturation at the highest average depth during the wettest season. It is at least 6 inches thick, persists in the soil for more than a few weeks, and is within 6 feet of the surface. Indicated in table 18, "Water Features," are the depth to the seasonal high water table, the kind of water table, and the months of the year when the water table usually is highest.

An *apparent* water table is indicated by the level at which water stands in a freshly dug, unlined borehole after adequate time for adjustments in the surrounding soil.

A *perched* water table is one that is above an unsaturated zone in the soil. The basis for determining that a water table is perched may be general knowledge of the area. The water table is proven to be perched if the water level in a borehole is observed to fall when the borehole is extended.

Two numbers in the column showing depth to the water table indicate the normal range in depth to a saturated zone. Depth is given to the nearest half foot. The first numeral in the range indicates the highest water level. A plus sign preceding the range in depth indicates that the water table is above the surface of the soil. "More than 6.0" indicates that the water table is below a depth of 6 feet or that it is within a depth of 6 feet for less than a month.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation.

Soil Features

Table 19, "Soil Features," gives estimates of several important soil features used in land use planning that involves engineering considerations. These features are described in the following paragraphs.

Depth to bedrock is given if bedrock is within a depth of 60 inches. The depth is based on many soil borings and on observations during soil mapping. The rock is specified as either soft or hard. If the rock is soft or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

A *cemented pan* is a nearly continuous layer of indurated or strongly cemented material that is hard and brittle. The particles are held together by cementing substances, such as calcium carbonate and oxides of silicon, iron, or aluminum. Pans are identified when they are within a depth of 60 inches. They are classified as thin or thick. A *thin* pan can be excavated by trenching machines, backhoes, small rippers, and other equipment commonly used to dig excavations for pipelines, sewer lines, and graves. A *thick* pan is so thick or massive that blasting or special equipment is needed when excavations are made.

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. Table 19, "Soil Features," shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential 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 mainly to pavements and other rigid structures.

A *low* potential for frost action indicates that the soil is rarely susceptible to the formation of ice lenses; a *moderate* potential indicates that the soil is susceptible to formation of ice lenses, resulting in frost heave and the subsequent loss of soil strength; and a *high* potential indicates that the soil is highly susceptible to formation of ice lenses, resulting in frost heave and the subsequent loss of soil strength.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that dissolves 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 in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel 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 is also expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

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Glossary

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone. The material washed down the sides of mountains and hills by ephemeral streams and deposited at the mouth of gorges in the form of a moderately steep, conical mass descending equally in all directions from the point of issue.

Alluvial fan. The fanlike deposit of a stream where it issues from a narrow valley upon a plain, or of a tributary stream near or at its junction with its main stream.

Alluvial flat. A nearly level, graded, alluvial surface in bolsons and semi-bolsons. Commonly, an alluvial flat does not manifest terraces or floodplain levels.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Argillite. Weakly metamorphosed mudstone or shale.

Arroyo. The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in alluvium.

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 3.5
Low	3.5 to 5
Moderate	5 to 7.5
High	more than 7.5

Avalanche chute. The track or path formed by an avalanche.

Back slope. The geomorphic component that forms the steepest inclined surface and principal element of many hillsides. Back slopes in profile are commonly steep, are linear, and may or may not include cliff segments.

Backswamp. A flood-plain landform of extensive, marshy, or swampy, depressed areas of floodplains between natural levees and valley sides or terraces.

Badland. Steep or very steep, commonly nonstony, barren land dissected by many intermittent drainage channels. Badland is most common in semiarid and arid regions where streams are entrenched in soft geologic material. Local relief generally ranges from 25 to 500 feet. Runoff potential is very high, and geologic erosion is active.

Ballena. A fan remnant having a distinctively-rounded surface of fan alluvium. The ballena's broadly rounded shoulders meet from either side to form a narrow summit and merge smoothly with concave, short pediments which form smoothly-rounded drainageways between adjcent ballenas. A partial ballena is a fan remnant large enough to retain some relict fan surface on a remnant summit.

Barrier beach. A wide gently sloping portion of a bolson floor comprising numerous, parallel, relict longshore-bars and lagoons built by a receding pluvial lake.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, K), expressed as a percentage of the total cation-exchange capacity.

Basin floor. A general term for the nearly level, lowermost part of intermontane basins (i.e., bolson, semi-bolsons). The basin floor includes all of the alluvial, eolian, and erosional landforms below the piedmont slope.

Beach terrace. The relict shorelines from pluvial lakes, generally restricted to valley sides.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level, or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts, the water table is exposed.

Board foot. A unit of measure of the wood in lumber, logs, or trees. The amount of wood in a board one foot wide, one foot long, and one inch thick before finishing.

Bolson. A landscape term for an internally drained intermontane basin into which drainages from surrounding mountains converge inward toward a central depression.

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.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

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.

Butte. An isolated small mountain or hill with steep or precipitous sides and a top variously flat, rounded, or pointed that may be a residual mass isolated by erosion or an exposed volcanic neck.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caldera. A large, more or less circular depression, formed by explosion and/or collapse, which surrounds a volcanic vent or vents, and whose diameter is much greater than that of the included vent, or vents.

Caliche. A more or less cemented deposit of calcium carbonate in soils of warm-temperate, subhumid to arid areas. Caliche occurs as soft, thin layers in the soil or as hard, thick beds directly beneath the solum, or it is exposed at the surface by erosion.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of a standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow, very steep sided valley with high, precipitous walls in an area of high local relief.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. 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.

Channeled. Refers to a drainage area in which natural meandering or repeated branching and convergence of a streambed have created deeply incised cuts, either active or abandoned, in alluvial material.

Channery soil material. Soil material that is, 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.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clayey soil. Silty clay, sandy clay, or clay.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Clearcut. A method of forest harvesting that removes the entire stand of trees in one cutting. Reproduction is achieved artificially or by natural seeding from adjacent stands.

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.

Closed depression. A low area completely surrounded by higher ground and having no natural outlet.

Coarse fragments. Mineral or rock particles larger than 2 millimeters in diameter.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded, partly rounded or angular fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that is 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 is 35 to 60 percent of these rock fragments, and extremely cobbly soil material is more than 60 percent.

Codominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above but comparatively little from the sides.

Colluvium. Unconsolidated, unsorted earth material moved and deposited by mass movement on sideslopes and at the base of slopes.

Commercial forest. Forest land capable of producing 20 cubic feet or more per acre per year at the culmination of mean annual increment.

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.

Compressible (in tables). Excessive decrease in volume of soft soil under load.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane that typically takes the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse grained, clastic rock composed of rounded to 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 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."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

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.

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

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.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cuesta. A hill or ridge that has a gentle slope on one side and a steep slope on the other; specifically, an asymmetric, homoclinal ridge capped by resistant rock layers of slight or moderate dip.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deep soil. A soil that is 40 to 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

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.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

Desert pavement. On a desert surface, a layer of gravel or larger fragments that was emplaced by upward movement of the underlying sediments or that remains after finer particles have been removed by running water or the wind.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Dominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above and from the sides.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are: recognized = excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. An area of ground at a lower elevation than the surrounding ground and in which water collects and is drained to a closed depression or lake or to a drainageway at a lower elevation. A drainageway may or may not have distinctly incised channels at its upper reaches or throughout its course.

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.

Dune. A mound, ridge, or hill of loose, windblown granular material (generally sand), either bare or covered with vegetation.

Ecological Site. A distinctive kind of rangeland or grazed forestland that has a unique historic potential native plant community. Ecological sites are the products of all the environmental factors that affect their development. An ecological site is capable of supporting a native plant communty that has a unique kind and/or proportion of species or tatol vegetative production. Ecological sites in grazed forestland include both overstory and understory vegetation.

Effervescence. The quality of a soil measured when drops of diluted (1:10) hydrochloric acid (HC1) are added to the soil. The ratings are as follows:

Very slightly effervescent ..... few bubbles
Slightly effervescent.....bubbles readily
Strongly effervescent ..... bubbles form low foam
Violently effervescent.....bubbles form thick foam quickly

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.
Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.
Erosion (accelerated). Erosion that is much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

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.

Even aged. Refers to a stand of trees in which only small differences in age occur between the individuals. A range of 20 years is allowed.

Excess alkali (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess lime (in tables). Excess carbonates in the soil that restrict the growth of some plants.

Excess salts (in tables). Excess water-soluble salts in the soil that restrict the growth of most plants.

Excess sodium (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess sulfur (in tables). Excessive amount of sulfur in the soil. The sulfur causes extreme acidity if the soil is drained, and the growth of most plants is restricted.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

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 apron. A sheet-like mantle of relatively young alluvium covering part of an older fan piedmont surface. It somewhere buries a soil that can be traced to the edge of the fan apron.

Fan piedmont. The most extensive landform on piedmont slopes, formed by the coalescence of alluvial fans or accretions of fan aprons into one generally smooth slope.

Fan remnant. A general term for landforms that are remaining parts of older fan-landforms, that either have been dissected or partially buried.

Fan skirt. The zone of smooth, laterally-coalescing, small alluvial fans that issue from gullies cut into the fan piedmont or that are the coalescing extensions of inset fans of the fan piedmont, and that merge with the basin floor.

Fast intake (in tables). The rapid movement of water into the soil.

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.*

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of fire fighters and

equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that is, by volume, 15 to 35 percent flagstones. Very flaggy soil material is 35 to 60 percent flagstones, and extremely flaggy soil material is 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.

Foot slope. The inclined surface at the base of a hill.

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.

Fragile (in tables). A soil that is easily damaged by use or disturbance.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai. The microrelief of clayey soils that shrink and swell considerably with changes in moisture content. Usually manifested as a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

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 is 15 to 50 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 underlying 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.

Gypsum. A mineral consisting of hydrous calcium sulfate.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

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.

Heavy metal. Inorganic substances that are solid at ordinary temperatures and are not soluble in water. They form oxides and hydroxides that are basic. Examples are copper, iron, cadmium, zinc, manganese, lead, and arsenic.

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.

Holocene. The epoch of the Quaternary Period of geologic time, extending from the end of the Pleistocene Epoch (about 10 to 12 thousand years ago) to the present.

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. 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.

Inset fan. A special case of the flood plain of an ephemeral stream that is confined between fan remnants, basin-floor remnants, ballenas, or closely opposed fan toeslopes.

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 groundwater discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Intermontane basin. A generic term for wide structural depressions between mountain ranges that are partly filled with alluvium. They may be drained internally (bolsons) or externally (semi-bolsons).

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.

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lagoon. The nearly level, filled depression behind the longshore bar on a barrier beach.

Lake plain. A surface marking the floor of an extinct lake, filled in by well sorted, stratified sediments.

Lake terrace. The narrow shelf produced along a lake shore and later exposed when the water recedes.

Lamella. A thin, generally horizontal layer of fine material illuviated within a very much thicker, coarser, eluviated layer.

Landform. Any recognizable form or feature on the earth's surface, having a characteristic shape, and produced by natural causes that provide an empirical description of similar portions of the earth's surface.

Landscape. A collection of related, natural landforms.

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.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

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.

Loamy soil. Coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, silt, clay loam, sandy clay loam, or silty clay loam.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Longshore bar. A narrow, elongate, coarse-textured ridge, built by the wave action of a pluvial lake, that extends parallel to the shore and separated it from a lagoon; both the bar and lagoon are now relict features.

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.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

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.

Mean annual increment (MAI). The average annual increase in volume of a tree during the entire life of the tree.

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.

Merchantable trees. Trees that are of sufficient size to be economically processed into wood products.

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.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately deep soil. A soil that is 20 to 40 inches deep over bedrock or to other material that restricts the penetration of plant roots.

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.

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.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

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.

Observed rooting depth. Depth to which roots have been observed to penetrate.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Overstory. The trees in a forest that form the upper crown cover.

Oxbow. The horseshoe-shaped channel of a former meander, remaining after the stream formed a cutoff across a narrow meander neck.

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.

Parna dune. An eolian dune built of sand size aggregates of clayey material that commonly occurs leeward of a playa.

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.

Pediment. A gently sloping erosional surface developed at the foot of a receding hill or mountain slope.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher lying areas of the erosion surface.

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 downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

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	0.00 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.)

Piedmont slope. The dominant slope at the foot of a mountain. Main components of the piedmont slope include pediments, alluvial fans, fan piedmonts, fan skirts and inset fans.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

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.

Plateau. An extensive upland mass with relatively flat summit area that is considerably elevated (more than 100 meters) above adjacent lowlands and separated from them on one or more sides by escarpments.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressional areas, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff.

Pleistocene. The epoch of the Quaternary Period of geologic time preceding the Holocene (from aproximately 2 million to 10 thousand years ago).

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Pluvial. Relating to former periods of abundant rains.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

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.

Poor outlets (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

Potential native plant community. See Climax plant community.

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.

Quartzite, metamorphic. Rock consisting mainly of quartz that formed through recrystallization of quartz-rich sandstone or chert.

Quaternary. The period of geologic time extending from about 2 million years ago to the present and comprising two epochs, the Pleistocene (Ice Age) and Holocene (Recent).

Quartzite, sedimentary. Very hard but unmetamorphosed sandstone consisting chiefly of quartz grains.

Range condition. The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

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.

Range site. An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range 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 range sites in kind or proportion of species or total production.

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 . (mildly alkaline)	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regeneration. The new growth of a natural plant community, developing from seed.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relict stream terrace. One of a series of platforms in or adjacent to a stream valley that formed prior to the current stream system.

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 is generally a few inches deep and not wide enough to be an obstacle to farm machinery.

Riverwash. Unstable areas of sandy, silty, clayey, or gravelly sediments. These areas are flooded, washed, and reworked by rivers so frequently that they support little or no vegetation.

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.

Rock outcrop. Exposures of bare bedrock other than lava flows and rock-lined pits.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Rubble land. Areas that have more than 90 percent of the surface covered by stones or boulders. Voids contain no soil material and virtually no vegetation other than lichens. The areas commonly are at the base of mountain slopes, but some are on mountain slopes as deposits of cobbles, stones, and boulders left by Pleistocene glaciation or by periglacial phenomena.

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 groundwater runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs the growth of plants. A saline soil does not contain excess exchangeable sodium.

Salinity. The electrical conductivity of a saline soil. It is expressed, in millimhos per centimeter, as follows:

Nonsaline	0 to 2
Very slightly saline	2 to 4
Slightly saline	4 to 8
Moderately saline	8 to 16
Strongly saline	More than 16

Salty water (in tables). Water that is too salty for consumption by livestock.

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.

Sand sheet. A large, irregularly shaped, surficial mantle of eolian sand.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sandy soil. Sand or loamy sand.

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.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

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.

Sawlogs. Logs of suitable size and quality for the production of lumber.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Scribner's log rule. A method of estimating the number of board feet that can be cut from a log of a given diameter and length.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Semi-bolson. An intermontane basin that is drained externally by an intermittent stream.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, 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.

Shallow soil. A soil that is 10 to 20 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shelterwood system. A forest management system requiring the removal of a stand in a series of cuts so that regeneration occurs under a partial canopy. After regeneration, a final cut removes the shelterwood and allows the stand to develop in the open as an even-aged stand. The system is

well suited to sites where shelter is needed for regeneration, and it can aid regeneration of the more intolerant tree species in a stand.

Shoulder slope. The uppermost inclined surface at the top of a hillside. It is the transition zone from the back slope to the summit of a hill or mountain. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). 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.

Shrub-coppice dune. A small dune that forms around shrubs or small trees.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

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.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site class. A grouping of site indexes into five to seven production capability levels. Each level can be represented by a site curve.

Site curve (50-year). A set of related curves on a graph that shows the average height of dominant or dominant and codominant trees for the range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and codominant trees that are 50 years old or are 50 years old at breast height.

Site curve (100-year). A set of related curves on a graph that shows the average height of dominant or dominant and codominant trees for a range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and codominant trees that are 100 years old or are 100 years old at breast height.

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.

Skid trails. Pathways along which logs are dragged to a common site for loading onto a logging truck.

Slash. The branches, bark, treetops, reject logs, and broken or uprooted trees left on the ground after logging.

Slickens. Accumulations of fine-textured material, such as material separated in placer mine and ore mill operations. Slickens from ore mills commonly consist of freshly ground rock that has undergone chemical treatment during the milling process.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slippage (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

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 the following slope classes are recognized:

Nearly level	0 to 2 percent
Gently sloping	2 to 4 percent
Moderately sloping	4 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 30 percent
Steep	30 to 50 percent
Very steep	50 to 75 percent
Extremely steep	75 percent and higher

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Very slight	5-12:1
Slight	13-30:1
Moderate	31-45:1
Strong	46-90:1
Very strong	more than 90:1

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Species. A single, distinct kind of plant or animal having certain distinguishing characteristics.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

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.

Strath terrace. A surface cut formed by the erosion of hard or semiconsolidated bedrock and thinly mantled with stream deposits.

Stream channel. The hollow bed where a natural stream of surface water flows or may flow; the deepest or central part of the bed, formed by the main current and covered more or less continuously by water.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel. It originally formed near the level of the stream and is the dissected remnants of an abandoned flood plain, streambed, or valley floor that were produced during a former stage of erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to soil blowing 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 grain* (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 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. Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

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. A general term for the top, or highest level, of an upland feature, such as a hill or mountain. It commonly refers to a higher area that has a gentle slope and is flanked by steeper slopes.

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.

Tailwater. The water directly downstream of a structure.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside

the range defined for the family of the series for which the soils are named.

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 is generally 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). A step-like surface, ordinarily flat or undulating, bordering a river, a lake, or the sea representing a former flood plain.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material too thin for the specified use.

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.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

Too arid (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

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.

Toxicity (in tables). Excessive amount of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Trafficability. The degree to which a soil is capable of supporting vehicular traffic across a wide range in soil moisture conditions.

Tread. The relatively flat terrace surface that was cut or built by stream or wave action.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Understory. Any plants in a forest community that grow to a height of less than 5 feet.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley. An elongated depressional area primarily developed by stream action.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Very deep soil. A soil that is more than 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Very shallow soil. A soil that is less than 10 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Waterspreading. Diverting runoff from natural channels by means of a system of dams, dikes, or ditches and spreading it over relatively flat surfaces.

Water supplying capacity. The total amount of water available in the soil for plant growth in a normal year from precipitation and from runon from higher areas. Runoff and water lost to deep percolation are not included.

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.

Windthrow. The uprooting and tipping over of trees by the wind.

USDA United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with United States Department of the Interior, Bureau of Land Management, and University of Nevada Agricultural Experiment Station

Soil Survey of Northwest Elko County Area, Nevada,
Parts of Elko and Eureka Counties

Part II, Volume II

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Tables

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1949-86 at Owyhee, Nevada)

Month	Temperature (Degrees F.)						Precipitation (Inches)			
				2 years in 10 will have--				2 years in 10 will have--		
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	less than	more than	Average number of days with 0.10 inch or more
January	36.8	16.6	26.7	58	-19	10	1.32	0.73	1.85	4
February	41.6	21.5	31.5	61	-9	19	1.10	0.61	1.53	3
March	45.5	24.1	34.8	67	1	37	1.52	0.91	2.06	5
April	54.3	29.9	42.1	76	14	119	1.45	0.73	2.08	4
May	63.9	37.6	50.7	85	21	317	1.88	1.01	2.84	5
June	73.5	44.1	58.8	92	28	532	1.69	0.53	2.63	4
July	85.0	51.2	68.1	96	36	818	0.44	0.13	0.79	1
August	83.1	49.7	66.4	95	33	762	0.57	0.14	1.15	1
September	74.3	40.6	57.5	92	22	489	0.70	0.23	1.17	2
October	62.5	31.9	47.2	82	13	234	1.00	0.37	1.75	2
November	48.2	25.5	36.8	70	1	63	1.24	0.50	1.92	4
December	40.1	19.7	29.9	59	-13	14	1.45	0.67	2.20	5
Yearly :										
Average	59.1	32.7	45.9	---	---	---	---	---	---	---
Extreme	98	-34	---	100	-20	---	---	---	---	---
Total	---	---	---	---	---	3,414	14.36	8.64	18.22	40

*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 (40 degrees F).

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1958-89 at Tuscarora, Nevada)

Month	Temperature (Degrees F.)						Precipitation (Inches)				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	less than	more than	Average number of days with 0.10 inch or more	Average snowfall
January	36.6	15.4	26.0	56	-14	2	1.14	0.46	1.72	4	10.5
February	39.8	19.1	29.5	58	-8	9	0.99	0.33	1.53	3	7.9
March	44.8	22.8	33.8	66	2	28	1.11	0.57	1.58	4	8.4
April	53.4	27.6	40.5	75	12	105	0.79	0.33	1.18	2	2.8
May	63.1	34.4	48.8	84	18	282	1.25	0.64	1.86	4	1.6
June	74.0	42.1	58.0	91	27	529	1.28	0.42	2.06	4	0.0
July	84.5	49.3	66.9	95	33	830	0.62	0.20	1.13	1	0.0
August	83.1	47.8	65.4	95	27	768	0.56	0.11	1.09	1	0.0
September	72.5	39.1	55.8	90	20	469	0.83	0.23	1.41	2	0.2
October	62.2	31.7	46.9	81	13	246	0.91	0.26	1.48	2	1.4
November	45.4	23.4	34.4	68	0	40	1.50	0.54	2.30	4	6.4
December	38.3	17.7	28.0	59	-10	8	1.44	0.48	2.23	4	12.7
Yearly :											
Average	58.1	30.9	44.5	---	---	---	----	----	----	---	---
Extreme	98	-25	---	96	-17	---	----	----	----	---	---
Total	---	---	---	---	---	3,315	12.42	8.05	15.44	35	52.0

Average # of days per year with at least 1 inch of snow on the ground: 51

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

TABLE 2.--FREEZE DATES IN SPRING AND FALL

(Recorded in the period 1949-86 at Owyhee, Nevada. During this period, 2 years, had 25 days or more of missing data)

Probability	Temperature		
	24 degrees F. or lower	28 degrees F. or lower	32 degrees F. or lower
Last freezing temperature in spring :			
1 year in 10 later than--	May 20	May 31	June 27
2 years in 10 later than--	May 14	May 26	June 21
5 years in 10 later than--	May 3	May 15	June 8
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 20	Sept. 8	Aug. 26
2 years in 10 earlier than--	Sept. 26	Sept. 14	Sept. 1
5 years in 10 earlier than--	Oct. 7	Sept. 25	Sept. 12

TABLE 2.--FREEZE DATES IN SPRING AND FALL

(Recorded in the period 1958-89 at Tuscarora, Nevada)

Probability	Temperature		
	24 degrees F. or lower	28 degrees F. or lower	32 degrees F. or lower
Last freezing temperature in spring:			
1 year in 10 later than--	May 29	June 15	July 9
2 years in 10 later than--	May 22	June 9	July 2
5 years in 10 later than--	May 11	May 28	June 18
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 14	Sept. 1	Aug. 17
2 years in 10 earlier than--	Sept. 20	Sept. 7	Aug. 24
5 years in 10 earlier than--	Oct. 2	Sept. 20	Sept. 7

TABLE 3.--GROWING SEASON

(Recorded in the period 1949-86 at Owyhee, Nevada. During this period, 9 years, had 25 days or more of missing data)

Probability	Daily Minimum Temperature during growing season		
	Higher than 24 degrees F.	Higher than 28 degrees F.	Higher than 32 degrees F.
	Days	Days	Days
9 years in 10	118	102	72
8 years in 10	128	110	79
5 years in 10	146	126	94
2 years in 10	164	141	108
1 year in 10	173	150	115

TABLE 3.--GROWING SEASON

(Recorded in the period 1958-89 at Tuscarora, Nevada)

Probability	Daily Minimum Temperature during growing season		
	Higher than 24 degrees F.	Higher than 28 degrees F.	Higher than 32 degrees F.
	Days	Days	Days
9 years in 10	118	89	50
8 years in 10	127	97	60
5 years in 10	143	114	79
2 years in 10	159	130	99
1 year in 10	168	139	109

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
001	Rubble land	390	*
120	Cotant, moderately steep-Lerrow-Cotant association	2,675	0.1
126	Cotant-Lerrow-Akler association	725	*
127	Cotant-Ninemile-Lerrow association	980	*
128	Cotant-Graley association	4,300	0.2
129	Cotant-Chen-Crooked Creek association	3,930	0.2
130	Cotant-Booford association	2,995	0.2
140	Upville, frequently flooded-Upville association	3,075	0.2
141	Upville-Klackner association	2,660	0.1
150	Gochea gravelly loam, 2 to 4 percent slopes	7,255	0.4
161	Sonoma silt loam, drained, 0 to 2 percent slopes	2,750	0.1
162	Sonoma silt loam, drained, occasionally flooded	320	*
184	Crooked Creek silty clay loam, frequently flooded, 0 to 2 percent slopes	3,165	0.2
185	Crooked Creek, moderately wet-Crooked Creek association	13,595	0.7
186	Crooked Creek-Crooked Creek, occasionally flooded-Crooked Creek, drained association	2,195	0.1
188	Crooked Creek-Welch-Crooked Creek, drained association	4,700	0.2
190	Heechee-Heechee, cobbly association	4,882	0.2
200	Lynnbow-Rugar association	6,789	0.4
201	Lynnbow-Lerrow-Crooked Creek association	3,625	0.2
210	Soonaker-Bulake association	3,000	0.2
220	Cavanaugh-Rugar-McIvey association	2,750	0.1
221	Cavanaugh-Quarz-Alyan association	9,050	0.5
233	Bioya-Bilbo-Chiara association	3,190	0.2
234	Bioya-Shabliss-Puett association	1,830	*
235	Bioya-Trunk-Alley association	5,040	0.3
236	Bioya-Wieland-Kleckner association	14,255	0.8
241	Wickahoney-Deunah-Petan association	3,965	0.2
270	Pernty, steep-Loncan-Pernty association	2,705	0.1
280	Humboldt silty clay loam, occasionally flooded	285	*
308	Akler-Pattani-Cotant association	2,425	0.1
309	Akler-Susie Creek association	4,380	0.2
457	Donna-Stampede-Short Creek association	5,225	0.3
458	Donna-Stampede association	22,535	1.2
464	Stampede silt loam, 2 to 8 percent slopes	23,088	1.2
570	Sumine-Cleavage-Hapgood association	22,055	1.2
571	Sumine-Tusel-Gando association	1,000	*
572	Sumine-Reluctan-Cleavage association	1,420	*
576	Sumine-Hapgood-Cleavage association, very gravelly	7,135	0.4
577	Sumine-Hapgood-Chen association	1,515	*
578	Sumine-Tusel-Hapgood association, very steep	13,530	0.7
579	Sumine-Pernty-Tusel association	1,270	*
580	Sumine-Pie Creek-Reluctan association	5,995	0.3

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
581	Sumine-Hapgood-Cleavage association	13,150	0.7
582	Sumine-Tusel-Cleavage association	1,960	0.1
583	Sumine-Hapgood-Pernty association	9,847	0.5
584	Sumine-Tusel-Hapgood association, steep	2,175	0.1
585	Sumine-Rock outcrop-Rubble land association	10,960	0.6
586	Sumine-Loncan-Cleavage association	3,635	0.2
600	Hapgood-Bullump-Gando association	1,130	*
601	Hapgood-Blitzen-Tusel association	2,625	0.1
602	Hapgood-Hackwood-Tusel association	605	*
623	Soughe-Rock outcrop association	4,525	0.2
624	Soughe-Soughe, very steep-Rock outcrop association	3,120	0.2
625	Soughe-Alyan-Shalper association	4,395	0.2
626	Soughe, cobbly-Vanwyper-Soughe associaiton	515	*
690	Welch, drained-Welch association	19,325	1.0
920	Bullump-Gando-Tusel association	175	*
921	Bullump-Hackwood-Cleavage association	11,100	0.6
922	Bullump-Cleavage-Hapgood association	10,955	0.6
1130	Clementine silt loam, drained, 0 to 2 percent slopes	8,955	0.5
1131	Clementine, drained-Clementine, gently sloping-Clementine association	4,750	0.2
1135	Clementine-Clurde association	3,585	0.2
1150	Clurde-Wieland association	10,260	0.5
1155	Clurde very fine sandy loam, 0 to 2 percent slopes	4,595	0.2
1156	Clurde-Kortty association	5,235	0.3
1157	Clurde-Zevadez-Chiara association	8,005	0.4
1190	Cherry Spring-Enko association	7,740	0.4
1191	Cherry Spring-Wieland association	1,945	0.1
1193	Cherry Spring-Hunnton-Chiara association	1,290	*
1210	Skull Creek-Shabliss-Puett association	19,965	1.0
1220	Hunnton, strongly sloping-Hunnton-Fulstone association	6,235	0.3
1221	Hunnton, moderately steep-Hunnton-Fulstone association	13,210	0.7
1223	Hunnton-Shabliss-Puett association	10,600	0.6
1224	Hunnton-Trunk-Shabliss association	1,390	*
1226	Hunnton-Wieland-Clementine association	8,250	0.4
1227	Hunnton-Chiara-Bilbo association	2,550	0.1
1228	Hunnton-Hunnton, moderately sloping association	7,990	0.4
1229	Hunnton-Chiara-Wieland association	12,045	0.6
1230	Fulstone-Hunnton association	3,170	0.2
1231	Fulstone-Fulstone, moderately steep-Hunnton association	32,370	1.7
1232	Fulstone-Fulstone, cobbly loam-Wieland association	2,970	0.2
1241	Enko-Shabliss-Orovada association	12,600	0.7
1242	Enko-Enko, strongly sloping association	1,510	*
1260	Kleckner-Upville-Fulstone association	4,420	0.2

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
1261	Kleckner-Heechee association	800	*
1290	Tweba very fine sandy loam, drained, 0 to 2 percent slopes	920	*
1350	Shabliss-Hunnton-Bioya association	4,850	0.2
1351	Shabliss-Bartome association	5,260	0.3
1352	Shabliss-Skull Creek-Puett association	5,205	0.3
1360	Orovada very fine sandy loam, 0 to 2 percent slopes	3,370	0.2
1362	Orovada-Clurde-Wieland association	6,920	0.4
1363	Orovada-Tweba-Weso association	3,675	0.2
1530	Creemon-Placeritos association	660	*
1572	Weso-Orovada-Shabliss association	5,420	0.3
1573	Weso-Orovada-Tweba associaiton	1,710	*
1617	Cleavage-Hapgood-Tweener association	1,955	0.1
1618	Cleavage-Sumine-Pequop association	2,285	0.1
1619	Cleavage-Tusk-Sumine association	10,920	0.6
1621	Cleavage-Graley-Cleavage, moderately steep association	21,610	1.1
1622	Cleavage-Sumine-Hapgood association	7,045	0.4
1623	Cleavage-Hapgood-Sumine association	15,000	0.8
1625	Cleavage-Ninemile-Sumine association	5,855	0.3
1626	Cleavage-Carstump-Chen association	1,140	*
1628	Cleavage-Chen-Reluctan association	6,870	0.4
1640	Tusk-Cleavage-Hackwood association	14,260	0.8
1650	Ninemile-Tusk-Ninemile, steep association	18,540	1.0
1651	Ninemile-Reluctan-Ninemile, moderately steep association	4,295	0.2
1652	Ninemile, steep-Graley-Ninemile association	41,545	2.2
1653	Ninemile-Reluctan-Graley association	6,630	0.3
1655	Ninemile-Thwoop-Pequop association	2,140	0.1
1656	Ninemile-Pequop-Gumble association	3,115	0.2
1657	Ninemile-Alyan association	2,380	0.1
1658	Ninemile-Vanwyper-Ninemile, moderately steep association	2,865	0.2
1659	Ninemile-Carstump association	9,640	0.5
1660	Susie Creek-Pie Creek-Pattani association	170	*
1671	Linkup-Carstump-Linkup, very cobbly loam association	20,265	1.1
1672	Linkup, steep-Carstump-Linkup association	26,585	1.4
1673	Linkup-Quarz-Alyan association	3,520	0.2
1675	Linkup-Snowmore-Ratsow association	5,120	0.3
1676	Linkup-Quarz association	1,530	*
1680	Carstump-Reluctan-Ninemile association, hilly	7,345	0.4
1685	Carstump-Ninemile-Graley association	16,795	0.9
1686	Carstump-Reluctan-Ninemile association, steep	10,360	0.5
1687	Carstump, cobbly loam-Linkup-Carstump association	13,075	0.7
1691	Pequop-Rock outcrop-Rubble land association	3,125	0.2
1700	Cotant-Quarz-Ninemile association	2,775	0.1

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
1702	Cotant-McIvey-Blitzen association	4,875	0.2
1703	Cotant-Lerrow-Bullump association	2,160	0.1
1711	Reluctan-Ninemile-Cleavage association	3,115	0.2
1712	Reluctan-Sumine-Cleavage association	2,195	0.1
1713	Reluctan-Erakatak-Rugar association	1,015	*
1720	Quarz-Alyan-Ninemile association	3,320	0.2
1725	Quarz-Cleavage-Loncan association	3,185	0.2
1726	Quarz-Ninemile-Pequop association	1,465	*
1730	Graley-Erakatak-Chen association	1,535	*
1732	Graley-Quarz-Ninemile association	13,955	0.7
1733	Graley-Loncan association	1,550	*
1740	Erakatak-Cleavage-Hackwood association	3,415	0.2
1741	Erakatak-Chen-Tusk association	1,170	*
1742	Erakatak-Rugar-Tusel association	2,210	0.1
1744	Erakatak-Graley-Tusel association	1,585	*
1746	Booford-Cotant-Blitzen association	4,205	0.2
1800	Bregar, moderately steep-Bregar-Carstump association	4,865	0.2
1802	Bregar-Ninemile-Pequop association	3,675	0.2
1803	Bregar-Sumine-Rock outcrop association	7,325	0.4
1805	Bregar-Deseed-Linkup association	6,660	0.4
1810	Shively-Ninemile-Hackwood association	17,230	0.9
1830	Vanwyper, steep-Alyan-Vanwyper association	12,615	0.7
1831	Vanwyper, moderately steep-Trunk-Vanwyper association	5,195	0.3
1832	Vanwyper-Trunk-Trunk, steep association	1,780	*
1833	Vanwyper-Rock outcrop-Trunk association	7,505	0.4
1852	Gumble-Tuffo-Hunnton association	4,150	0.2
1853	Gumble-Tuffo-Rock outcrop association	5,433	0.3
1854	Gumble-Chen association	4,360	0.2
1855	Gumble-Puett Variant-Xeric Torriorthents association	3,180	0.2
1870	Chen-Graley-Quarz association	13,510	0.7
1871	Chen-Cotant-Graley association	3,210	0.2
1872	Chen-Sumine-Tusel association	17,160	0.9
1874	Chen-Quarz-Arcia association	15,990	0.8
1875	Chen-Bregar-Ramires association	2,750	0.1
1876	Chen-Chen, steep-Arcia association	1,920	0.1
1877	Chen-Bregar-Loncan association	2,000	0.1
1880	Chen-Blitzen-Pequop association	3,890	0.2
1881	Chen-Blitzen-Loncan association	3,145	0.2
1888	Chen-Pie Creek-Alyan association	1,435	*
1889	Chen-Sumine association	14,845	0.8
1910	Mahala-Ramires association	620	*
1920	Lerrow-Chen-Cotant association	7,070	0.4

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
1921	Lerrow-Quarz-Rugar association	2,780	0.1
1931	Tweener-Cleavage-Reluctan association	3,320	0.2
1932	Tweener-Sumine-Cleavage association	5,690	0.3
1933	Tweener-Pequop-Cleavage association	1,800	*
1950	McIvey-McIvey, very cobbly-Tusel association	1,165	*
1980	Thwoop-Trunk-Pequop association	2,395	0.1
2000	Alyan-Cotant-Akler association	2,730	0.1
2001	Alyan, steep-Bregar-Alyan association	3,770	0.2
2002	Alyan, moderately steep-Alyan-Quarz association	11,912	0.6
2003	Alyan-Deepeek-Susie Creek association	1,100	*
2004	Alyan, cobbly loam-Ninemile-Alyan association	8,945	0.5
2005	Alyan-Graley-Rock outcrop association	3,940	0.2
2171	Deseed-Reluctan-Cleavage association	1,940	0.1
2173	Deseed-Quarz association	2,360	0.1
2205	Coltroop-Snowmore association	6,555	0.3
2206	Coltroop-Vanwyper association	4,035	0.2
2310	Bulake-Deunah-Bulake, very cobbly association	8,400	0.4
2311	Bulake-Hatpeak-Petan association	4,775	0.2
2505	Buffaran-Zevadez association	13,425	0.7
2511	Bilbo-Alley-Deepeek association	9,540	0.5
2514	Bilbo-Susie Creek-Buffaran association	3,860	0.2
2521	Dewar-Chiara-Chiara, very cobbly association	6,835	0.4
2522	Dewar-Sodhouse association	4,080	0.2
2531	Clurde Variant-Clurde-Rock outcrop association	3,315	0.2
2541	Kelk very fine sandy loam, occasionally flooded, 0 to 2 percent slopes	6,295	0.3
2545	Kelk-Clurde association	21,680	1.1
2555	Piline silty clay loam	1,415	*
2560	McCleary silt loam, occasionally flooded	4,005	0.2
2561	McCleary cobbly silt loam, drained, rarely flooded	1,185	*
2571	Chiara-Chiara, cobbly-Chiara, very cobbly association	102,380	5.4
2572	Chiara-Chiara, moderately eroded association	29,735	1.6
2573	Chiara, very cobbly-Chiara association	40,645	2.1
2575	Chiara-Dacker-Shalake association	25,110	1.3
2577	Chiara-Orovada association	1,128	*
2600	Shalake-Chiara-Shalake, gently sloping association	11,450	0.6
2611	Dacker-Hunnton association	3,435	0.2
2612	Dacker-Zevadez association	24,260	1.3
2615	Dacker-Chiara association	22,785	1.2
2621	Gochea-Susie Creek-Carstump association	4,500	0.2
2641	Olac-Snowmore association	3,925	0.2
2650	Wieland-Bartome-Zevadez assocation	6,690	0.4
2651	Wieland-Buffaran association	5,822	0.3

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
2652	Wieland-Dacker-Zevadez association	10,089	0.5
2655	Wieland-Gumble-Bilbo association	10,540	0.6
2656	Wieland-Hunnton-Thwoop association	2,570	0.1
2658	Wieland very gravelly loam, 15 to 30 percent slopes	1,365	*
2666	Puett-Orovada association	2,525	0.1
2667	Puett-Rock outcrop-Clurde association	1,930	0.1
2668	Puett-Yuko-Zevadez association	3,035	0.2
2710	Ramires-Bartome-Bilbo association	4,360	0.2
2711	Ramires-Bilbo-Buffaran association	11,415	0.6
2741	Wilsor-Wilsor, moderately steep association	1,930	0.1
2751	Yuko-Chime-Clurde association	17,390	0.9
2775	Zevadez-Bartome-Wieland association	24,385	1.3
2776	Zevadez-Chiara association	17,895	0.9
2777	Zevadez-Wieland-Clurde association	3,940	0.2
2778	Zevadez-Yuko-Kelk association	47,840	2.5
2780	Snowmore, cobbly-Snowmore association	5,100	0.3
2781	Snowmore, cobbly-Snowmore, very cobbly-Snowmore association	4,040	0.2
2782	Snowmore-Zevadez-Snowmore, cobbly association	3,895	0.2
2783	Snowmore-Willhill association	2,190	0.1
2790	Old Camp-Troughs-Olac association	1,135	*
2801	Bartome-Alley-Clurde association	3,310	0.2
2802	Bartome-Buffaran association	1,050	*
2803	Bartome-Buffaran-Ramires association	6,360	0.3
2804	Bartome-Chiara association	62,430	3.3
2805	Bartome very fine sandy loam, 0 to 2 percent slopes	1,335	*
2807	Bartome-Coltroop-Zevadez association	13,420	0.7
2808	Bartome-Susie Creek-Wieland association	1,585	*
2809	Bartome-Dacker association	25,440	1.3
2820	Alley-Vanwyper-Rock outcrop association	1,265	*
2822	Alley-Rock outcrop-Rubble land association	1,765	*
3000	Handy-Wilsor-Deseed association	3,155	0.2
3010	Relley-Kelk association	710	*
3020	Sodhouse-Chiara association	1,325	*
3030	Deepeek-Alley association	20,615	1.1
3100	Ratsow-Quarz-Susie Creek association	6,040	0.3
3510	Midraw-Troughs-Midraw, strongly sloping association	9,875	0.5
3710	Petan-Bulake-Rock outcrop association	2,865	0.2
3715	Petan-Deunah-Hatpeak association	20,225	1.1
3721	Hatpeak-Deunah association	5,538	0.3
3722	Hatpeak-Hatpeak, moderately steep association	17,891	0.9
W	Water	6,000	0.3
	Total	1,899,379	100.0

* Less than 0.1 percent.

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS

(See text for a description of the limitations and hazards listed in this table)

Soil name and map symbol	Cropland limitations or hazards
140:	
Upville	Excessive permeability below restriction Flooding Limited available water capacity Potential for ground-water pollution Short frost-free season
Upville	Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Short frost-free season Soil blowing
141:	
Upville	Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Short frost-free season Soil blowing
Kleckner	Short frost-free season
150:	
Gochea	Excessive permeability below restriction Potential for ground-water pollution
161:	
Sonoma	Lime content Surface crusting
162:	
Sonoma	Flooding Lime content Salt content Surface crusting Water table
184:	
Crooked Creek	Flooding Potential for ground-water pollution Short frost-free season Water table

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
185:	
Crooked Creek----------	Flooding Potential for ground-water pollution Short frost-free season Water table
Crooked Creek----------	Flooding Potential for ground-water pollution Short frost-free season Water table
186:	
Crooked Creek----------	Flooding Potential for ground-water pollution Short frost-free season Water table
Crooked Creek----------	Flooding Potential for ground-water pollution Short frost-free season Water table
Crooked Creek----------	Poor tilth Short frost-free season Water table
188:	
Crooked Creek----------	Flooding Potential for ground-water pollution Short frost-free season Water table
Welch----------	Short frost-free season Water table
Crooked Creek----------	Poor tilth Short frost-free season Water table
200:	
Lynnbow----------	Erosion by water Short frost-free season
Rugar----------	Erosion by water Short frost-free season

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
201:	
Lynnbow	Erosion by water Short frost-free season Slope
Lerrow	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope
Crooked Creek	Flooding Potential for ground-water pollution Short frost-free season Water table
233:	
Bioya	Erosion by water Restricted permeability Root restrictive layer Soil blowing
Bilbo	Erosion by water Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Slope
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
234:	
Bioya	Erosion by water Restricted permeability Root restrictive layer Soil blowing
Shabliss	Erosion by water Excessive permeability below restriction Potential for ground-water pollution Restricted permeability Root restrictive layer Soil blowing
Puett	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing Surface crusting Surface stones
235:	
Bioya	Erosion by water Restricted permeability Root restrictive layer Soil blowing
Trunk	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface crusting
Alley	Erosion by water Slope Surface stones
236:	
Bioya	Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Wieland	Erosion by water Short frost-free season Surface crusting
Kleckner	Short frost-free season

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
280:	
Humboldt	Flooding Lime content Poor tilth Potential for ground-water pollution Salt content Sodium content Surface crusting Water table
457:	
Donna	Erosion by water Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Stampede	Erosion by water Restricted permeability Root restrictive layer Short frost-free season Slope Soil blowing
Short Creek	Erosion by water Short frost-free season Slope
458:	
Donna	Erosion by water Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Stampede	Erosion by water Restricted permeability Root restrictive layer Short frost-free season Slope Soil blowing
464:	
Stampede	Erosion by water Restricted permeability Root restrictive layer Soil blowing

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
690:	
Welch	Short frost-free season Water table
Welch	Flooding Potential for ground-water pollution Short frost-free season Water table
1130:	
Clementine	Surface crusting
1131:	
Clementine	Surface crusting
Clementine	Surface crusting
Clementine	Flooding Potential for ground-water pollution Surface crusting Water table
1135:	
Clementine	Surface crusting
Clurde	Excessive permeability below restriction Potential for ground-water pollution Soil blowing
1150:	
Clurde	Erosion by water Excessive permeability below restriction Potential for ground-water pollution Soil blowing
Wieland	Erosion by water
1155:	
Clurde	Excessive permeability below restriction Potential for ground-water pollution Soil blowing
1156:	
Clurde	Excessive permeability below restriction Potential for ground-water pollution Soil blowing
Kortty	Restricted permeability Sodium content Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1157:	
Clurde	Excessive permeability below restriction Potential for ground-water pollution Soil blowing
Zevadez	None
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
1190:	
Cherry Spring	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Enko	Erosion by water Salt content Sodium content Surface crusting
1191:	
Cherry Spring	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Wieland	Erosion by water Slope

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1193:	
Cherry Spring	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Soil blowing Surface crusting
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
1210:	
Skull Creek	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Shabliss	Erosion by water Excessive permeability below restriction Potential for ground-water pollution Restricted permeability Root restrictive layer Soil blowing
Puett	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1220:	
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Soil blowing Surface crusting
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Soil blowing Surface crusting
Fulstone	Erosion by water Limited available water capacity Root restrictive layer Slope Soil blowing Surface rock fragments
1223:	
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Surface crusting
Shabliss	Erosion by water Excessive permeability below restriction Potential for ground-water pollution Restricted permeability Root restrictive layer Soil blowing
Puett	Depth to rock Erosion by water Lime content Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface rock fragments

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1226:	
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Surface crusting
Wieland	Erosion by water
Clementine	Surface crusting
1228:	
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Soil blowing Surface crusting
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Soil blowing Surface crusting
1229:	
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Soil blowing Surface crusting
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
Wieland	Erosion by water Slope Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1230:	
Fulstone	Limited available water capacity Root restrictive layer Soil blowing
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Soil blowing Surface crusting
1232:	
Fulstone	Limited available water capacity Root restrictive layer Soil blowing
Fulstone	Erosion by water Limited available water capacity Root restrictive layer Slope Soil blowing Surface rock fragments
Wieland	Erosion by water Slope Surface crusting
1242:	
Enko	Salt content Surface crusting
Enko	Erosion by water Salt content Slope Surface crusting
1260:	
Kleckner	Erosion by water Short frost-free season Slope
Upville	Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Short frost-free season Soil blowing
Fulstone	Limited available water capacity Root restrictive layer Short frost-free season Soil blowing Surface rock fragments

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1290:	
Tweba	Lime content Surface crusting Water table
1351:	
Shabliss	Excessive permeability below restriction Potential for ground-water pollution Restricted permeability Root restrictive layer Soil blowing
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
1352:	
Shabliss	Erosion by water Excessive permeability below restriction Potential for ground-water pollution Restricted permeability Root restrictive layer Slope Soil blowing
Skull Creek	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Puett	Depth to rock Erosion by water Lime content Limited available water capacity Slope Soil blowing Surface rock fragments
1360:	
Orovada	Erosion by water Salt content Sodium content Surface crusting
1362:	
Orovada	Erosion by water Salt content Surface crusting
Clurde	Erosion by water Excessive permeability below restriction Potential for ground-water pollution Soil blowing
Wieland	Erosion by water Slope Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1363:	
Orovada	Salt content Sodium content Surface crusting
Tweba	Lime content Potential for ground-water pollution Surface crusting Water table
Weso	Salt content Sodium content Soil blowing Surface crusting
1530:	
Creemon	Lime content Salt content Sodium content Surface crusting
Placeritos	Lime content Sodium content Surface crusting
1572:	
Weso	Salt content Sodium content Soil blowing Surface crusting
Orovada	Erosion by water Salt content Surface crusting
Shabliss	Erosion by water Excessive permeability below restriction Potential for ground-water pollution Restricted permeability Root restrictive layer Slope Soil blowing
1573:	
Weso	Erosion by water Salt content Sodium content Soil blowing Surface crusting
Orovada	Erosion by water Salt content Surface crusting
Tweba	Lime content Potential for ground-water pollution Surface crusting Water table

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1852:	
Gumble	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
Tuffo	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
Hunnton	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Soil blowing Surface crusting
2505:	
Buffaran	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Zevadez	None
2514:	
Bilbo	Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Slope Surface rock fragments
Susie Creek	Erosion by water Slope
Buffaran	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
2521:	
Dewar	Erosion by water Restricted permeability Root restrictive layer Slope Soil blowing Surface rock fragments
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2521:	
Chiara	Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting Surface rock fragments
2522:	
Dewar	Restricted permeability Root restrictive layer Soil blowing Surface rock fragments
Sodhouse	Lime content Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting Surface rock fragments
2531:	
Clurde Variant	Areas of rock outcrop Depth to rock Flooding Limited available water capacity Potential for ground-water pollution Soil blowing
Clurde	Areas of rock outcrop Excessive permeability below restriction Potential for ground-water pollution Soil blowing
Rock outcrop	Nonsoil material
2541:	
Kelk	Flooding Surface crusting
2545:	
Kelk	Surface crusting
Clurde	Excessive permeability below restriction Potential for ground-water pollution Soil blowing
2555:	
Piline	Ponding Poor tilth Potential for ground-water pollution Water table
2560:	
McCleary	Flooding Potential for ground-water pollution Water table
2561:	
McCleary	Surface rock fragments

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2571:	
Chiara	Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
Chiara	Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting Surface rock fragments
Chiara	Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting Surface rock fragments
2572:	
Chiara	Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
Chiara	Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2573:	
Chiara	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Sodium content Soil blowing Surface crusting Surface rock fragments
Chiara	Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting Surface rock fragments
2575:	
Chiara	Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
Dacker	Restricted permeability Root restrictive layer Soil blowing
Shalake	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
2577:	
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
Orovada	Erosion by water Salt content Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2600:	
Shalake	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Chiara	Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
Shalake	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
2611:	
Dacker	Restricted permeability Root restrictive layer Soil blowing
Hunnton	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing Surface crusting
2612:	
Dacker	Restricted permeability Root restrictive layer Soil blowing
Zevadez	None
2615:	
Dacker	Restricted permeability Root restrictive layer Soil blowing
Chiara	Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2621:	
Gochea	Excessive permeability below restriction Potential for ground-water pollution Short frost-free season
Susie Creek	Erosion by water Short frost-free season Slope
Carstump	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
2650:	
Wieland	Erosion by water Slope
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Zevadez	Erosion by water
2651:	
Wieland	Erosion by water Slope Surface crusting
Buffaran	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
2652:	
Wieland	Surface crusting
Dacker	Restricted permeability Root restrictive layer Soil blowing
Zevadez	None

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2656:	
Wieland	Short frost-free season Surface crusting
Hunnton	Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Soil blowing Surface crusting
Thwoop	Depth to rock Limited available water capacity Potential for ground-water pollution Restricted permeability Root restrictive layer Short frost-free season Soil blowing
2668:	
Puett	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing Surface crusting
Yuko	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
Zevadez	Erosion by water

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2710:	
Ramires	Depth to rock Erosion by water Potential for ground-water pollution Short frost-free season Slope Soil blowing
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Bilbo	Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
2711:	
Ramires	Depth to rock Erosion by water Potential for ground-water pollution Short frost-free season Slope Soil blowing
Bilbo	Erosion by water Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
Buffaran	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Soil blowing

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2751:	
Yuko	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
Chime	Depth to rock Erosion by water Limited available water capacity Slope
Clurde	Excessive permeability below restriction Potential for ground-water pollution Soil blowing
2775:	
Zevadez	Erosion by water
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Wieland	Surface crusting
2776:	
Zevadez	None
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
2777:	
Zevadez	None
Wieland	Surface crusting
Clurde	Excessive permeability below restriction Potential for ground-water pollution Soil blowing
2778:	
Zevadez	None
Yuko	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
Kelk	Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2801:	
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Alley	Erosion by water Lime content Slope Surface crusting
Clurde	Excessive permeability below restriction Potential for ground-water pollution Soil blowing
2802:	
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Buffaran	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
2803:	
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Buffaran	Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Ramires	Depth to rock Erosion by water Potential for ground-water pollution Short frost-free season Slope Soil blowing
2804:	
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
2805:	
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
2807:	
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Coltroop	Depth to rock Limited available water capacity Potential for ground-water pollution Restricted permeability Root restrictive layer Soil blowing Surface crusting
Zevadez	None
2808:	
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Susie Creek	None
Wieland	Erosion by water Surface crusting
2809:	
Bartome	Limited available water capacity Restricted permeability Root restrictive layer Soil blowing
Dacker	Erosion by water Restricted permeability Root restrictive layer Soil blowing
3010:	
Relley	Flooding Lime content Salt content Sodium content Surface crusting
Kelk	Surface crusting

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
3020:	
Sodhouse	Lime content Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
Chiara	Erosion by water Lime content Limited available water capacity Restricted permeability Root restrictive layer Sodium content Soil blowing Surface crusting
3715:	
Petan	Depth to rock Limited available water capacity Potential for ground-water pollution Restricted permeability Root restrictive layer Short frost-free season Surface rock fragments
Deunah	Depth to rock Limited available water capacity Potential for ground-water pollution Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Hatpeak	Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Soil blowing
3721:	
Hatpeak	Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Deunah	Depth to rock Limited available water capacity Potential for ground-water pollution Restricted permeability Root restrictive layer Short frost-free season Soil blowing

TABLE 5.-- CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
3722:	
Hatpeak----------	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Soil blowing
Hatpeak----------	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Slope Soil blowing

TABLE 6.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS

(Yields are those that can be expected under a high level of irrigated management by component name. 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
		Tons
1130:		
Clementine------	2C	4.0
1131:		
Clementine------	2C	4.0
Clementine------		---
Clementine------	3W	---
1135:		
Clementine------	2C	4.0
Clurde----------		---
1241:		
Enko------------	3E	---
Shabliss--------		---
Orovada---------	3E	5.8
1362:		
Orovada---------	3E	5.8
Clurde----------		---
Wieland---------		---
1363:		
Orovada---------		---
Tweba-----------	3W	---

TABLE 6.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued

Map symbol and soil name	Land capability	Alfalfa hay
		Tons
Weso	2C	6.0
1530:		
Creemon	2C	6.4
Placeritos	2C	5.8
1572:		
Weso	2C	6.0
Orovada	3E	5.8
Shabliss		---
1573:		
Weso	3E	---
Orovada	3E	5.8
Tweba	3W	---
2541:		
Kelk	2W	5.8
2571:		
Chiara	4S	3.5
Chiara		---
Chiara		---
2572:		
Chiara	4S	3.5

TABLE 6.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued

Map symbol and soil name	Land capability	Alfalfa hay
		Tons
Chiara----------	4S	3.5
2575:		
Chiara----------	4S	3.5
Dacker----------	3E	---
Shalake---------	4S	---
2577:		
Chiara----------		---
Orovada---------	3E	5.8
2600:		
Shalake---------	4S	---
Chiara----------	4S	3.5
Shalake---------	4E	---
2615:		
Dacker----------	3E	---
Chiara----------	4S	3.5
3010:		
Relley----------	3W	5.8
Kelk------------		---

TABLE 7.--RANGELAND SEEDING

Soil name and map symbol	Limitation rating	Restrictive features
1:		
Rubble Land	Poorly suited	Too arid, droughty, large stones.
120:		
Cotant	Poorly suited	Rooting depth.
Lerrow	Suited	Too arid, droughty.
Cotant	Poorly suited	Rooting depth.
126:		
Cotant	Poorly suited	Rooting depth.
Lerrow	Suited	Too arid, droughty, large stones.
Akler	Poorly suited	Too arid, droughty, rooting depth.
127:		
Cotant	Poorly suited	Rooting depth.
Ninemile	Poorly suited	Rooting depth.
Lerrow	Suited	Too arid, droughty.
128:		
Cotant	Poorly suited	Rooting depth.
Graley	Poorly suited	Droughty, small stones.
129:		
Cotant	Poorly suited	Rooting depth.
Chen	Poorly suited	Droughty, small stones, rooting depth.
Crooked Creek	Well suited	
130:		
Cotant	Poorly suited	Rooting depth.
Booford	Well suited	
140:		
Upville	Suited	Too arid.
Upville	Suited	Too arid.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
141:		
Upville	Suited	Too arid.
Kleckner	Poorly suited	Rooting depth.
150:		
Gochea	Suited	Too arid, droughty.
161:		
Sonoma	Suited	Too arid, excess salt.
162:		
Sonoma	Poorly suited	Excess salt.
184:		
Crooked Creek	Suited	Too clayey.
185:		
Crooked Creek	Well suited	
Crooked Creek	Well suited	
186:		
Crooked Creek	Well suited	
Crooked Creek	Well suited	
Crooked Creek	Suited	Too clayey.
188:		
Crooked Creek	Well suited	
Welch	Well suited	
Crooked Creek	Suited	Too clayey.
190:		
Heechee	Suited	Droughty.
Heechee	Suited	Droughty.
200:		
Lynnbow	Poorly suited	Rooting depth.
Rugar	Well suited	

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
201:		
Lynnbow	Poorly suited	Rooting depth.
Lerrow	Suited	Too arid, droughty.
Crooked Creek	Well suited	
210:		
Soonaker	Suited	, droughty.
Bulake	Poorly suited	Droughty, rooting depth.
220:		
Cavanaugh	Poorly suited	Rooting depth.
Rugar	Well suited	
Mcivey	Well suited	
221:		
Cavanaugh	Poorly suited	Rooting depth.
Quarz	Poorly suited	Droughty, small stones, rooting depth.
Alyan	Poorly suited	Rooting depth.
233:		
Bioya	Suited	Too arid.
Bilbo	Poorly suited	Rooting depth.
Chiara	Poorly suited	Excess sodium.
234:		
Bioya	Suited	Too arid.
Shabliss	Poorly suited	Too arid, droughty.
Puett	Poorly suited	Too arid, droughty.
235:		
Bioya	Suited	Too arid.
Trunk	Poorly suited	Rooting depth.
Alley	Suited	Too arid, large stones, excess salt.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
236:		
Bioya	Suited	Too arid.
Wieland	Poorly suited	Rooting depth.
Kleckner	Poorly suited	Rooting depth.
241:		
Wickahoney	Poorly suited	Droughty.
Deunah	Poorly suited	Rooting depth.
Petan	Poorly suited	Droughty, small stones, rooting depth.
270:		
Pernty	Poorly suited	Droughty, small stones.
Loncan	Poorly suited	Droughty, small stones.
Pernty	Poorly suited	Droughty, small stones.
280:		
Humboldt	Poorly suited	Excess salt, excess sodium.
308:		
Akler	Poorly suited	Too arid, droughty, rooting depth.
Pattani	Suited	Too arid, too clayey.
Cotant	Poorly suited	Rooting depth.
309:		
Akler	Poorly suited	Too arid, droughty, rooting depth.
Susie Creek	Suited	Too arid.
457:		
Donna	Suited	Too arid.
Stampede	Suited	Too arid.
Short Creek	Suited	Too arid.
458:		
Donna	Suited	Too arid.
Stampede	Suited	Too arid.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
464:		
Stampede	Suited	Too arid.
570:		
Sumine	Poorly suited	Small stones.
Cleavage	Poorly suited	Droughty, small stones.
Hapgood	Poorly suited	Small stones.
571:		
Sumine	Poorly suited	Small stones.
Tusel	Suited	Droughty.
Gando	Poorly suited	Droughty, small stones.
572:		
Sumine	Poorly suited	Small stones.
Reluctan	Suited	Too arid, droughty.
Cleavage	Poorly suited	Droughty, small stones.
576:		
Sumine	Poorly suited	Small stones.
Hapgood	Poorly suited	Small stones.
Cleavage	Poorly suited	Droughty, small stones.
577:		
Sumine	Poorly suited	Small stones.
Hapgood	Poorly suited	Small stones.
Chen	Poorly suited	Droughty, small stones, rooting depth.
578:		
Sumine	Poorly suited	Small stones, erodes easily.
Tusel	Suited	Droughty.
Hapgood	Poorly suited	Small stones.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
579:		
Sumine	Poorly suited	Small stones.
Pernty	Poorly suited	Droughty, small stones.
Tusel	Poorly suited	Small stones.
580:		
Sumine	Poorly suited	Small stones.
Pie Creek	Poorly suited	Rooting depth.
Reluctan	Suited	Too arid, droughty.
581:		
Sumine	Poorly suited	Small stones.
Hapgood	Poorly suited	Small stones.
Cleavage	Poorly suited	Droughty, small stones.
582:		
Sumine	Poorly suited	Small stones.
Tusel	Poorly suited	Small stones.
Cleavage	Poorly suited	Droughty, small stones.
583:		
Sumine	Poorly suited	Small stones, erodes easily.
Hapgood	Poorly suited	Small stones.
Pernty	Poorly suited	Droughty, small stones.
584:		
Sumine	Poorly suited	Small stones.
Tusel	Poorly suited	Small stones.
Hapgood	Poorly suited	Small stones.
585:		
Sumine	Poorly suited	Small stones.
Rock Outcrop	Not rated	
Rubble Land	Poorly suited	Too arid, droughty, large stones.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
586:		
Sumine	Poorly suited	Small stones.
Loncan	Poorly suited	Droughty, small stones.
Cleavage	Poorly suited	Droughty, small stones.
600:		
Hapgood	Poorly suited	Small stones.
Bullump	Poorly suited	Small stones.
Gando	Poorly suited	Droughty, small stones.
601:		
Hapgood	Poorly suited	Small stones.
Blitzen	Poorly suited	Small stones.
Tusel	Suited	Droughty.
602:		
Hapgood	Poorly suited	Small stones.
Hackwood	Well suited	
Tusel	Suited	Droughty.
623:		
Soughe	Poorly suited	Droughty, small stones.
Rock Outcrop	Not rated	
624:		
Soughe	Poorly suited	Droughty, small stones.
Soughe	Poorly suited	Droughty, small stones.
Rock Outcrop	Not rated	
625:		
Soughe	Poorly suited	Droughty, small stones.
Alyan	Poorly suited	Small stones, rooting depth.
Shalper	Poorly suited	Too arid, droughty, small stones.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
626:		
Soughe	Poorly suited	Droughty.
Vanwyper	Suited	Too arid, droughty.
Soughe	Poorly suited	Droughty, small stones.
690:		
Welch	Well suited	
Welch	Well suited	
920:		
Bullump	Poorly suited	Small stones.
Gando	Poorly suited	Droughty, small stones.
Tusel	Suited	Droughty.
921:		
Bullump	Poorly suited	Small stones.
Hackwood	Well suited	
Cleavage	Poorly suited	Droughty, small stones.
922:		
Bullump	Poorly suited	Small stones.
Cleavage	Poorly suited	Droughty, small stones.
Hapgood	Poorly suited	Small stones.
1130:		
Clementine	Suited	Excess sodium.
1131:		
Clementine	Suited	Excess sodium.
Clementine	Suited	Excess sodium.
Clementine	Well suited	
1135:		
Clementine	Suited	Excess sodium.
Clurde	Suited	Too arid.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1150:		
Clurde	Suited	Too arid.
Wieland	Poorly suited	Rooting depth.
1155:		
Clurde	Suited	Too arid.
1156:		
Clurde	Suited	Too arid.
Kortty	Poorly suited	Too arid, rooting depth, excess sodium.
1157:		
Clurde	Suited	Too arid.
Zevadez	Suited	Too arid.
Chiara	Poorly suited	Excess sodium.
1190:		
Cherry Spring	Suited	Too arid, droughty.
Enko	Poorly suited	Excess salt, excess sodium.
1191:		
Cherry Spring	Suited	Too arid, droughty.
Wieland	Poorly suited	Rooting depth.
1193:		
Cherry Spring	Suited	Too arid.
Hunnton	Poorly suited	Rooting depth.
Chiara	Poorly suited	Excess sodium.
1210:		
Skull Creek	Suited	Too arid, excess salt.
Shabliss	Poorly suited	Too arid, droughty.
Puett	Poorly suited	Too arid, droughty.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1220:		
Hunnton	Poorly suited	Rooting depth.
Hunnton	Poorly suited	Rooting depth.
Fulstone	Poorly suited	Droughty, rooting depth.
1221:		
Hunnton	Poorly suited	Rooting depth, erodes easily.
Hunnton	Poorly suited	Rooting depth.
Fulstone	Poorly suited	Droughty, rooting depth.
1223:		
Hunnton	Poorly suited	Rooting depth.
Shabliss	Poorly suited	Too arid, droughty.
Puett	Poorly suited	Too arid, droughty.
1224:		
Hunnton	Poorly suited	Rooting depth, erodes easily.
Trunk	Poorly suited	Small stones, rooting depth.
Shabliss	Poorly suited	Too arid, droughty.
1226:		
Hunnton	Poorly suited	Rooting depth.
Wieland	Poorly suited	Rooting depth.
Clementine	Suited	Excess sodium.
1227:		
Hunnton	Poorly suited	Rooting depth.
Chiara	Poorly suited	Excess sodium.
Bilbo	Poorly suited	Rooting depth.
1228:		
Hunnton	Poorly suited	Rooting depth.
Hunnton	Poorly suited	Rooting depth.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1229:		
Hunnton	Poorly suited	Rooting depth.
Chiara	Poorly suited	Excess sodium.
Wieland	Poorly suited	Rooting depth.
1230:		
Fulstone	Poorly suited	Droughty, rooting depth.
Hunnton	Poorly suited	Rooting depth.
1231:		
Fulstone	Poorly suited	Droughty, small stones, rooting depth.
Fulstone	Poorly suited	Droughty, small stones, rooting depth.
Hunnton	Poorly suited	Rooting depth.
1232:		
Fulstone	Poorly suited	Droughty, rooting depth.
Fulstone	Poorly suited	Droughty, rooting depth.
Wieland	Poorly suited	Rooting depth.
1241:		
Enko	Poorly suited	Excess salt.
Shabliss	Poorly suited	Too arid, droughty.
Orovada	Suited	Too arid, excess salt.
1242:		
Enko	Poorly suited	Excess salt.
Enko	Poorly suited	Excess salt.
1260:		
Kleckner	Poorly suited	Rooting depth.
Upville	Suited	Too arid, droughty.
Fulstone	Poorly suited	Droughty, small stones, rooting depth.
1261:		
Kleckner	Poorly suited	Rooting depth.
Heechee	Suited	Droughty.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1290:		
Tweba	Suited	Too arid, excess salt, excess sodium.
1350:		
Shabliss	Poorly suited	Too arid, droughty.
Hunnton	Poorly suited	Rooting depth.
Bioya	Suited	Too arid.
1351:		
Shabliss	Poorly suited	Too arid, droughty.
Bartome	Poorly suited	Too arid, droughty.
1352:		
Shabliss	Poorly suited	Too arid, droughty.
Skull Creek	Suited	Too arid, excess salt.
Puett	Poorly suited	Too arid, droughty.
1360:		
Orovada	Suited	Too arid, excess salt, excess sodium.
1362:		
Orovada	Suited	Too arid, excess salt.
Clurde	Suited	Too arid.
Wieland	Poorly suited	Rooting depth.
1363:		
Orovada	Suited	Too arid, excess salt, excess sodium.
Tweba	Suited	Too arid, droughty, excess salt.
Weso	Poorly suited	Too arid, excess salt, excess sodium.
1530:		
Creemon	Poorly suited	Excess salt, excess sodium.
Placeritos	Poorly suited	Excess sodium.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1572:		
Weso	Poorly suited	Too arid, excess salt, excess sodium.
Orovada	Suited	Too arid, excess salt.
Shabliss	Poorly suited	Too arid, droughty.
1573:		
Weso	Poorly suited	Too arid, excess salt, excess sodium.
Orovada	Suited	Too arid, excess salt.
Tweba	Suited	Too arid, droughty, excess salt.
1617:		
Cleavage	Poorly suited	Droughty, small stones.
Hapgood	Poorly suited	Small stones.
Tweener	Poorly suited	Too arid, droughty, small stones.
1618:		
Cleavage	Poorly suited	Droughty, small stones.
Sumine	Poorly suited	Small stones.
Pequop	Well suited	
1619:		
Cleavage	Poorly suited	Droughty, small stones.
Tusk	Well suited	
Sumine	Poorly suited	Small stones.
1621:		
Cleavage	Poorly suited	Droughty, small stones.
Graley	Poorly suited	Droughty.
Cleavage	Poorly suited	Droughty, small stones.
1622:		
Cleavage	Poorly suited	Droughty, small stones.
Sumine	Poorly suited	Small stones.
Hapgood	Poorly suited	Small stones.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1623:		
Cleavage	Poorly suited	Droughty, small stones.
Hapgood	Poorly suited	Small stones.
Sumine	Poorly suited	Small stones.
1625:		
Cleavage	Poorly suited	Droughty, small stones.
Ninemile	Poorly suited	Rooting depth.
Sumine	Poorly suited	Small stones.
1626:		
Cleavage	Poorly suited	Droughty, small stones.
Carstump	Suited	Too arid.
Chen	Poorly suited	Droughty, small stones, rooting depth.
1628:		
Cleavage	Poorly suited	Droughty, small stones.
Chen	Poorly suited	Droughty, small stones, rooting depth.
Reluctan	Suited	Too arid, droughty.
1640:		
Tusk	Well suited	
Cleavage	Poorly suited	Droughty, small stones.
Hackwood	Well suited	
1650:		
Ninemile	Poorly suited	Rooting depth.
Tusk	Well suited	
Ninemile	Poorly suited	Rooting depth.
1651:		
Ninemile	Poorly suited	Rooting depth.
Reluctan	Suited	Too arid, droughty.
Ninemile	Poorly suited	Rooting depth.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1652:		
Ninemile	Poorly suited	Rooting depth, erodes easily.
Graley	Poorly suited	Droughty, small stones.
Ninemile	Poorly suited	Rooting depth.
1653:		
Ninemile	Poorly suited	Rooting depth.
Reluctan	Poorly suited	Small stones.
Graley	Poorly suited	Droughty, rooting depth.
1655:		
Ninemile	Poorly suited	Rooting depth.
Thwoop	Suited	Too arid, droughty.
Pequop	Well suited	
1656:		
Ninemile	Poorly suited	Rooting depth.
Pequop	Well suited	
Gumble	Poorly suited	Droughty, rooting depth.
1657:		
Ninemile	Poorly suited	Rooting depth.
Alyan	Poorly suited	Rooting depth.
1658:		
Ninemile	Poorly suited	Rooting depth.
Vanwyper	Poorly suited	Droughty, small stones.
Ninemile	Poorly suited	Rooting depth.
1659:		
Ninemile	Poorly suited	Rooting depth.
Carstump	Suited	Too arid.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1660:		
Susie Creek	Suited	Too arid.
Pie Creek	Poorly suited	Rooting depth.
Pattani	Suited	Too arid, too clayey.
1671:		
Linkup	Poorly suited	Droughty, rooting depth.
Carstump	Poorly suited	Small stones.
Linkup	Poorly suited	Droughty, rooting depth.
1672:		
Linkup	Poorly suited	Droughty, rooting depth.
Carstump	Suited	Too arid.
Linkup	Poorly suited	Droughty, rooting depth.
1673:		
Linkup	Poorly suited	Droughty, rooting depth.
Quarz	Poorly suited	Droughty, small stones, rooting depth.
Alyan	Poorly suited	Rooting depth.
1675:		
Linkup	Poorly suited	Droughty.
Snowmore	Suited	Too arid, droughty, excess sodium.
Ratsow	Poorly suited	Rooting depth.
1676:		
Linkup	Poorly suited	Droughty, rooting depth.
Quarz	Poorly suited	Droughty, small stones, rooting depth.
1680:		
Carstump	Poorly suited	Small stones.
Reluctan	Suited	Too arid, droughty.
Ninemile	Poorly suited	Rooting depth.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1685:		
Carstump	Poorly suited	Small stones.
Ninemile	Poorly suited	Rooting depth.
Graley	Poorly suited	Droughty, small stones.
1686:		
Carstump	Poorly suited	Erodes easily.
Reluctan	Suited	Too arid, droughty.
Ninemile	Poorly suited	Rooting depth.
1687:		
Carstump	Suited	Too arid, erodes easily.
Linkup	Poorly suited	Droughty, rooting depth.
Carstump	Suited	Too arid.
1691:		
Pequop	Suited	Erodes easily.
Rock Outcrop	Not rated	
Rubble Land	Poorly suited	Too arid, droughty, large stones.
1700:		
Cotant	Poorly suited	Rooting depth.
Quarz	Poorly suited	Droughty, small stones, rooting depth.
Ninemile	Poorly suited	Rooting depth.
1702:		
Cotant	Poorly suited	Rooting depth.
Mcivey	Well suited	
Blitzen	Poorly suited	Small stones.
1703:		
Cotant	Poorly suited	Rooting depth.
Lerrow	Suited	Too arid, droughty, large stones.
Bullump	Poorly suited	Small stones.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1711:		
Reluctan	Suited	Too arid, droughty, erodes easily.
Ninemile	Poorly suited	Rooting depth.
Cleavage	Poorly suited	Droughty, small stones.
1712:		
Reluctan	Poorly suited	Erodes easily.
Sumine	Poorly suited	Small stones.
Cleavage	Poorly suited	Droughty, small stones.
1713:		
Reluctan	Poorly suited	Erodes easily.
Erakatak	Poorly suited	Rooting depth.
Rugar	Well suited	
1720:		
Quarz	Poorly suited	Droughty, small stones, rooting depth.
Alyan	Poorly suited	Rooting depth.
Ninemile	Poorly suited	Rooting depth.
1725:		
Quarz	Poorly suited	Droughty, small stones.
Cleavage	Poorly suited	Droughty, small stones.
Loncan	Poorly suited	Droughty, small stones.
1726:		
Quarz	Poorly suited	Droughty, small stones, rooting depth.
Ninemile	Poorly suited	Rooting depth.
Pequop	Well suited	
1730:		
Graley	Poorly suited	Droughty, small stones.
Erakatak	Poorly suited	Small stones, rooting depth.
Chen	Poorly suited	Droughty, small stones, rooting depth.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1732:		
Graley	Poorly suited	Droughty, small stones.
Quarz	Poorly suited	Droughty, small stones, rooting depth.
Ninemile	Poorly suited	Rooting depth.
1733:		
Graley	Poorly suited	Droughty, small stones.
Loncan	Poorly suited	Droughty, small stones.
1740:		
Erakatak	Poorly suited	Small stones, rooting depth.
Cleavage	Poorly suited	Droughty, small stones.
Hackwood	Well suited	
1741:		
Erakatak	Poorly suited	Small stones.
Chen	Poorly suited	Droughty, small stones, rooting depth.
Tusk	Well suited	
1742:		
Erakatak	Poorly suited	Rooting depth.
Rugar	Well suited	
Tusel	Poorly suited	Small stones.
1744:		
Erakatak	Poorly suited	Small stones.
Graley	Poorly suited	Droughty, small stones.
Tusel	Poorly suited	Small stones.
1746:		
Booford	Poorly suited	Erodes easily.
Cotant	Poorly suited	Rooting depth.
Blitzen	Suited	Too arid, droughty.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1800:		
Bregar	Poorly suited	Droughty, small stones, depth to rock.
Bregar	Poorly suited	Droughty, small stones, depth to rock.
Carstump	Poorly suited	Large stones.
1802:		
Bregar	Poorly suited	Too arid, droughty, small stones.
Ninemile	Poorly suited	Rooting depth.
Pequop	Well suited	
1803:		
Bregar	Poorly suited	Too arid, droughty, small stones.
Sumine	Poorly suited	Small stones.
Rock Outcrop	Not rated	
1805:		
Bregar	Poorly suited	Droughty, small stones, depth to rock.
Deseed	Poorly suited	Rooting depth.
Linkup	Poorly suited	Droughty, rooting depth.
1810:		
Shively	Poorly suited	Erodes easily.
Ninemile	Poorly suited	Rooting depth.
Hackwood	Well suited	
1830:		
Vanwyper	Suited	Too arid, droughty, erodes easily.
Alyan	Poorly suited	Rooting depth.
Vanwyper	Suited	Too arid, droughty.
1831:		
Vanwyper	Suited	Too arid, droughty.
Trunk	Poorly suited	Rooting depth.
Vanwyper	Suited	Too arid, droughty.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1832:		
Vanwyper	Poorly suited	Droughty, small stones.
Trunk	Suited	Too arid, droughty, excess sodium.
Trunk	Suited	Too arid, droughty, excess sodium.
1833:		
Vanwyper	Poorly suited	Droughty, small stones.
Rock Outcrop	Not rated	
Trunk	Poorly suited	Rooting depth.
1852:		
Gumble	Poorly suited	Rooting depth.
Tuffo	Poorly suited	Droughty, depth to rock.
Hunnton	Poorly suited	Rooting depth.
1853:		
Gumble	Poorly suited	Droughty, rooting depth.
Tuffo	Poorly suited	Droughty, depth to rock.
Rock Outcrop	Not rated	
1854:		
Gumble	Poorly suited	Droughty, rooting depth.
Chen	Poorly suited	Droughty, small stones, rooting depth.
1855:		
Gumble	Poorly suited	Droughty, rooting depth.
Puett Variant	Poorly suited	Droughty.
Xeric Torriorth	Poorly suited	Too arid, droughty, depth to rock.
1870:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Graley	Poorly suited	Droughty, small stones.
Quarz	Poorly suited	Droughty, small stones, rooting depth.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1871:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Cotant	Poorly suited	Rooting depth.
Graley	Poorly suited	Droughty, small stones.
1872:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Sumine	Poorly suited	Small stones.
Tusel	Poorly suited	Small stones.
1874:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Quarz	Poorly suited	Droughty.
Arcia	Well suited	
1875:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Bregar	Poorly suited	Droughty, small stones, depth to rock.
Ramires	Suited	Too arid.
1876:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Chen	Poorly suited	Droughty, small stones, rooting depth.
Arcia	Well suited	
1877:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Bregar	Poorly suited	Too arid, droughty, small stones.
Loncan	Poorly suited	Droughty, small stones.
1880:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Blitzen	Poorly suited	Small stones, rooting depth.
Pequop	Well suited	

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1881:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Blitzen	Suited	Too arid, droughty.
Loncan	Poorly suited	Droughty, small stones.
1888:		
Chen	Poorly suited	Droughty, rooting depth.
Pie Creek	Poorly suited	Rooting depth.
Alyan	Poorly suited	Rooting depth.
1889:		
Chen	Poorly suited	Droughty, small stones, rooting depth.
Sumine	Poorly suited	Small stones.
1910:		
Mahala	Poorly suited	Rooting depth.
Ramires	Suited	Too arid.
1920:		
Lerrow	Suited	Too arid, droughty, large stones.
Chen	Poorly suited	Droughty, small stones, rooting depth.
Cotant	Poorly suited	Rooting depth.
1921:		
Lerrow	Suited	Too arid, droughty, erodes easily.
Quarz	Poorly suited	Droughty, small stones, rooting depth.
Rugar	Well suited	
1931:		
Tweener	Poorly suited	Too arid, droughty, small stones.
Cleavage	Poorly suited	Droughty, small stones.
Reluctan	Suited	Too arid, droughty.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1932:		
Tweener	Poorly suited	Too arid, droughty, small stones.
Sumine	Poorly suited	Small stones.
Cleavage	Poorly suited	Droughty, small stones.
1933:		
Tweener	Poorly suited	Too arid, droughty, small stones.
Pequop	Well suited	
Cleavage	Poorly suited	Droughty, small stones.
1950:		
Mcivey	Well suited	
Mcivey	Poorly suited	Small stones.
Tusel	Poorly suited	Small stones.
1980:		
Thwoop	Suited	Too arid, droughty.
Trunk	Poorly suited	Rooting depth.
Pequop	Well suited	
2000:		
Alyan	Poorly suited	Rooting depth.
Cotant	Poorly suited	Rooting depth.
Akler	Poorly suited	Too arid, droughty, rooting depth.
2001:		
Alyan	Poorly suited	Rooting depth, erodes easily.
Bregar	Poorly suited	Droughty, small stones, depth to rock.
Alyan	Poorly suited	Rooting depth.
2002:		
Alyan	Poorly suited	Rooting depth.
Alyan	Poorly suited	Rooting depth.
Quarz	Poorly suited	Droughty, small stones, rooting depth.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
2003:		
Alyan	Poorly suited	Small stones, rooting depth.
Deepeek	Poorly suited	Droughty, small stones.
Susie Creek	Suited	Too arid.
2004:		
Alyan	Poorly suited	Rooting depth.
Ninemile	Poorly suited	Rooting depth.
Alyan	Poorly suited	Rooting depth.
2005:		
Alyan	Poorly suited	Rooting depth.
Graley	Poorly suited	Droughty, small stones.
Rock Outcrop	Not rated	
2171:		
Deseed	Poorly suited	Rooting depth.
Reluctan	Suited	Too arid, droughty.
Cleavage	Poorly suited	Droughty, small stones.
2173:		
Deseed	Poorly suited	Rooting depth.
Quarz	Poorly suited	Droughty, small stones.
2205:		
Coltroop	Suited	Too arid, droughty, cemented pan.
Snowmore	Suited	Too arid, droughty, excess sodium.
2206:		
Coltroop	Suited	Too arid, droughty, cemented pan.
Vanwyper	Poorly suited	Droughty.
2310:		
Bulake	Poorly suited	Droughty, rooting depth.
Deunah	Poorly suited	Rooting depth.
Bulake	Poorly suited	Droughty, small stones, rooting depth.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
2311:		
Bulake	Poorly suited	Droughty, small stones, rooting depth.
Hatpeak	Well suited	
Petan	Poorly suited	Droughty, rooting depth.
2505:		
Buffaran	Poorly suited	Rooting depth.
Zevadez	Suited	Too arid.
2511:		
Bilbo	Poorly suited	Droughty, small stones, rooting depth.
Alley	Suited	Too arid, large stones, excess salt.
Deepeek	Poorly suited	Droughty, small stones.
2514:		
Bilbo	Poorly suited	Small stones, rooting depth.
Susie Creek	Suited	Too arid.
Buffaran	Poorly suited	Rooting depth.
2521:		
Dewar	Suited	Too arid, droughty, large stones.
Chiara	Poorly suited	Excess sodium.
Chiara	Poorly suited	Excess sodium.
2522:		
Dewar	Suited	Too arid, droughty, large stones.
Sodhouse	Poorly suited	Too arid, excess sodium.
2531:		
Clurde Variant	Suited	Too arid.
Clurde	Suited	Too arid.
Rock Outcrop	Not rated	
2541:		
Kelk	Suited	Too arid, excess salt.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
2545:		
Kelk	Suited	Too arid, excess salt.
Clurde	Suited	Too arid.
2555:		
Piline	Suited	Too arid, too clayey.
2560:		
Mccleary	Poorly suited	Rooting depth.
2561:		
Mccleary	Poorly suited	Rooting depth.
2571:		
Chiara	Poorly suited	Excess sodium.
Chiara	Poorly suited	Excess sodium.
Chiara	Poorly suited	Excess sodium.
2572:		
Chiara	Poorly suited	Excess sodium.
Chiara	Poorly suited	Excess sodium.
2573:		
Chiara	Poorly suited	Excess sodium.
Chiara	Poorly suited	Excess sodium.
2575:		
Chiara	Poorly suited	Excess sodium.
Dacker	Poorly suited	Rooting depth.
Shalake	Suited	Too arid, droughty, excess salt.
2577:		
Chiara	Poorly suited	Excess sodium.
Orovada	Suited	Too arid, excess salt.
2600:		
Shalake	Suited	Too arid, droughty, excess salt.
Chiara	Poorly suited	Excess sodium.
Shalake	Suited	Too arid, droughty, excess salt.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
2611:		
Dacker	Suited	Too arid, excess salt.
Hunnton	Poorly suited	Rooting depth.
2612:		
Dacker	Poorly suited	Rooting depth.
Zevadez	Suited	Too arid.
2615:		
Dacker	Poorly suited	Rooting depth.
Chiara	Poorly suited	Excess sodium.
2621:		
Gochea	Suited	Too arid, droughty.
Susie Creek	Suited	Too arid.
Carstump	Poorly suited	Large stones.
2641:		
Olac	Poorly suited	Too arid, droughty, small stones.
Snowmore	Suited	Too arid, droughty, excess sodium.
2650:		
Wieland	Poorly suited	Rooting depth.
Bartome	Poorly suited	Too arid, droughty.
Zevadez	Suited	Too arid.
2651:		
Wieland	Poorly suited	Rooting depth.
Buffaran	Poorly suited	Rooting depth.
2652:		
Wieland	Poorly suited	Rooting depth.
Dacker	Suited	Too arid, excess salt.
Zevadez	Suited	Too arid.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
2655:		
Wieland	Poorly suited	Rooting depth.
Gumble	Poorly suited	Droughty, rooting depth.
Bilbo	Poorly suited	Rooting depth.
2656:		
Wieland	Poorly suited	Rooting depth.
Hunnton	Poorly suited	Rooting depth.
Thwoop	Suited	Too arid, droughty.
2658:		
Wieland	Poorly suited	Small stones, rooting depth.
2666:		
Puett	Poorly suited	Too arid, droughty.
Orovada	Suited	Too arid, excess salt.
2667:		
Puett	Poorly suited	Too arid, droughty, erodes easily.
Rock Outcrop	Not rated	
Clurde	Suited	Too arid.
2668:		
Puett	Poorly suited	Too arid, droughty, erodes easily.
Yuko	Poorly suited	Droughty, rooting depth.
Zevadez	Suited	Too arid.
2710:		
Ramires	Poorly suited	Rooting depth.
Bartome	Poorly suited	Too arid, droughty.
Bilbo	Poorly suited	Small stones, rooting depth.
2711:		
Ramires	Poorly suited	Rooting depth.
Bilbo	Poorly suited	Small stones, rooting depth.
Buffaran	Poorly suited	Rooting depth.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
2741:		
Wilsor	Poorly suited	Excess sodium.
Wilsor	Poorly suited	Excess sodium.
2751:		
Yuko	Poorly suited	Droughty, rooting depth.
Chime	Suited	Too arid, droughty.
Clurde	Suited	Too arid.
2775:		
Zevadez	Suited	Too arid.
Bartome	Poorly suited	Too arid, droughty.
Wieland	Poorly suited	Rooting depth.
2776:		
Zevadez	Suited	Too arid.
Chiara	Poorly suited	Excess sodium.
2777:		
Zevadez	Suited	Too arid.
Wieland	Poorly suited	Rooting depth.
Clurde	Suited	Too arid.
2778:		
Zevadez	Suited	Too arid.
Yuko	Poorly suited	Droughty, rooting depth.
Kelk	Suited	Too arid, excess salt.
2780:		
Snowmore	Suited	Too arid, droughty, excess sodium.
Snowmore	Suited	Too arid, droughty, excess sodium.
2781:		
Snowmore	Suited	Too arid, droughty, excess sodium.
Snowmore	Suited	Too arid, droughty, large stones.
Snowmore	Suited	Too arid, droughty, excess sodium.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
2782:		
Snowmore	Suited	Too arid, droughty, excess sodium.
Zevadez	Suited	Too arid.
Snowmore	Suited	Too arid, droughty, excess sodium.
2783:		
Snowmore	Suited	Too arid, droughty, excess sodium.
Willhill	Poorly suited	Droughty.
2790:		
Old Camp	Poorly suited	Too arid, droughty, large stones.
Troughs	Poorly suited	Droughty, small stones.
Olac	Poorly suited	Too arid, droughty, small stones.
2801:		
Bartome	Poorly suited	Too arid, droughty.
Alley	Suited	Too arid.
Clurde	Suited	Too arid.
2802:		
Bartome	Poorly suited	Too arid, droughty.
Buffaran	Poorly suited	Rooting depth.
2803:		
Bartome	Poorly suited	Too arid, droughty.
Buffaran	Poorly suited	Rooting depth.
Ramires	Poorly suited	Rooting depth.
2804:		
Bartome	Poorly suited	Too arid, droughty.
Chiara	Poorly suited	Excess sodium.
2805:		
Bartome	Poorly suited	Too arid, droughty.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
2807:		
Bartome	Poorly suited	Too arid, droughty.
Coltroop	Suited	Too arid, droughty, cemented pan.
Zevadez	Suited	Too arid.
2808:		
Bartome	Poorly suited	Too arid, droughty.
Susie Creek	Suited	Too arid.
Wieland	Poorly suited	Rooting depth.
2809:		
Bartome	Poorly suited	Too arid.
Dacker	Suited	Too arid, excess salt.
2820:		
Alley	Suited	Too arid, large stones, excess salt.
Vanwyper	Poorly suited	Droughty.
Rock Outcrop	Not rated	
2822:		
Alley	Poorly suited	Erodes easily.
Rock Outcrop	Not rated	
Rubble Land	Not rated	
3000:		
Handy	Suited	Too arid, erodes easily.
Wilsor	Poorly suited	Excess sodium.
Deseed	Poorly suited	Rooting depth.
3010:		
Relley	Poorly suited	Too arid.
Kelk	Suited	Too arid, excess salt.
3020:		
Sodhouse	Poorly suited	Too arid, excess sodium.
Chiara	Poorly suited	Excess sodium.

TABLE 7.--RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
3030:		
Deepeek	Poorly suited	Droughty, small stones.
Alley	Poorly suited	Small stones.
3100:		
Ratsow	Poorly suited	Rooting depth.
Quarz	Poorly suited	Droughty, small stones.
Susie Creek	Suited	Too arid.
3510:		
Midraw	Poorly suited	Rooting depth.
Troughs	Poorly suited	Droughty, small stones.
Midraw	Poorly suited	Rooting depth.
3710:		
Petan	Poorly suited	Droughty, large stones, rooting depth.
Bulake	Poorly suited	Droughty, rooting depth.
Rock Outcrop	Not rated	
3715:		
Petan	Poorly suited	Droughty, small stones, rooting depth.
Deunah	Poorly suited	Rooting depth.
Hatpeak	Well suited	
3721:		
Hatpeak	Well suited	
Deunah	Poorly suited	Rooting depth.
3722:		
Hatpeak	Well suited	
Hatpeak	Well suited	
W:		
Water	Not rated	

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY

(Only the soils suitable for production of commercial trees are listed)

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity		
		Erosion hazard	Equipment Limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber
									m3/ha
602:									
Hapgood.									
Hackwood--------	1R	Severe	Severe	Slight	Moderate	Slight	Quaking aspen-------	44	1
Tusel.									
921:									
Bullump.									
Hackwood--------	1R	Severe	Severe	Slight	Moderate	Slight	Quaking aspen-------	44	1
Cleavage.									
1640:									
Tusk.									
Cleavage.									
Hackwood--------	1A	Slight	Slight	Slight	Moderate	Slight	Quaking aspen-------	44	1
1740:									
Erakatak.									
Cleavage.									
Hackwood--------	1R	Severe	Severe	Slight	Moderate	Slight	Quaking aspen-------	44	1
1810:									
Shively.									
Ninemile.									
Hackwood--------	1A	Moderate	Moderate	Slight	Moderate	Slight	Quaking aspen-------	44	1

TABLE 9.--WILDLIFE HABITAT

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
1:												
Rubble Land-----	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
120:												
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Lerrow----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
126:												
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Lerrow----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Akler-----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
127:												
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Lerrow----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
128:												
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Graley----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
129:												
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chen------------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Crooked Creek---	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
130:												
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Booford---	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
140:												
Upville---	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Upville---	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
141:												
Upville---	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Kleckner---	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
150:												
Gochea---	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
161:												
Sonoma---	Good	Good	Good	---	---	Good	Good	Good	Good	---	Good	---
162:												
Sonoma---	Fair	Fair	Fair	---	---	Poor	Fair	Fair	Fair	---	Fair	---
184:												
Crooked Creek---	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
185:												
Crooked Creek---	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
Crooked Creek---	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
186:												
Crooked Creek---	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
Crooked Creek---	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
Crooked Creek---	---	---	Fair	---	---	Fair	Poor	Poor	Fair	---	Poor	Fair
188:												
Crooked Creek---	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Welch	Fair	Fair	Good	---	---	Good	Poor	Very poor	Fair	---	Very poor	---
Crooked Creek	Fair	Fair	Fair	---	---	Fair	Poor	Poor	Fair	---	Poor	---
190:												
Heechee	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Heechee	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
200:												
Lynnbow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rugar	---	---	Good	---	---	Good	---	---	---	---	---	Good
201:												
Lynnbow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Lerrow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Crooked Creek	Poor	Fair	Fair	---	---	Fair	Good	Good	Fair	---	Good	Fair
210:												
Soonaker	---	---	Good	---	---	Good	---	---	---	---	---	Good
Bulake	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
220:												
Cavanaugh	---	---	Good	---	---	Good	---	---	---	---	---	Good
Rugar	---	---	Good	---	---	Good	---	---	---	---	---	Good
McIvey	---	---	Good	---	---	Good	---	---	---	---	---	Good
221:												
Cavanaugh	---	---	Good	---	---	Good	---	---	---	---	---	Good
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
233:												
Bioya	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bilbo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
234:												
Bioya	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shabliss	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Puett	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
235:												
Bioya	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Trunk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
236:												
Bioya	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Kleckner	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
241:												
Wickahoney	Very poor	Very poor	Fair	---	---	Poor	Very poor	Very poor	Poor	---	Very poor	Poor
Deunah	Poor	Poor	Good	---	---	Good	Poor	Very poor	Fair	---	Very poor	Good
Petan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
270:												
Pernty	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Loncan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pernty	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
280:												
Humboldt	Very poor	Very poor	Very poor	---	---	Very poor	Good	Good	Very poor	---	Good	---
308:												
Akler	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pattani	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cotant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
309:												
Akler	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Susie Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
457:												
Donna	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Stampede	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Short Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
458:												
Donna	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Stampede	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
464:												
Stampede	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
570:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
571:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
Gando	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
572:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
576:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
577:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
578:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
579:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Pernty	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
580:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pie Creek	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
581:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
582:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
583:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pernty	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
584:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
585:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
Rubble Land	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
586:												
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Loncan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
600:												
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bullump	---	---	Good	---	---	Good	---	---	---	---	---	Good
Gando	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
601:												
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Blitzen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
602:												
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
623:												
Soughe	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
624:												
Soughe	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Soughe	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
625:												
Soughe	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shalper	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
626:												
Soughe	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Soughe	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
690:												
Welch	Fair	Fair	Good	---	---	Good	Poor	Very poor	Fair	---	Very poor	---
Welch	Poor	Poor	Good	---	---	Fair	Poor	Very poor	Poor	---	Very poor	---
920:												
Bullump	---	---	Good	---	---	Good	---	---	---	---	---	Good
Gando	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
921:												
Bullump	---	---	Good	---	---	Good	---	---	---	---	---	Good
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
922:												
Bullump	---	---	Good	---	---	Good	---	---	---	---	---	Good
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1130:												
Clementine	---	---	Fair	---	---	Fair	Poor	Very poor	---	---	Very poor	Fair
1131:												
Clementine	Good	Good	Fair	---	---	Fair	Poor	Very poor	Good	---	Very poor	---
Clementine	Good	Good	Fair	---	---	Fair	Poor	Very poor	Good	---	Very poor	---
Clementine	Fair	Fair	Fair	---	---	Fair	Good	Good	---	---	---	---
1135:												
Clementine	---	---	Fair	---	---	Fair	Poor	Very poor	---	---	Very poor	Fair
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1150:												
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1155:												
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1156:												
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Kortty	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
1157:												
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Zevadez	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1190:												
Cherry Spring	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Enko	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1191:												
Cherry Spring	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1193:												
Cherry Spring	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1210:												
Skull Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shabliss	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Puett	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1220:												
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Fulstone	---	---	Fair	---	---	Fair	---	---	---	---	---	---
1221:												
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Fulstone	---	---	Fair	---	---	Fair	---	---	---	---	---	---
1223:												
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shabliss	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Puett	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1224:												
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Trunk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shabliss	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1226:												
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Clementine	---	---	Fair	---	---	Fair	Poor	Very poor	---	---	Very poor	Fair
1227:												
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bilbo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1228:												
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1229:												
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Chiara----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1230:												
Fulstone--------	---	---	Fair	---	---	Fair	---	---	---	---	---	---
Hunnton---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1231:												
Fulstone--------	---	---	Fair	---	---	Fair	---	---	---	---	---	---
Fulstone--------	---	---	Fair	---	---	Fair	---	---	---	---	---	---
Hunnton---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1232:												
Fulstone--------	---	---	Fair	---	---	Fair	---	---	---	---	---	---
Fulstone--------	---	---	Fair	---	---	Fair	---	---	---	---	---	---
Wieland---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1241:												
Enko------------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shabliss--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Orovada---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1242:												
Enko------------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Enko------------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1260:												
Kleckner--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Upville---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Fulstone	---	---	Fair	---	---	Fair	---	---	---	---	---	---
1261:												
Kleckner	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Heechee	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1290:												
Tweba	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1350:												
Shabliss	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bioya	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1351:												
Shabliss	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1352:												
Shabliss	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Skull Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Puett	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1360:												
Orovada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1362:												
Orovada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
1363:												
Orovada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tweba	---	---	Fair	---	---	Fair	Good	Good	---	---	Good	Fair
Weso	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1530:												
Creemon	---	---	Very poor	---	---	Very poor	---	---	---	---	---	Very poor
Placeritos	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1572:												
Weso	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Orovada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shabliss	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1573:												
Weso	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Orovada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tweba	---	---	Fair	---	---	Fair	Good	Good	---	---	Good	Fair
1617:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tweener	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1618:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pequop	---	---	Good	---	---	Good	---	---	---	---	---	Good

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
1619:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1621:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Graley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1622:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1623:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1625:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1626:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1628:												
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1640:												
Tusk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good
1650:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1651:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1652:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Graley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1653:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Graley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1655:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Thwoop	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pequop	---	---	Good	---	---	Good	---	---	---	---	---	Good
1656:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pequop	---	---	Good	---	---	Good	---	---	---	---	---	Good
Gumble	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1657:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1658:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1659:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1660:												
Susie Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pie Creek	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Pattani	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1671:												
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1672:												
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1673:												
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1675:												
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Snowmore	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ratsow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1676:												
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1680:												
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1685:												
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Graley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1686:												
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1687:												
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1691:												
Pequop	---	---	Good	---	---	Good	---	---	---	---	---	Good
Rock Outcrop.												
Rubble Land	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
1700:												
Cotant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1702:												
Cotant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
McIvey	---	---	Good	---	---	Good	---	---	---	---	---	Good
Blitzen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1703:												
Cotant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Lerrow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bullump	---	---	Good	---	---	Good	---	---	---	---	---	Good
1711:												
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1712:												
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1713:												
Reluctan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Erakatak	---	---	Good	---	---	Good	---	---	---	---	---	Good
Rugar	---	---	Good	---	---	Good	---	---	---	---	---	Good
1720:												
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
1725:												
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Loncan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1726:												
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pequop	---	---	Good	---	---	Good	---	---	---	---	---	Good
1730:												
Graley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Erakatak	---	---	Good	---	---	Good	---	---	---	---	---	Good
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1732:												
Graley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1733:												
Graley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Loncan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1740:												
Erakatak	---	---	Good	---	---	Good	---	---	---	---	---	Good
Cleavage	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
1741:												
Erakatak	---	---	Good	---	---	Good	---	---	---	---	---	Good
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1742:												
Erakatak	---	---	Good	---	---	Good	---	---	---	---	---	Good
Rugar	---	---	Good	---	---	Good	---	---	---	---	---	Good
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
1744:												
Erakatak	---	---	Good	---	---	Good	---	---	---	---	---	Good
Graley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel	---	---	Good	---	---	Good	---	---	---	---	---	Good
1746:												
Booford	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cotant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Blitzen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1800:												
Bregar	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bregar	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1802:												
Bregar	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Pequop	---	---	Good	---	---	Good	---	---	---	---	---	Good
1803:												
Bregar	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
1805:												
Bregar	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Deseed	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Linkup	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1810:												
Shively	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good
1830:												
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1831:												
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Trunk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1832:												
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Trunk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Trunk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1833:												
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
Trunk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1852:												
Gumble	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Tuffo	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1853:												
Gumble	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Tuffo	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Rock Outcrop.												
1854:												
Gumble	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1855:												
Gumble	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Puett Variant	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Xeric Torriorthents	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1870:												
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Graley----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1871:												
Chen----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Graley----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1872:												
Chen----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusel----------	---	---	Good	---	---	Good	---	---	---	---	---	Good
1874:												
Chen----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Arcia----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1875:												
Chen----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bregar----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ramires---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1876:												
Chen----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chen----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Arcia----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
1877:												
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bregar	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Loncan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1880:												
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Blitzen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pequop	---	---	Good	---	---	Good	---	---	---	---	---	Good
1881:												
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Blitzen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Loncan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1888:												
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pie Creek	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1889:												
Chen	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1910:												
Mahala	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ramires	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1920:												
Lerrow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Chen----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cotant----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1921:												
Lerrow----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rugar----------	---	---	Good	---	---	Good	---	---	---	---	---	Good
1931:												
Tweener---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reluctan--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1932:												
Tweener---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sumine----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1933:												
Tweener---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pequop----------	---	---	Good	---	---	Good	---	---	---	---	---	Good
Cleavage--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1950:												
McIvey----------	---	---	Good	---	---	Good	---	---	---	---	---	Good
McIvey----------	---	---	Good	---	---	Good	---	---	---	---	---	Good
Tusel-----------	---	---	Good	---	---	Good	---	---	---	---	---	Good

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
1980:												
Thwoop	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Trunk	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Pequop	---	---	Good	---	---	Good	---	---	---	---	---	Good
2000:												
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cotant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Akler	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2001:												
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bregar	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2002:												
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2003:												
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Deepeek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Susie Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2004:												
Alyan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Alyan----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2005:												
Alyan----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Graley----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
2171:												
Deseed----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reluctan--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cleavage--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2173:												
Deseed----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2205:												
Coltroop--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Snowmore--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2206:												
Coltroop--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Vanwyper--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2310:												
Bulake----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Deunah----------	Poor	Poor	Good	---	---	Good	Poor	Very poor	Fair	---	Very poor	Good
Bulake----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
2311:												
Bulake	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hatpeak	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Petan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2505:												
Buffaran	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Zevadez	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2511:												
Bilbo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Deepeek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2514:												
Bilbo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Susie Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Buffaran	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2521:												
Dewar	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2522:												
Dewar	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Sodhouse	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
2531:												
Clurde Variant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
2541:												
Kelk	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
2545:												
Kelk	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2555:												
Piline	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2560:												
McCleary	---	---	Poor	---	---	Poor	Good	Fair	---	---	Fair	Poor
2561:												
McCleary	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2571:												
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2572:												
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2573:												
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2575:												
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Dacker	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shalake	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2577:												
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Orovada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2600:												
Shalake	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Shalake	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2611:												
Dacker	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2612:												
Dacker	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Zevadez	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2615:												
Dacker	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2621:												
Gochea	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Susie Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Carstump	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2641:												
Olac	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Snowmore	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2650:												
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Zevadez	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2651:												
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Buffaran	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2652:												
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Dacker	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Zevadez	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2655:												
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Gumble	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Bilbo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2656:												
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hunnton	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Thwoop	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2658:												
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2666:												
Puett	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Orovada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2667:												
Puett	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Rock Outcrop.												
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2668:												
Puett	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Yuko	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Zevadez	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2710:												
Ramires	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bilbo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2711:												
Ramires	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bilbo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Buffaran	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2741:												
Wilsor	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wilsor	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2751:												
Yuko	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Chime	---	---	Fair	---	---	Poor	---	---	---	---	---	Poor

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Clurde----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2775:												
Zevadez---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bartome---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2776:												
Zevadez---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2777:												
Zevadez---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Clurde----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2778:												
Zevadez---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Yuko------------	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Kelk------------	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
2780:												
Snowmore--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Snowmore--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2781:												
Snowmore--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Snowmore--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Snowmore--------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
2782:												
Snowmore	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Zevadez	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Snowmore	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2783:												
Snowmore	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Willhill	Poor	Poor	Fair	---	---	Fair	Very poor	Very poor	Poor	---	Very poor	Fair
2790:												
Old Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Troughs	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Olac	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
2801:												
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Clurde	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2802:												
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Buffaran	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2803:												
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Buffaran	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ramires	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
2804:												
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2805:												
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2807:												
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Coltroop	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Zevadez	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2808:												
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Susie Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Wieland	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2809:												
Bartome	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Dacker	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
2820:												
Alley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Vanwyper	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
2822:												
Alley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
Rubble Land.												

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
3000:												
Handy	---	---	Fair	---	---	Fair	---	---	---	---	---	---
Wilsor	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Deseed	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
3010:												
Relley	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Kelk	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
3020:												
Sodhouse	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Chiara	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
3030:												
Deepeek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Alley	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
3100:												
Ratsow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Quarz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Susie Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
3510:												
Midraw	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Troughs	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Midraw	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
3710:												
Petan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bulake	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 9.--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	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Rock Outcrop.												
3715:												
Petan----------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Deunah----------	Poor	Poor	Good	---	---	Good	Poor	Very poor	Fair	---	Very poor	Good
Hatpeak---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
3721:												
Hatpeak---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Deunah----------	Poor	Poor	Good	---	---	Good	Poor	Very poor	Fair	---	Very poor	Good
3722:												
Hatpeak---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hatpeak---------	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair

TABLE 10.--RECREATIONAL DEVELOPMENT

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1:					
Rubble Land	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: large stones, slope, small stones	Severe: small stones, large stones, droughty
120:					
Cotant	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope	Severe: slope, depth to rock
Lerrow	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope
Cotant	Severe: depth to rock	Severe: depth to rock	Severe: small stones, depth to rock	Slight	Severe: depth to rock
126:					
Cotant	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope, dusty	Severe: small stones, slope, depth to rock
Lerrow	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: slope	Severe: large stones, slope
Akler	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: erodes easily	Severe: depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
127:					
Cotant	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
Ninemile	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope, depth to rock
Lerrow	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
128:					
Cotant	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
Graley	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
129:					
Cotant	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
Chen	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Crooked Creek---	Severe: flooding, wetness	Moderate: wetness, percs slowly	Severe: wetness	Moderate: wetness	Moderate: wetness, flooding
130:					
Cotant----------	Severe: depth to rock	Severe: depth to rock	Severe: small stones, depth to rock	Slight	Severe: depth to rock
Booford---------	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, depth to rock	Moderate: dusty	Moderate: depth to rock
140:					
Upville---------	Severe: flooding	Moderate: flooding, small stones, dusty	Severe: small stones, flooding	Moderate: flooding, dusty	Severe: flooding
Upville---------	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
141:					
Upville---------	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
Kleckner---------	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, large stones, droughty

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
150:					
Gochea	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, droughty
161:					
Sonoma	Moderate: percs slowly	Moderate: percs slowly	Moderate: percs slowly	Slight	Slight
162:					
Sonoma	Severe: flooding	Moderate: excess salt, percs slowly	Moderate: flooding, percs slowly, excess salt	Slight	Moderate: excess salt, flooding
184:					
Crooked Creek	Severe: flooding, wetness	Moderate: flooding, wetness, percs slowly	Severe: wetness, flooding	Moderate: wetness, flooding	Severe: flooding
185:					
Crooked Creek	Severe: flooding, wetness	Moderate: flooding, wetness, percs slowly	Severe: wetness, flooding	Moderate: wetness, flooding	Severe: flooding
Crooked Creek	Severe: flooding, wetness	Moderate: flooding, wetness, percs slowly	Severe: wetness, flooding	Moderate: wetness, flooding	Severe: flooding
186:					
Crooked Creek	Severe: flooding, wetness	Moderate: flooding, wetness, percs slowly	Severe: wetness, flooding	Moderate: wetness, flooding	Severe: flooding

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Crooked Creek---	Severe: flooding, wetness	Moderate: wetness, percs slowly	Severe: wetness	Moderate: wetness	Moderate: wetness, flooding
Crooked Creek---	Severe: flooding	Moderate: percs slowly	Moderate: percs slowly	Slight	Slight
188:					
Crooked Creek---	Severe: flooding, wetness	Moderate: flooding, wetness, percs slowly	Severe: wetness, flooding	Moderate: wetness, flooding	Severe: flooding
Welch----------	Severe: flooding	Moderate: percs slowly	Moderate: slope, percs slowly	Slight	Slight
Crooked Creek---	Severe: flooding	Moderate: percs slowly	Moderate: percs slowly	Slight	Slight
190:					
Heechee---------	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, droughty, slope
Heechee---------	Moderate: slope, large stones, small stones	Moderate: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
200:					
Lynnbow---------	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: slope, percs slowly, dusty	Moderate: dusty	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Rugar	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
201:					
Lynnbow	Moderate: slope, percs slowly, dusty	Moderate: slope, percs slowly, dusty	Severe: slope	Severe: erodes easily	Moderate: slope
Lerrow	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope
Crooked Creek	Severe: flooding, wetness	Moderate: wetness, percs slowly	Severe: wetness	Moderate: wetness	Moderate: wetness, flooding
210:					
Soonaker	Slight	Slight	Moderate: slope, small stones, depth to rock	Slight	Moderate: depth to rock
Bulake	Severe: depth to rock	Severe: depth to rock	Severe: small stones, depth to rock	Moderate: dusty	Severe: depth to rock
220:					
Cavanaugh	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: slope	Severe: slope
Rugar	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
McIvey	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
221:					
Cavanaugh	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: slope	Severe: slope
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Alyan	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
233:					
Bioya	Moderate: dusty	Moderate: dusty	Moderate: slope, cemented pan, dusty	Moderate: dusty	Moderate: cemented pan
Bilbo	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
234:					
Bioya	Moderate: dusty	Moderate: dusty	Moderate: slope, cemented pan, dusty	Moderate: dusty	Moderate: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Shabliss	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Puett	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, depth to rock	Moderate: slope	Severe: slope, depth to rock
235:					
Bioya	Moderate: dusty	Moderate: dusty	Moderate: slope, cemented pan, dusty	Moderate: dusty	Moderate: cemented pan
Trunk	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Alley	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope
236:					
Bioya	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: cemented pan
Wieland	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Moderate: droughty
Kleckner	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, large stones, droughty

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
241:					
Wickahoney	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Moderate: large stones, dusty	Severe: depth to rock
Deunah	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: slope, depth to rock, cemented pan	Moderate: dusty	Moderate: large stones, depth to rock
Petan	Severe: large stones, depth to rock, cemented pan	Severe: large stones, depth to rock, cemented pan	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, depth to rock
270:					
Pernty	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
Loncan	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Pernty	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope, dusty	Severe: small stones, slope, depth to rock
280:					
Humboldt	Severe: flooding, wetness, excess salt	Severe: wetness, excess salt	Severe: wetness, excess salt	Severe: wetness	Severe: excess salt, wetness

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
308:					
Akler	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: erodes easily	Severe: depth to rock
Pattani	Moderate: slope, percs slowly, too clayey	Moderate: slope, too clayey, percs slowly	Severe: slope	Moderate: too clayey	Severe: too clayey
Cotant	Severe: depth to rock	Severe: depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: depth to rock
309:					
Akler	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: erodes easily	Severe: depth to rock
Susie Creek	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Moderate: dusty	Moderate: slope
457:					
Donna	Moderate: small stones, percs slowly, dusty	Moderate: small stones, percs slowly, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, cemented pan
Stampede	Moderate: slope, small stones, percs slowly	Moderate: slope, small stones, percs slowly	Severe: slope, small stones	Severe: erodes easily	Moderate: small stones, slope, cemented pan
Short Creek	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
458:					
Donna	Moderate: small stones, percs slowly, dusty	Moderate: small stones, percs slowly, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, cemented pan
Stampede	Moderate: slope, small stones, percs slowly	Moderate: slope, small stones, percs slowly	Severe: slope, small stones	Severe: erodes easily	Moderate: small stones, slope, cemented pan
464:					
Stampede	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
570:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, slope, depth to rock
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
571:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Tusel	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Gando	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, slope, depth to rock
572:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Reluctan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: slope
Cleavage	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
576:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
577:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Chen	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
578:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Tusel	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
579:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Pernty	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Tusel	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
580:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope, dusty	Severe: small stones, slope
Pie Creek	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: small stones, large stones
Reluctan	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
581:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
582:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Tusel	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
583:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Pernty	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
584:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Tusel	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
585:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Rock Outcrop.					
Rubble Land	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: large stones, slope, small stones	Severe: small stones, large stones, droughty
586:					
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Loncan	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Cleavage	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
600:					
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Bullump	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Gando	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, slope, depth to rock
601:					
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Blitzen	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Tusel	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
602:					
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope, erodes easily	Severe: slope
Tusel	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
623:					
Soughe	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: large stones, slope, depth to rock
Rock Outcrop.					

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
624:					
Soughe	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope, depth to rock
Soughe	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope, depth to rock
Rock Outcrop.					
625:					
Soughe	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope, depth to rock
Alyan	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Shalper	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
626:					
Soughe	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: slope, depth to rock
Vanwyper	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Soughe	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones, depth to rock
690:					
Welch	Severe: flooding	Moderate: percs slowly	Moderate: slope, percs slowly	Slight	Slight
Welch	Severe: flooding, wetness	Moderate: flooding, wetness, percs slowly	Severe: wetness, flooding	Moderate: wetness, flooding	Severe: flooding
920:					
Bullump	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Gando	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, slope, depth to rock
Tusel	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
921:					
Bullump	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope, erodes easily	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
922:					
Bullump	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1130:					
Clementine	Severe: flooding	Moderate: percs slowly	Moderate: percs slowly	Slight	Slight
1131:					
Clementine	Severe: flooding	Moderate: percs slowly	Moderate: percs slowly	Slight	Slight
Clementine	Severe: flooding	Moderate: percs slowly	Moderate: slope, percs slowly	Slight	Slight
Clementine	Severe: flooding	Moderate: wetness, percs slowly	Moderate: wetness, flooding, percs slowly	Moderate: wetness	Moderate: wetness, flooding

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1135:					
Clementine	Severe: flooding	Moderate: percs slowly	Moderate: percs slowly	Slight	Slight
Clurde	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
1150:					
Clurde	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
Wieland	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, droughty
1155:					
Clurde	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
1156:					
Clurde	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
Kortty	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
1157:					
Clurde	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
1190:					
Cherry Spring	Moderate: dusty	Moderate: dusty	Moderate: slope, cemented pan, dusty	Moderate: dusty	Moderate: cemented pan
Enko	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
1191:					
Cherry Spring	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, large stones, cemented pan
Wieland	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, droughty, slope
1193:					
Cherry Spring	Moderate: dusty	Moderate: dusty	Moderate: slope, cemented pan, dusty	Moderate: dusty	Moderate: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Hunnton	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
1210:					
Skull Creek	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: large stones, cemented pan
Shabliss	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Puett	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, depth to rock	Moderate: slope	Severe: slope, depth to rock
1220:					
Hunnton	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, cemented pan
Hunnton	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Fulstone	Severe: cemented pan	Severe: cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1221:					
Hunnton	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: erodes easily	Severe: slope
Hunnton	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, cemented pan
Fulstone	Severe: slope, cemented pan	Severe: slope, cemented pan	Severe: slope, small stones, cemented pan	Moderate: slope, dusty	Severe: slope, cemented pan
1223:					
Hunnton	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Severe: erodes easily	Moderate: small stones, slope, cemented pan
Shabliss	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Puett	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, slope	Severe: large stones, slope, depth to rock
1224:					
Hunnton	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope
Trunk	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Shabliss	Severe: cemented pan	Severe: cemented pan	Severe: slope, small stones, cemented pan	Moderate: dusty	Severe: cemented pan
1226:					
Hunnton	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, cemented pan
Wieland	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, droughty
Clementine	Severe: flooding	Moderate: percs slowly	Moderate: slope, percs slowly	Slight	Slight
1227:					
Hunnton	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: erodes easily	Severe: cemented pan
Bilbo	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope
1228:					
Hunnton	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Hunnton	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, cemented pan
1229:					
Hunnton	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Wieland	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: droughty, slope
1230:					
Fulstone	Severe: cemented pan	Severe: cemented pan	Severe: small stones, cemented pan	Moderate: dusty	Severe: cemented pan
Hunnton	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, cemented pan
1231:					
Fulstone	Severe: large stones, small stones, cemented pan	Severe: large stones, small stones, cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: small stones, large stones, cemented pan
Fulstone	Severe: slope, large stones, small stones	Severe: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: small stones, large stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Hunnton	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope
1232:					
Fulstone	Severe: cemented pan	Severe: cemented pan	Severe: small stones, cemented pan	Moderate: dusty	Severe: cemented pan
Fulstone	Severe: cemented pan	Severe: cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: cemented pan
Wieland	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: droughty, slope
1241:					
Enko	Slight	Slight	Moderate: slope, small stones	Slight	Slight
Shabliss	Severe: slope, cemented pan	Severe: slope, cemented pan	Severe: slope, cemented pan	Severe: erodes easily	Severe: slope, cemented pan
Orovada	Moderate: dusty	Moderate: dusty	Moderate: slope, dusty	Moderate: dusty	Slight
1242:					
Enko	Slight	Slight	Moderate: small stones	Slight	Slight
Enko	Moderate: slope	Moderate: slope	Severe: slope	Severe: erodes easily	Moderate: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1260:					
Kleckner	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
Upville	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
Fulstone	Severe: large stones, small stones, cemented pan	Severe: large stones, small stones, cemented pan	Severe: large stones, small stones, cemented pan	Moderate: large stones, dusty	Severe: small stones, large stones, cemented pan
1261:					
Kleckner	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
Heechee	Moderate: slope, large stones, small stones	Moderate: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
1290:					
Tweba	Severe: flooding	Slight	Slight	Slight	Slight
1350:					
Shabliss	Severe: cemented pan	Severe: cemented pan	Severe: slope, small stones, cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Hunnton	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: erodes easily	Severe: slope
Bioya	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, cemented pan
1351:					
Shabliss	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
1352:					
Shabliss	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: erodes easily	Severe: cemented pan
Skull Creek	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: large stones, cemented pan
Puett	Severe: slope, large stones, small stones	Severe: slope, large stones, small stones	Severe: large stones, slope, small stones	Severe: slope	Severe: small stones, large stones, slope
1360:					
Orovada	Severe: flooding	Moderate: dusty	Moderate: slope, dusty	Moderate: dusty	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1362:					
Orovada	Moderate: dusty	Moderate: dusty	Moderate: slope, dusty	Moderate: dusty	Slight
Clurde	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
Wieland	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: droughty, slope
1363:					
Orovada	Severe: flooding	Moderate: dusty	Moderate: dusty	Moderate: dusty	Slight
Tweba	Severe: flooding	Slight	Slight	Slight	Moderate: droughty
Weso	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: dusty	Slight
1530:					
Creemon	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: dusty	Slight
Placeritos	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: dusty	Slight
1572:					
Weso	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: dusty	Slight
Orovada	Moderate: dusty	Moderate: dusty	Moderate: slope, dusty	Moderate: dusty	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Shabliss	Severe: slope, cemented pan	Severe: slope, cemented pan	Severe: slope, cemented pan	Severe: erodes easily	Severe: slope, cemented pan
1573:					
Weso	Moderate: dusty	Moderate: dusty	Moderate: slope, dusty	Moderate: dusty	Slight
Orovada	Moderate: dusty	Moderate: dusty	Moderate: slope, dusty	Moderate: dusty	Slight
Tweba	Severe: flooding	Slight	Slight	Slight	Moderate: droughty
1617:					
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Tweener	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope, depth to rock
1618:					
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
1619:					
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Tusk	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1621:					
Cleavage	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
Graley	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1622:					
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1623:					
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1625:					
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1626:					
Cleavage	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
Carstump	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, depth to rock
Chen	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, depth to rock
1628:					
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, slope, depth to rock
Chen	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, depth to rock
Reluctan	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1640:					
Tusk	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, slope
Cleavage	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: small stones, large stones, depth to rock
Hackwood	Moderate: slope	Moderate: slope	Severe: slope	Severe: erodes easily	Moderate: slope
1650:					
Ninemile	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, depth to rock
Tusk	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Ninemile	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope, depth to rock
1651:					
Ninemile	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Reluctan--------	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
Ninemile--------	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope, depth to rock
1652:					
Ninemile--------	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope, depth to rock
Graley----------	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope, depth to rock
Ninemile--------	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, depth to rock
1653:					
Ninemile--------	Severe: depth to rock	Severe: depth to rock	Severe: large stones, slope, depth to rock	Moderate: dusty	Severe: depth to rock
Reluctan--------	Severe: small stones	Severe: small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Graley	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope, dusty	Severe: slope, depth to rock
1655:					
Ninemile	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: large stones, slope, depth to rock
Thwoop	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
1656:					
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Gumble	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1657:					
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Alyan	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, slope, depth to rock
1658:					
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Vanwyper	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: large stones, slope
Ninemile	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope, dusty	Severe: slope, depth to rock
1659:					
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Carstump	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1660:					
Susie Creek	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Moderate: dusty	Moderate: slope
Pie Creek	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope
Pattani	Moderate: slope, percs slowly, too clayey	Moderate: slope, too clayey, percs slowly	Severe: slope	Moderate: too clayey	Severe: too clayey
1671:					
Linkup	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: slope, depth to rock
Carstump	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope, dusty	Severe: small stones, slope
Linkup	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: small stones, large stones, depth to rock
1672:					
Linkup	Severe: slope, large stones, small stones	Severe: slope, large stones, small stones	Severe: large stones, slope, small stones	Severe: slope	Severe: small stones, large stones, slope
Carstump	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Linkup	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: small stones, large stones, depth to rock
1673:					
Linkup	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Alyan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
1675:					
Linkup	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Slight	Severe: depth to rock
Snowmore	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, depth to rock	Moderate: dusty	Moderate: large stones, depth to rock
Ratsow	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Moderate: depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1676:					
Linkup	Severe: depth to rock	Severe: depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: depth to rock
Quarz	Severe: small stones	Severe: small stones	Severe: slope, small stones	Moderate: dusty	Severe: small stones
1680:					
Carstump	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope, dusty	Severe: small stones, slope
Reluctan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: slope
Ninemile	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope, depth to rock
1685:					
Carstump	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Ninemile	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Graley	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope, depth to rock
1686:					
Carstump	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Reluctan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones, depth to rock
1687:					
Carstump	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: slope	Severe: slope
Linkup	Severe: depth to rock	Severe: depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: depth to rock
Carstump	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1691:					
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Rock Outcrop.					
Rubble Land	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: large stones, slope, small stones	Severe: small stones, large stones, droughty
1700:					
Cotant	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Ninemile	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope, depth to rock
1702:					
Cotant	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Slight	Severe: depth to rock
McIvey	Moderate: slope, large stones, small stones	Moderate: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Blitzen	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
1703:					
Cotant	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Lerrow	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: slope	Severe: large stones, slope
Bullump	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1711:					
Reluctan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: slope
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: large stones, slope, depth to rock	Moderate: dusty	Severe: depth to rock
Cleavage	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1712:					
Reluctan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
1713:					
Reluctan	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Erakatak	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Rugar	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1720:					
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Alyan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Ninemile	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope, depth to rock
1725:					
Quarz	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Loncan	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
1726:					
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope, dusty	Severe: small stones, slope
Ninemile	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope, dusty	Severe: slope, depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1730:					
Graley	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Erakatak	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Chen	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
1732:					
Graley	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: large stones, slope, small stones	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Ninemile	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope, depth to rock
1733:					
Graley	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: large stones, slope, small stones	Severe: slope, small stones	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Loncan	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
1740:					
Erakatak	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Cleavage	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope, erodes easily	Severe: slope
1741:					
Erakatak	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Chen	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Slight	Severe: small stones, depth to rock
Tusk	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
1742:					
Erakatak	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Rugar	Severe: slope	Severe: slope	Severe: slope	Moderate: slope	Severe: slope
Tusel	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1744:					
Erakatak	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Graley	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Tusel	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1746:					
Booford	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope
Cotant	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope	Severe: slope, depth to rock
Blitzen	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1800:					
Bregar	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope, dusty	Severe: small stones, slope, depth to rock
Bregar	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
Carstump	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope
1802:					
Bregar	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
1803:					
Bregar	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Rock Outcrop.					
1805:					
Bregar	Severe: slope, large stones, small stones	Severe: slope, large stones, small stones	Severe: large stones, slope, small stones	Severe: large stones	Severe: small stones, large stones, slope
Deseed	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope
Linkup	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: small stones, large stones, depth to rock
1810:					
Shively	Severe: slope	Severe: slope	Severe: slope	Severe: slope, erodes easily	Severe: slope
Ninemile	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: erodes easily	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1830:					
Vanwyper	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Alyan	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Vanwyper	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, droughty, depth to rock
1831:					
Vanwyper	Severe: slope	Severe: slope	Severe: large stones, slope	Moderate: slope, dusty	Severe: slope
Trunk	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Vanwyper	Moderate: large stones, dusty	Moderate: large stones, dusty	Severe: large stones	Moderate: dusty	Moderate: large stones, droughty, depth to rock
1832:					
Vanwyper	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope
Trunk	Moderate: slope, large stones, small stones	Moderate: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: large stones	Moderate: small stones, large stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Trunk	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
1833:					
Vanwyper	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope
Rock Outcrop.					
Trunk	Moderate: slope, large stones, small stones	Moderate: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Moderate: small stones, large stones, slope
1852:					
Gumble	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Slight	Severe: depth to rock
Tuffo	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Slight	Severe: depth to rock
Hunnton	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
1853:					
Gumble	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Tuffo	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Rock Outcrop.					
1854:					
Gumble	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
Chen	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
1855:					
Gumble	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Puett Variant	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Xeric Torriorthents	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: erodes easily	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1870:					
Chen	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
Graley	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1871:					
Chen	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
Cotant	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
Graley	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
1872:					
Chen	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Tusel	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1874:					
Chen	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
Quarz	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Arcia	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1875:					
Chen	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
Bregar	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
Ramires	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: large stones, droughty, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1876:					
Chen	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: small stones, depth to rock
Chen	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
Arcia	Severe: slope	Severe: slope	Severe: slope	Moderate: slope, dusty	Severe: slope
1877:					
Chen	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope, depth to rock
Bregar	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Slight	Severe: small stones, depth to rock
Loncan	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
1880:					
Chen	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Blitzen	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
1881:					
Chen	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
Blitzen	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Loncan	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
1888:					
Chen	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, depth to rock
Pie Creek	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: large stones, slope
Alyan	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1889:					
Chen	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1910:					
Mahala	Moderate: slope, percs slowly, dusty	Moderate: slope, percs slowly, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, depth to rock
Ramires	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: large stones, droughty, slope
1920:					
Lerrow	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: slope	Severe: large stones, slope
Chen	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope, depth to rock
Cotant	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: slope, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1921:					
Lerrow	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Rugar	Severe: slope	Severe: slope	Severe: slope	Moderate: slope, dusty	Severe: slope
1931:					
Tweener	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, slope	Severe: large stones, slope, depth to rock
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, slope, depth to rock
Reluctan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
1932:					
Tweener	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Sumine	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Cleavage	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones	Severe: small stones, slope, depth to rock
1933:					
Tweener	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Moderate: large stones, slope	Severe: large stones, slope, depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Cleavage	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
1950:					
McIvey	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
McIvey	Severe: slope, large stones, small stones	Severe: slope, large stones, small stones	Severe: large stones, slope, small stones	Severe: slope	Severe: small stones, large stones, slope
Tusel	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1980:					
Thwoop	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope
Trunk	Moderate: slope, small stones, percs slowly	Moderate: slope, small stones, percs slowly	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, slope, depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
2000:					
Alyan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
Cotant	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: slope, depth to rock
Akler	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: erodes easily	Severe: depth to rock
2001:					
Alyan	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Bregar	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: small stones, slope, depth to rock
Alyan	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, slope, depth to rock
2002:					
Alyan	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Alyan	Moderate: slope, small stones	Moderate: slope, small stones	Severe: slope, small stones	Slight	Moderate: small stones, slope, depth to rock
Quarz	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope, dusty	Severe: small stones, slope
2003:					
Alyan	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
Deepeek	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones, cemented pan
Susie Creek	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2004:					
Alyan	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
Ninemile	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Alyan	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, slope, depth to rock
2005:					
Alyan	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, slope, depth to rock
Graley	Severe: slope, small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: large stones, slope, small stones	Severe: slope, small stones	Severe: small stones, slope, depth to rock
Rock Outcrop.					
2171:					
Deseed	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Reluctan	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Cleavage	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: slope, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
2173:					
Deseed	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Quarz	Severe: large stones	Severe: large stones	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones
2205:					
Coltroop	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Snowmore	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, depth to rock	Moderate: dusty	Moderate: large stones, depth to rock
2206:					
Coltroop	Severe: cemented pan	Severe: cemented pan	Severe: large stones, cemented pan	Moderate: dusty	Severe: cemented pan
Vanwyper	Moderate: large stones, small stones, dusty	Moderate: large stones, small stones, dusty	Severe: large stones, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
2310:					
Bulake	Severe: depth to rock	Severe: depth to rock	Severe: small stones, depth to rock	Moderate: dusty	Severe: depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Deunah	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: slope, depth to rock, cemented pan	Moderate: dusty	Moderate: large stones, depth to rock
Bulake	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, small stones, depth to rock	Moderate: large stones, dusty	Severe: large stones, depth to rock
2311:					
Bulake	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, small stones, depth to rock	Moderate: large stones, dusty	Severe: large stones, depth to rock
Hatpeak	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Petan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: large stones, small stones, depth to rock	Moderate: large stones, dusty	Severe: depth to rock
2505:					
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2511:					
Bilbo	Severe: slope, large stones, small stones	Severe: slope, large stones, small stones	Severe: large stones, slope, small stones	Severe: slope	Severe: small stones, slope
Alley	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
Deepeek	Severe: slope, large stones, cemented pan	Severe: slope, large stones, cemented pan	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope, cemented pan
2514:					
Bilbo	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
Susie Creek	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
2521:					
Dewar	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones, cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Chiara	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones, cemented pan
2522:					
Dewar	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones, cemented pan
Sodhouse	Severe: cemented pan	Severe: cemented pan	Severe: large stones, small stones, cemented pan	Moderate: large stones, dusty	Severe: cemented pan
2531:					
Clurde Variant	Severe: flooding	Moderate: dusty	Moderate: small stones, flooding, dusty	Moderate: dusty	Moderate: flooding, depth to rock
Clurde	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
Rock Outcrop.					
2541:					
Kelk	Severe: flooding	Moderate: dusty	Moderate: flooding, dusty	Moderate: dusty	Moderate: flooding
2545:					
Kelk	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: dusty	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Clurde	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
2555:					
Piline	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding
2560:					
McCleary	Severe: flooding, wetness, percs slowly	Severe: wetness, percs slowly	Severe: wetness, percs slowly	Severe: wetness	Severe: wetness
2561:					
McCleary	Severe: flooding, percs slowly	Severe: percs slowly	Severe: large stones, percs slowly	Moderate: large stones	Moderate: large stones
2571:					
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: large stones, cemented pan	Moderate: large stones, dusty	Severe: cemented pan
Chiara	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, small stones, cemented pan	Moderate: large stones, dusty	Severe: large stones, cemented pan
2572:					
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2573:					
Chiara	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones, cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: large stones, cemented pan	Moderate: large stones, dusty	Severe: cemented pan
2575:					
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Dacker	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Shalake	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Moderate: cemented pan
2577:					
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Orovada	Moderate: dusty	Moderate: dusty	Moderate: slope, dusty	Moderate: dusty	Slight
2600:					
Shalake	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Moderate: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Shalake	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
2611:					
Dacker	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Hunnton	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
2612:					
Dacker	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Moderate: cemented pan
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
2615:					
Dacker	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2621:					
Gochea	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, droughty
Susie Creek	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Moderate: dusty	Moderate: slope
Carstump	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, slope
2641:					
Olac	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: large stones, slope, small stones	Moderate: dusty	Severe: small stones, depth to rock
Snowmore	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, depth to rock	Moderate: dusty	Moderate: large stones, depth to rock
2650:					
Wieland	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, droughty, slope
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Zevadez	Moderate: dusty	Moderate: dusty	Severe: slope	Moderate: dusty	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2651:					
Wieland	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: droughty, slope
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
2652:					
Wieland	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Moderate: droughty
Dacker	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
2655:					
Wieland	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: droughty, slope
Gumble	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Moderate: slope	Severe: slope, depth to rock
Bilbo	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2656:					
Wieland	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Moderate: droughty
Hunnton	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Thwoop	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, depth to rock
2658:					
Wieland	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
2666:					
Puett	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, depth to rock	Moderate: slope	Severe: slope, depth to rock
Orovada	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope
2667:					
Puett	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Rock Outcrop.					

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Clurde	Moderate: dusty	Moderate: dusty	Severe: slope	Moderate: dusty	Slight
2668:					
Puett	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Yuko	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, depth to rock	Moderate: slope	Severe: slope, depth to rock
Zevadez	Moderate: dusty	Moderate: dusty	Severe: slope	Moderate: dusty	Slight
2710:					
Ramires	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, depth to rock
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Bilbo	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
2711:					
Ramires	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, depth to rock
Bilbo	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
2741:					
Wilsor	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Moderate: dusty	Moderate: slope
Wilsor	Severe: slope	Severe: slope	Severe: slope	Moderate: slope, dusty	Severe: slope
2751:					
Yuko	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Slight	Severe: depth to rock
Chime	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, slope, depth to rock
Clurde	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
2775:					
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Wieland	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Moderate: droughty
2776:					
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
2777:					
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
Wieland	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Moderate: droughty
Clurde	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
2778:					
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
Yuko	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Slight	Severe: depth to rock
Kelk	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: dusty	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2780:					
Snowmore	Moderate: large stones	Moderate: large stones	Severe: large stones	Moderate: large stones	Severe: large stones
Snowmore	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Moderate: large stones, depth to rock
2781:					
Snowmore	Moderate: large stones	Moderate: large stones	Severe: large stones	Moderate: large stones	Severe: large stones
Snowmore	Severe: large stones	Severe: large stones	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones
Snowmore	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Moderate: large stones, depth to rock
2782:					
Snowmore	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Moderate: large stones, depth to rock
Zevadez	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
Snowmore	Moderate: large stones	Moderate: large stones	Severe: large stones	Moderate: large stones	Severe: large stones
2783:					
Snowmore	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, depth to rock	Moderate: dusty	Moderate: large stones, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Willhill	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
2790:					
Old Camp	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, depth to rock
Troughs	Severe: cemented pan	Severe: cemented pan	Severe: small stones, cemented pan	Moderate: dusty	Severe: cemented pan
Olac	Severe: small stones, depth to rock	Severe: small stones, depth to rock	Severe: large stones, slope, small stones	Moderate: dusty	Severe: small stones, depth to rock
2801:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Alley	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Clurde	Moderate: dusty	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
2802:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
2803:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Ramires	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, depth to rock
2804:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
2805:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
2807:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Coltroop	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Zevadez	Moderate: small stones, dusty	Moderate: small stones, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones
2808:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Susie Creek-----	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, dusty	Moderate: dusty	Slight
Wieland---------	Moderate: dusty	Moderate: dusty	Severe: slope	Moderate: dusty	Moderate: droughty
2809:					
Bartome---------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Dacker----------	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
2820:					
Alley-----------	Moderate: slope, large stones, small stones	Moderate: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope
Vanwyper--------	Moderate: slope, large stones, small stones	Moderate: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
Rock Outcrop.					
2822:					
Alley-----------	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
Rock Outcrop.					

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Rubble Land.					
3000:					
Handy	Severe: slope	Severe: slope	Severe: slope	Moderate: slope, dusty	Severe: slope
Wilsor	Moderate: dusty	Moderate: dusty	Severe: slope	Moderate: dusty	Slight
Deseed	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, slope
3010:					
Relley	Severe: flooding	Moderate: flooding, dusty	Severe: flooding	Moderate: flooding, dusty	Severe: flooding
Kelk	Moderate: dusty	Moderate: dusty	Moderate: dusty	Moderate: dusty	Slight
3020:					
Sodhouse	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Moderate: dusty	Severe: cemented pan
3030:					
Deepeek	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones, cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Alley	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Moderate: large stones, slope, dusty	Severe: large stones, slope
3100:					
Ratsow	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Moderate: dusty	Moderate: slope, depth to rock
Quarz	Severe: large stones	Severe: large stones	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: large stones
Susie Creek	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Moderate: dusty	Moderate: slope
3510:					
Midraw	Severe: cemented pan	Severe: cemented pan	Severe: small stones, cemented pan	Moderate: dusty	Severe: cemented pan
Troughs	Severe: cemented pan	Severe: cemented pan	Severe: slope, small stones, cemented pan	Moderate: dusty	Severe: cemented pan
Midraw	Severe: cemented pan	Severe: cemented pan	Severe: slope, small stones, cemented pan	Moderate: dusty	Severe: cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
3710:					
Petan	Severe: large stones, depth to rock, cemented pan	Severe: large stones, depth to rock, cemented pan	Severe: large stones, slope, small stones	Moderate: large stones, dusty	Severe: depth to rock
Bulake	Severe: depth to rock	Severe: depth to rock	Severe: small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Rock Outcrop.					
3715:					
Petan	Severe: large stones, depth to rock, cemented pan	Severe: large stones, depth to rock, cemented pan	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, depth to rock
Deunah	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: slope, depth to rock, cemented pan	Moderate: dusty	Moderate: large stones, depth to rock
Hatpeak	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
3721:					
Hatpeak	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Deunah	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: slope, depth to rock, cemented pan	Moderate: dusty	Moderate: large stones, depth to rock

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
3722:					
Hatpeak---------	Moderate: dusty	Moderate: dusty	Moderate: slope, small stones, cemented pan	Moderate: dusty	Moderate: cemented pan
Hatpeak---------	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Moderate: dusty	Moderate: slope, cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1:						
Rubble Land	Severe: large stones, slope	Severe: slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: small stones, large stones, droughty
120:						
Cotant	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope, depth to rock
Lerrow	Moderate: depth to rock, too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, large stones, slope
Cotant	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: depth to rock
126:						
Cotant	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: small stones, slope, depth to rock
Lerrow	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: large stones, slope
Akler	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
127:						
Cotant	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones, depth to rock
Ninemile	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
Lerrow	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
128:						
Cotant	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones, depth to rock
Graley	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
129:						
Cotant	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones, depth to rock
Chen	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Crooked Creek	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, flooding	Moderate: wetness, flooding

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
130:						
Cotant	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: depth to rock
Booford	Moderate: depth to rock, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: depth to rock
140:						
Upville	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding
Upville	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: frost action, large stones	Moderate: small stones, large stones, droughty
141:						
Upville	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: frost action, large stones	Moderate: small stones, large stones, droughty
Kleckner	Moderate: too clayey, large stones	Moderate: shrink-swell, large stones	Moderate: shrink-swell, large stones	Moderate: shrink-swell, slope, large stones	Moderate: shrink-swell, large stones	Moderate: small stones, large stones, droughty
150:						
Gochea	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Moderate: small stones, droughty

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
161:						
Sonoma	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Severe: low strength, frost action	Slight
162:						
Sonoma	Moderate: wetness, flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, flooding, frost action	Moderate: excess salt, flooding
184:						
Crooked Creek	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: flooding
185:						
Crooked Creek	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: flooding
Crooked Creek	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: flooding
186:						
Crooked Creek	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: flooding

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Crooked Creek---	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, flooding	Moderate: wetness, flooding
Crooked Creek---	Moderate: too clayey, wetness	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength, frost action	Slight
188:						
Crooked Creek---	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: flooding
Welch----------	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, frost action	Slight
Crooked Creek---	Moderate: too clayey, wetness	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength, frost action	Slight
190:						
Heechee---------	Moderate: large stones, slope	Moderate: slope, large stones	Moderate: slope, large stones	Severe: slope	Moderate: slope, frost action, large stones	Moderate: small stones, droughty, slope
Heechee---------	Moderate: large stones, slope	Moderate: slope, large stones	Moderate: slope, large stones	Severe: slope	Moderate: slope, frost action, large stones	Moderate: small stones, large stones, droughty

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
200:						
Lynnbow	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Slight
Rugar	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Slight
201:						
Lynnbow	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
Lerrow	Moderate: depth to rock, too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, large stones, slope
Crooked Creek	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, flooding	Moderate: wetness, flooding
210:						
Soonaker	Moderate: depth to rock	Slight	Moderate: depth to rock	Moderate: slope	Moderate: frost action	Moderate: depth to rock
Bulake	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
220:						
Cavanaugh	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Rugar	Moderate: too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
McIvey	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
221:						
Cavanaugh	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Quarz	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Alyan	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
233:						
Bioya	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Moderate: cemented pan, shrink-swell, frost action	Moderate: cemented pan
Bilbo	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
234:						
Bioya	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Moderate: cemented pan, shrink-swell, frost action	Moderate: cemented pan
Shabliss	Severe: cemented pan, cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: slope, cemented pan	Moderate: cemented pan, frost action	Severe: cemented pan
Puett	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
235:						
Bioya	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Moderate: cemented pan, shrink-swell, frost action	Moderate: cemented pan
Trunk	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Alley	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
236:						
Bioya	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Moderate: cemented pan, shrink-swell, frost action	Moderate: cemented pan
Wieland	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: droughty

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Kleckner	Moderate: too clayey, large stones	Moderate: shrink-swell, large stones	Moderate: shrink-swell, large stones	Moderate: shrink-swell, slope, large stones	Moderate: shrink-swell, large stones	Moderate: small stones, large stones, droughty
241:						
Wickahoney	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Deunah	Severe: depth to rock, cemented pan	Severe: shrink-swell	Severe: depth to rock, cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: large stones, depth to rock
Petan	Severe: depth to rock, cemented pan	Severe: depth to rock	Severe: depth to rock, cemented pan	Severe: depth to rock	Severe: depth to rock, low strength	Severe: large stones, depth to rock
270:						
Pernty	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Loncan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Pernty	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
280:						
Humboldt	Severe: wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: low strength, wetness, flooding	Severe: excess salt, wetness
308:						
Akler	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: depth to rock
Pattani	Severe: cutbanks cave	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: too clayey
Cotant	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: depth to rock
309:						
Akler	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: depth to rock
Susie Creek	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
457:						
Donna	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: small stones, cemented pan
Stampede	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, slope, cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Short Creek-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
458:						
Donna-----------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: small stones, cemented pan
Stampede--------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, slope, cemented pan
464:						
Stampede--------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
570:						
Sumine----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Cleavage--------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Hapgood---------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
571:						
Sumine----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Tusel	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Gando	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
572:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Reluctan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Cleavage	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
576:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
577:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Chen	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
578:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Tusel	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
579:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Pernty	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Tusel	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
580:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Pie Creek	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones, large stones
Reluctan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
581:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
582:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Tusel----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Cleavage--------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
583:						
Sumine----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hapgood---------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Pernty----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
584:						
Sumine----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Tusel----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hapgood---------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
585:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Rock Outcrop.						
Rubble Land	Severe: large stones, slope	Severe: slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: small stones, large stones, droughty
586:						
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Loncan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Cleavage	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
600:						
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Bullump	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Gando	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
601:						
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Blitzen	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Tusel	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
602:						
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Tusel	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
623:						
Soughe	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock
Rock Outcrop.						
624:						
Soughe	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Soughe----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock
Rock Outcrop.						
625:						
Soughe----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock
Alyan----------	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: small stones, slope
Shalper---------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
626:						
Soughe----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock
Vanwyper--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: slope
Soughe----------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: large stones, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
690:						
Welch	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, frost action	Slight
Welch	Severe: wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, frost action	Severe: flooding
920:						
Bullump	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Gando	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Tusel	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
921:						
Bullump	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
922:						
Bullump	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1130:						
Clementine	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, frost action	Slight
1131:						
Clementine	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, frost action	Slight
Clementine	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, frost action	Slight
Clementine	Severe: wetness	Severe: flooding	Severe: flooding, wetness	Severe: flooding	Severe: low strength, flooding, frost action	Moderate: wetness, flooding
1135:						
Clementine	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, frost action	Slight

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight
1150:						
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, slope	Moderate: shrink-swell, frost action	Slight
Wieland---------	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: small stones, droughty
1155:						
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight
1156:						
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight
Kortty----------	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Slight
1157:						
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight
Zevadez---------	Slight	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1190:						
Cherry Spring---	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Moderate: cemented pan, shrink-swell, low strength	Moderate: cemented pan
Enko----------	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
1191:						
Cherry Spring---	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Moderate: cemented pan, shrink-swell, low strength	Moderate: small stones, large stones, cemented pan
Wieland---------	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, droughty, slope
1193:						
Cherry Spring---	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Moderate: cemented pan, shrink-swell, low strength	Moderate: cemented pan
Hunnton---------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
1210:						
Skull Creek-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: slope, cemented pan	Moderate: cemented pan, frost action	Moderate: large stones, cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Shabliss	Severe: cemented pan, cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: slope, cemented pan	Moderate: cemented pan, frost action	Severe: cemented pan
Puett	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1220:						
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope, cemented pan
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
Fulstone	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
1221:						
Hunnton	Severe: cemented pan, slope	Severe: shrink-swell, slope	Severe: cemented pan, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope, cemented pan
Fulstone	Severe: cemented pan, slope	Severe: shrink-swell, slope, cemented pan	Severe: cemented pan, slope, shrink-swell	Severe: shrink-swell, slope, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: slope, cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1223:						
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, slope, cemented pan
Shabliss	Severe: cemented pan, cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: slope, cemented pan	Moderate: cemented pan, frost action	Severe: cemented pan
Puett	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: large stones, slope, depth to rock
1224:						
Hunnton	Severe: cemented pan, slope	Severe: shrink-swell, slope	Severe: cemented pan, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Trunk	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: large stones, slope
Shabliss	Severe: cemented pan, cutbanks cave	Moderate: slope, cemented pan	Severe: cemented pan	Severe: slope	Moderate: cemented pan, slope, frost action	Severe: cemented pan
1226:						
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: small stones, cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Wieland	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: small stones, droughty
Clementine	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, frost action	Slight
1227:						
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope, cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: cemented pan
Bilbo	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1228:						
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope, cemented pan
1229:						
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Wieland---------	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: droughty, slope
1230:						
Fulstone--------	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
Hunnton---------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope, cemented pan
1231:						
Fulstone--------	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: small stones, large stones, cemented pan
Fulstone--------	Severe: cemented pan, slope	Severe: shrink-swell, slope, cemented pan	Severe: cemented pan, slope, shrink-swell	Severe: shrink-swell, slope, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: small stones, large stones, slope
Hunnton---------	Severe: cemented pan, slope	Severe: shrink-swell, slope	Severe: cemented pan, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
1232:						
Fulstone--------	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Fulstone	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
Wieland	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: droughty, slope
1241:						
Enko	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
Shabliss	Severe: cemented pan, cutbanks cave, slope	Severe: slope	Severe: cemented pan, slope	Severe: slope	Severe: slope	Severe: slope, cemented pan
Orovada	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
1242:						
Enko	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Enko	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope, frost action	Moderate: slope
1260:						
Kleckner	Moderate: too clayey, large stones, slope	Moderate: shrink-swell, slope, large stones	Moderate: slope, shrink-swell, large stones	Severe: slope	Moderate: shrink-swell, slope, large stones	Moderate: small stones, large stones, droughty

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Upville---	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: frost action, large stones	Moderate: small stones, large stones, droughty
Fulstone---	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: small stones, large stones, cemented pan
1261:						
Kleckner---	Moderate: too clayey, large stones, slope	Moderate: shrink-swell, slope, large stones	Moderate: slope, shrink-swell, large stones	Severe: slope	Moderate: shrink-swell, slope, large stones	Moderate: small stones, large stones, droughty
Heechee---	Moderate: large stones, slope	Moderate: slope, large stones	Moderate: slope, large stones	Severe: slope	Moderate: slope, frost action, large stones	Moderate: small stones, large stones, droughty
1290:						
Tweba---	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding, frost action	Slight
1350:						
Shabliss---	Severe: cemented pan, cutbanks cave	Moderate: slope, cemented pan	Severe: cemented pan	Severe: slope	Moderate: cemented pan, slope, frost action	Severe: cemented pan
Hunnton---	Severe: cemented pan, slope	Severe: shrink-swell, slope	Severe: cemented pan, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Bioya	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Severe: cemented pan	Severe: slope	Moderate: cemented pan, shrink-swell, slope	Moderate: slope, cemented pan
1351:						
Shabliss	Severe: cemented pan, cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan	Moderate: cemented pan, frost action	Severe: cemented pan
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
1352:						
Shabliss	Severe: cemented pan, cutbanks cave	Moderate: slope, cemented pan	Severe: cemented pan	Severe: slope	Moderate: cemented pan, slope, frost action	Severe: cemented pan
Skull Creek	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: slope, cemented pan	Moderate: cemented pan, frost action	Moderate: large stones, cemented pan
Puett	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, large stones, slope
1360:						
Orovada	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding, frost action	Slight
1362:						
Orovada	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, slope	Moderate: shrink-swell, frost action	Slight
Wieland---------	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: droughty, slope
1363:						
Orovada---------	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding, frost action	Slight
Tweba-----------	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding, frost action	Moderate: droughty
Weso------------	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
1530:						
Creemon---------	Slight	Slight	Slight	Slight	Slight	Slight
Placeritos------	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Severe: low strength	Slight
1572:						
Weso------------	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Orovada---------	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
Shabliss--------	Severe: cemented pan, cutbanks cave, slope	Severe: slope	Severe: cemented pan, slope	Severe: slope	Severe: slope	Severe: slope, cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1573:						
Weso	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Slight
Orovada	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
Tweba	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding, frost action	Moderate: droughty
1617:						
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Tweener	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock
1618:						
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Pequop----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1619:						
Cleavage--------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Tusk----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Sumine----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
1621:						
Cleavage--------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Graley----------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: depth to rock
Cleavage--------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
1622:						
Cleavage--------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1623:						
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
1625:						
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1626:						
Cleavage	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Carstump	Severe: depth to rock	Moderate: shrink-swell, depth to rock, large stones	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Moderate: depth to rock, shrink-swell, frost action	Moderate: small stones, large stones, depth to rock
Chen	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Severe: slope, depth to rock, large stones	Severe: depth to rock, large stones	Severe: large stones, depth to rock
1628:						
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Chen	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Severe: slope, depth to rock, large stones	Severe: depth to rock, large stones	Severe: large stones, depth to rock
Reluctan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
1640:						
Tusk	Moderate: slope	Moderate: shrink-swell, slope	Moderate: slope, shrink-swell	Severe: slope	Moderate: shrink-swell, slope, frost action	Moderate: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Cleavage--------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, large stones, depth to rock
Hackwood--------	Moderate: slope	Moderate: shrink-swell, slope	Moderate: slope, shrink-swell	Severe: slope	Moderate: shrink-swell, slope, frost action	Moderate: slope
1650:						
Ninemile--------	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, depth to rock
Tusk------------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Ninemile--------	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
1651:						
Ninemile--------	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, depth to rock
Reluctan--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Ninemile--------	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
1652:						
Ninemile--------	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
Graley----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock
Ninemile--------	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, depth to rock
1653:						
Ninemile--------	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Reluctan--------	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, shrink-swell, low strength	Severe: small stones
Graley----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1655:						
Ninemile	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
Thwoop	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, shrink-swell, slope	Moderate: small stones, large stones, slope
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1656:						
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Gumble	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: small stones, slope, depth to rock
1657:						
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Alyan	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell	Moderate: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1658:						
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Vanwyper	Severe: depth to rock, large stones, slope	Severe: slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope, large stones	Severe: low strength, slope, large stones	Severe: large stones, slope
Ninemile	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: slope, depth to rock
1659:						
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Carstump	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
1660:						
Susie Creek	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
Pie Creek	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Pattani---	Severe: cutbanks cave	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: too clayey
1671:						
Linkup---	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: slope, depth to rock
Carstump---	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Linkup---	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: small stones, large stones, depth to rock
1672:						
Linkup---	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: small stones, large stones, slope
Carstump---	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Linkup---	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: small stones, large stones, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1673:						
Linkup	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: small stones, depth to rock
Quarz	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Alyan	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
1675:						
Linkup	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Moderate: large stones, depth to rock
Ratsow	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: depth to rock
1676:						
Linkup	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Quarz----------	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, shrink-swell, slope	Severe: small stones
1680:						
Carstump--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Reluctan--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Ninemile--------	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
1685:						
Carstump--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Ninemile--------	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
Graley----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1686:						
Carstump	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Reluctan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, depth to rock
1687:						
Carstump	Severe: depth to rock, large stones, slope	Severe: slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: slope
Linkup	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Carstump	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, shrink-swell, slope	Moderate: small stones, large stones, slope
1691:						
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Rock Outcrop.						

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Rubble Land-----	Severe: large stones, slope	Severe: slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: small stones, large stones, droughty
1700:						
Cotant----------	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope, depth to rock
Quarz-----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Ninemile--------	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
1702:						
Cotant----------	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: depth to rock
McIvey----------	Moderate: too clayey, large stones, slope	Moderate: shrink-swell, slope, large stones	Moderate: slope, shrink-swell, large stones	Severe: slope	Moderate: shrink-swell, low strength, slope	Moderate: small stones, large stones, slope
Blitzen---------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1703:						
Cotant	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope, depth to rock
Lerrow	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: large stones, slope
Bullump	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1711:						
Reluctan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Cleavage	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: depth to rock
1712:						
Reluctan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
1713:						
Reluctan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Erakatak	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: slope
Rugar	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
1720:						
Quarz	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Alyan	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
Ninemile	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1725:						
Quarz	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: large stones, slope
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Loncan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
1726:						
Quarz	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Ninemile	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: slope, depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1730:						
Graley	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Erakatak	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Chen	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
1732:						
Graley	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Quarz	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Ninemile	Severe: depth to rock, slope	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, slope, depth to rock
1733:						
Graley	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Loncan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
1740:						
Erakatak	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: small stones, slope
Cleavage	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Hackwood--------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1741:						
Erakatak--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: small stones, slope
Chen------------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Tusk------------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1742:						
Erakatak--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: slope
Rugar-----------	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Tusel-----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1744:						
Erakatak--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: small stones, slope
Graley----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Tusel	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1746:						
Booford	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Cotant	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope, depth to rock
Blitzen	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1800:						
Bregar	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Bregar	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Carstump	Severe: depth to rock, large stones, slope	Severe: slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1802:						
Bregar	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1803:						
Bregar	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Rock Outcrop.						
1805:						
Bregar	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, large stones, slope
Deseed	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, large stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Linkup----------	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: small stones, large stones, depth to rock
1810:						
Shively---------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Ninemile--------	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, depth to rock
Hackwood--------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1830:						
Vanwyper--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: slope
Alyan-----------	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
Vanwyper--------	Severe: depth to rock	Moderate: shrink-swell, depth to rock, large stones	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: low strength	Moderate: small stones, droughty, depth to rock
1831:						
Vanwyper--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Trunk	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Vanwyper	Severe: depth to rock	Moderate: shrink-swell, depth to rock, large stones	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: low strength	Moderate: large stones, droughty, depth to rock
1832:						
Vanwyper	Severe: depth to rock, large stones, slope	Severe: slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope, large stones	Severe: low strength, slope, large stones	Severe: large stones, slope
Trunk	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, large stones, slope
Trunk	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
1833:						
Vanwyper	Severe: depth to rock, large stones, slope	Severe: slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope, large stones	Severe: low strength, slope, large stones	Severe: large stones, slope
Rock Outcrop.						
Trunk	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, large stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1852:						
Gumble	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: depth to rock
Tuffo	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope, frost action	Severe: depth to rock
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
1853:						
Gumble	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: small stones, slope, depth to rock
Tuffo	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Rock Outcrop.						
1854:						
Gumble	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: small stones, slope, depth to rock
Chen	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1855:						
Gumble	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope, depth to rock
Puett Variant	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock
Xeric Torriorthents	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope, depth to rock
1870:						
Chen	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Graley	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Quarz	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
1871:						
Chen	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Cotant----------	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones, depth to rock
Graley----------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
1872:						
Chen----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Sumine----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Tusel----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1874:						
Chen----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Quarz----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Arcia----------	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1875:						
Chen	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Bregar	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Ramires	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: large stones, droughty, slope
1876:						
Chen	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Chen	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Arcia	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
1877:						
Chen	Severe: depth to rock, large stones, slope	Severe: slope, depth to rock, large stones	Severe: depth to rock, slope, large stones	Severe: slope, depth to rock, large stones	Severe: depth to rock, slope, large stones	Severe: large stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Bregar----------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Loncan----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
1880:						
Chen----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Blitzen----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Pequop----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1881:						
Chen----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Blitzen----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Loncan----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1888:						
Chen	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock
Pie Creek	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: large stones, slope
Alyan	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
1889:						
Chen	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
1910:						
Mahala	Moderate: depth to rock, too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope, depth to rock
Ramires	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: large stones, droughty, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1920:						
Lerrow	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: large stones, slope
Chen	Severe: depth to rock, large stones, slope	Severe: slope, depth to rock, large stones	Severe: depth to rock, slope, large stones	Severe: slope, depth to rock, large stones	Severe: depth to rock, slope, large stones	Severe: large stones, slope, depth to rock
Cotant	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope, depth to rock
1921:						
Lerrow	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Quarz	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Rugar	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
1931:						
Tweener	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Reluctan	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
1932:						
Tweener	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Sumine	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Cleavage	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
1933:						
Tweener	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: large stones, slope, depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Cleavage	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1950:						
McIvey	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
McIvey	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, large stones, slope
Tusel	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1980:						
Thwoop	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, shrink-swell, slope	Moderate: small stones, large stones, slope
Trunk	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, slope, depth to rock
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
2000:						
Alyan	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
Cotant	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Akler----------	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: depth to rock
2001:						
Alyan----------	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
Bregar----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Alyan----------	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell	Moderate: small stones, slope, depth to rock
2002:						
Alyan----------	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
Alyan----------	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell	Moderate: small stones, slope, depth to rock
Quarz----------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
2003:						
Alyan	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: small stones, slope
Deepeek	Severe: cemented pan	Moderate: slope, cemented pan	Severe: cemented pan	Severe: slope	Moderate: cemented pan, slope, frost action	Severe: large stones, cemented pan
Susie Creek	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
2004:						
Alyan	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, slope	Severe: slope
Ninemile	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Alyan	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell	Moderate: small stones, slope, depth to rock
2005:						
Alyan	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell	Moderate: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Graley----------	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: small stones, slope, depth to rock
Rock Outcrop.						
2171:						
Deseed----------	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Reluctan--------	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Cleavage--------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
2173:						
Deseed----------	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Quarz-----------	Severe: depth to rock	Moderate: shrink-swell, depth to rock, large stones	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Moderate: depth to rock, shrink-swell, large stones	Severe: large stones
2205:						
Coltroop--------	Severe: depth to rock, cemented pan	Severe: cemented pan	Severe: depth to rock, cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Moderate: large stones, depth to rock
2206:						
Coltroop	Severe: depth to rock, cemented pan	Severe: cemented pan	Severe: depth to rock, cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Vanwyper	Severe: depth to rock	Moderate: shrink-swell, depth to rock, large stones	Severe: depth to rock	Moderate: shrink-swell, depth to rock, large stones	Severe: low strength	Moderate: small stones, large stones, droughty
2310:						
Bulake	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Deunah	Severe: depth to rock, cemented pan	Severe: shrink-swell	Severe: depth to rock, cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: large stones, depth to rock
Bulake	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, depth to rock
2311:						
Bulake	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: large stones, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Hatpeak---	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
Petan---	Severe: depth to rock, cemented pan	Severe: depth to rock	Severe: depth to rock, cemented pan	Severe: depth to rock	Severe: depth to rock, low strength	Severe: depth to rock
2505:						
Buffaran---	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
Zevadez---	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
2511:						
Bilbo---	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Alley---	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Deepeek---	Severe: cemented pan, slope	Severe: slope	Severe: cemented pan, slope	Severe: slope	Severe: slope	Severe: large stones, slope, cemented pan
2514:						
Bilbo---	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Susie Creek-----	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
Buffaran--------	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
2521:						
Dewar-----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: large stones, cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: large stones, cemented pan
2522:						
Dewar-----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: large stones, cemented pan
Sodhouse--------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
2531:						
Clurde Variant--	Severe: depth to rock	Severe: flooding	Severe: flooding, depth to rock	Severe: flooding	Severe: flooding	Moderate: flooding, depth to rock
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Rock Outcrop.						
2541:						
Kelk	Moderate: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, flooding	Moderate: flooding
2545:						
Kelk	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Severe: low strength	Slight
Clurde	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight
2555:						
Piline	Severe: cutbanks cave, ponding	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: shrink-swell, low strength, ponding	Severe: ponding
2560:						
McCleary	Severe: wetness	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: shrink-swell, low strength, wetness	Severe: wetness
2561:						
McCleary	Moderate: too clayey	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength	Moderate: large stones
2571:						
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: large stones, cemented pan
2572:						
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
2573:						
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: large stones, cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
2575:						
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Dacker----------	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: low strength	Moderate: cemented pan
Shalake---------	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan	Moderate: cemented pan, frost action	Moderate: cemented pan
2577:						
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Orovada	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
2600:						
Shalake	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan	Moderate: cemented pan, frost action	Moderate: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Shalake	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan	Moderate: cemented pan, frost action	Moderate: cemented pan
2611:						
Dacker	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: low strength	Moderate: cemented pan
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
2612:						
Dacker	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: low strength	Moderate: cemented pan
Zevadez	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
2615:						
Dacker	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: low strength	Moderate: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
2621:						
Gochea----------	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell, slope	Moderate: shrink-swell, frost action	Moderate: small stones, droughty
Susie Creek-----	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
Carstump--------	Severe: depth to rock, large stones, slope	Severe: slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope
2641:						
Olac------------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
Snowmore--------	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Moderate: large stones, depth to rock
2650:						
Wieland---------	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, droughty, slope
Bartome---------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Zevadez	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
2651:						
Wieland	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: droughty, slope
Buffaran	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
2652:						
Wieland	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: droughty
Dacker	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: low strength	Moderate: cemented pan
Zevadez	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
2655:						
Wieland	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: droughty, slope
Gumble	Severe: depth to rock, slope	Severe: shrink-swell, slope	Severe: depth to rock, slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Bilbo	Severe: cutbanks cave	Moderate: shrink-swell, slope	Moderate: slope, shrink-swell	Severe: slope	Moderate: shrink-swell, slope	Moderate: small stones, large stones, droughty
2656:						
Wieland	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: droughty
Hunnton	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
Thwoop	Severe: depth to rock	Moderate: shrink-swell, depth to rock	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Moderate: depth to rock, shrink-swell, frost action	Moderate: small stones, large stones, depth to rock
2658:						
Wieland	Severe: slope	Severe: shrink-swell, slope	Severe: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: small stones, slope
2666:						
Puett	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Orovada	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope, frost action	Moderate: slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
2667:						
Puett	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Rock Outcrop.						
Clurde	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, slope	Moderate: shrink-swell, frost action	Slight
2668:						
Puett	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Yuko	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: low strength, slope	Severe: slope, depth to rock
Zevadez	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
2710:						
Ramires	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope, frost action	Moderate: slope, depth to rock
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
Bilbo	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
2711:						
Ramires	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope, frost action	Moderate: slope, depth to rock
Bilbo	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Buffaran	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
2741:						
Wilsor	Moderate: slope	Moderate: shrink-swell, slope	Moderate: slope, shrink-swell	Severe: slope	Moderate: shrink-swell, slope, frost action	Moderate: slope
Wilsor	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
2751:						
Yuko	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: depth to rock	Severe: slope	Severe: low strength	Severe: depth to rock
Chime	Moderate: depth to rock, slope	Moderate: shrink-swell, slope	Moderate: depth to rock, slope, shrink-swell	Severe: slope	Moderate: shrink-swell, slope, frost action	Moderate: small stones, slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight
2775:						
Zevadez---------	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
Bartome---------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
Wieland---------	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: droughty
2776:						
Zevadez---------	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
2777:						
Zevadez---------	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Wieland---------	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: droughty
Clurde----------	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
2778:						
Zevadez	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Yuko	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: depth to rock	Severe: slope	Severe: low strength	Severe: depth to rock
Kelk	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Severe: low strength	Slight
2780:						
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Severe: large stones
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Moderate: large stones, depth to rock
2781:						
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Severe: large stones
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, slope, depth to rock	Severe: low strength	Severe: large stones

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Moderate: large stones, depth to rock
2782:						
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Moderate: large stones, depth to rock
Zevadez	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: low strength	Severe: large stones
2783:						
Snowmore	Severe: depth to rock, cemented pan	Moderate: shrink-swell, depth to rock, cemented pan	Severe: depth to rock, cemented pan	Moderate: shrink-swell, slope, depth to rock	Severe: low strength	Moderate: large stones, depth to rock
Willhill	Severe: depth to rock	Moderate: slope, depth to rock, large stones	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope, large stones	Moderate: small stones, large stones, droughty
2790:						
Old Camp	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock	Severe: depth to rock, slope	Severe: slope, depth to rock

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Troughs	Severe: depth to rock, cemented pan	Severe: cemented pan	Severe: depth to rock, cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Olac	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Severe: depth to rock	Severe: small stones, depth to rock
2801:						
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
Alley	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Clurde	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, frost action	Slight
2802:						
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
Buffaran	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
2803:						
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Buffaran	Severe: cemented pan	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell, low strength	Severe: cemented pan
Ramires	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope, frost action	Moderate: slope, depth to rock
2804:						
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
2805:						
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
2807:						
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
Coltroop	Severe: depth to rock, cemented pan	Severe: cemented pan	Severe: depth to rock, cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Zevadez	Slight	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
2808:						
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
Susie Creek	Moderate: too clayey	Severe: shrink-swell	Moderate: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Slight
Wieland	Moderate: too clayey	Severe: shrink-swell	Slight	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: droughty
2809:						
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan, low strength	Severe: cemented pan
Dacker	Severe: cemented pan	Moderate: shrink-swell, cemented pan	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Severe: low strength	Moderate: cemented pan
2820:						
Alley	Moderate: large stones, slope	Moderate: slope, large stones	Moderate: slope, large stones	Severe: slope	Moderate: slope, frost action, large stones	Moderate: small stones, large stones, slope
Vanwyper	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Severe: depth to rock	Severe: slope	Severe: low strength	Moderate: small stones, large stones, droughty
Rock Outcrop.						

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
2822:						
Alley	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Rock Outcrop.						
Rubble Land.						
3000:						
Handy	Severe: cutbanks cave, slope	Severe: shrink-swell, slope	Severe: slope	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
Wilsor	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, slope	Moderate: shrink-swell, frost action	Slight
Deseed	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, large stones, slope
3010:						
Relley	Moderate: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding
Kelk	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Severe: low strength	Slight
3020:						
Sodhouse	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
3030:						
Deepeek	Severe: cemented pan	Moderate: slope, cemented pan	Severe: cemented pan	Severe: slope	Moderate: cemented pan, slope, frost action	Severe: large stones, cemented pan
Alley	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones, slope
3100:						
Ratsow	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope, depth to rock
Quarz	Severe: depth to rock	Moderate: shrink-swell, depth to rock, large stones	Severe: depth to rock	Moderate: shrink-swell, slope, depth to rock	Moderate: depth to rock, shrink-swell, large stones	Severe: large stones
Susie Creek	Moderate: too clayey, slope	Severe: shrink-swell	Moderate: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
3510:						
Midraw	Severe: depth to rock, cemented pan	Severe: shrink-swell, cemented pan	Severe: depth to rock, cemented pan, shrink-swell	Severe: shrink-swell, cemented pan	Severe: cemented pan, shrink-swell	Severe: cemented pan
Troughs	Severe: depth to rock, cemented pan, large stones	Severe: cemented pan, large stones	Severe: depth to rock, cemented pan, large stones	Severe: slope, cemented pan, large stones	Severe: cemented pan, large stones	Severe: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Midraw----------	Severe: depth to rock, cemented pan	Severe: shrink-swell, cemented pan	Severe: depth to rock, cemented pan, shrink-swell	Severe: shrink-swell, slope, cemented pan	Severe: cemented pan, shrink-swell	Severe: cemented pan
3710:						
Petan----------	Severe: depth to rock, cemented pan	Severe: depth to rock	Severe: depth to rock, cemented pan	Severe: slope, depth to rock	Severe: depth to rock, low strength	Severe: depth to rock
Bulake----------	Severe: depth to rock	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: depth to rock
Rock Outcrop.						
3715:						
Petan----------	Severe: depth to rock, cemented pan	Severe: depth to rock	Severe: depth to rock, cemented pan	Severe: depth to rock	Severe: depth to rock, low strength	Severe: large stones, depth to rock
Deunah----------	Severe: depth to rock, cemented pan	Severe: shrink-swell	Severe: depth to rock, cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: large stones, depth to rock
Hatpeak----------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
3721:						
Hatpeak----------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Deunah----------	Severe: depth to rock, cemented pan	Severe: shrink-swell	Severe: depth to rock, cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: large stones, depth to rock
3722:						
Hatpeak---------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: cemented pan
Hatpeak---------	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope, cemented pan

TABLE 12.--SANITARY FACILITIES

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1:					
Rubble Land-----	Severe: poor filter, slope, large stones	Severe: seepage, slope, large stones	Severe: depth to rock, seepage, slope	Severe: seepage, slope	Poor: seepage, small stones, slope
120:					
Cotant----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, slope
Lerrow----------	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
Cotant----------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack
126:					
Cotant----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, slope
Lerrow----------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Akler-----------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
127:					
Cotant	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Lerrow	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
128:					
Cotant	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Graley	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
129:					
Cotant	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Chen	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Crooked Creek---	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
130:					
Cotant----------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack
Booford---------	Severe: depth to rock, percs slowly	Severe: depth to rock	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
140:					
Upville---------	Severe: flooding, poor filter	Severe: seepage, flooding	Severe: flooding, too sandy, large stones	Severe: flooding	Poor: seepage, too sandy, small stones
Upville---------	Severe: poor filter	Severe: seepage	Severe: too sandy, large stones	Slight	Poor: seepage, too sandy, small stones
141:					
Upville---------	Severe: poor filter	Severe: seepage	Severe: too sandy	Slight	Poor: seepage, too sandy, small stones
Kleckner--------	Severe: percs slowly	Severe: seepage, large stones	Moderate: large stones	Slight	Poor: small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
150:					
Gochea	Severe: percs slowly, poor filter	Severe: seepage	Severe: seepage, too sandy	Severe: seepage	Poor: seepage, too sandy, small stones
161:					
Sonoma	Severe: percs slowly	Slight	Moderate: too clayey	Slight	Fair: too clayey
162:					
Sonoma	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness	Severe: flooding	Fair: too clayey
184:					
Crooked Creek	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
185:					
Crooked Creek	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
Crooked Creek	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
186:					
Crooked Creek---	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
Crooked Creek---	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
Crooked Creek---	Severe: percs slowly	Slight	Severe: wetness, too clayey	Moderate: flooding	Poor: too clayey, hard to pack
188:					
Crooked Creek---	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
Welch----------	Severe: percs slowly	Moderate: slope, wetness	Severe: wetness	Moderate: flooding, wetness	Fair: too clayey
Crooked Creek---	Severe: percs slowly	Slight	Severe: wetness, too clayey	Moderate: flooding	Poor: too clayey, hard to pack
190:					
Heechee---------	Severe: percs slowly, poor filter	Severe: seepage, slope	Severe: seepage, large stones	Severe: seepage	Poor: seepage, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Heechee	Severe: percs slowly, poor filter	Severe: seepage, slope, large stones	Severe: seepage, large stones	Severe: seepage	Poor: seepage, small stones
200:					
Lynnbow	Severe: percs slowly	Moderate: depth to rock, slope	Severe: depth to rock	Moderate: depth to rock	Poor: thin layer
Rugar	Severe: percs slowly	Moderate: depth to rock, slope	Severe: depth to rock, too clayey	Moderate: depth to rock	Poor: too clayey, hard to pack
201:					
Lynnbow	Severe: percs slowly	Severe: slope	Severe: depth to rock	Moderate: depth to rock, slope	Poor: thin layer
Lerrow	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
Crooked Creek	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
210:					
Soonaker	Severe: depth to rock	Severe: seepage, depth to rock	Severe: depth to rock, seepage	Severe: depth to rock, seepage	Poor: depth to rock, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Bulake	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
220:					
Cavanaugh	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Rugar	Severe: percs slowly	Severe: slope	Severe: depth to rock, too clayey	Moderate: depth to rock, slope	Poor: too clayey, hard to pack
McIvey	Severe: percs slowly, slope	Severe: slope	Severe: slope, too clayey, large stones	Severe: slope	Poor: too clayey, small stones, slope
221:					
Cavanaugh	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
233:					
Bioya	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Bilbo	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
234:					
Bioya	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Shabliss	Severe: cemented pan, poor filter	Severe: seepage, cemented pan	Moderate: cemented pan, too sandy	Slight	Poor: cemented pan, seepage, small stones
Puett	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
235:					
Bioya	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Trunk	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Alley	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
236:					
Bioya	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Wieland	Severe: percs slowly	Moderate: seepage, slope	Slight	Slight	Fair: small stones
Kleckner	Severe: percs slowly	Severe: seepage, large stones	Moderate: large stones	Slight	Poor: small stones
241:					
Wickahoney	Severe: depth to rock	Severe: depth to rock, large stones	Severe: depth to rock, too clayey, large stones	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Deunah	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
Petan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, large stones	Severe: depth to rock, too clayey, large stones	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
270:					
Pernty	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Loncan----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Pernty----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
280:					
Humboldt--------	Severe: flooding, wetness, percs slowly	Severe: flooding, wetness	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
308:					
Akler-----------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Pattani---------	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Cotant----------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
309:					
Akler-----------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Susie Creek-----	Severe: percs slowly	Severe: slope	Moderate: slope, too clayey	Moderate: slope	Fair: too clayey, slope
457:					
Donna-----------	Severe: cemented pan, percs slowly	Severe: seepage, cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Stampede--------	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
Short Creek-----	Severe: percs slowly, slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
458:					
Donna-----------	Severe: cemented pan, percs slowly	Severe: seepage, cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Stampede--------	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
464:					
Stampede--------	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
570:					
Sumine----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
571:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Gando	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
572:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Reluctan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Cleavage	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
576:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
577:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
578:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
579:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Pernty	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, large stones	Severe: slope	Poor: small stones, slope
580:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Pie Creek	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Reluctan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
581:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
582:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, large stones	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
583:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Pernty	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
584:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, large stones	Severe: slope	Poor: small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
585:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Rock Outcrop.					
Rubble Land	Severe: poor filter, slope, large stones	Severe: seepage, slope, large stones	Severe: depth to rock, seepage, slope	Severe: seepage, slope	Poor: seepage, small stones, slope
586:					
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Loncan	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Cleavage	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
600:					
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Bullump	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Gando	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
601:					
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Blitzen	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
602:					
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
623:					
Soughe	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Rock Outcrop.					
624:					
Soughe	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Soughe	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Rock Outcrop.					
625:					
Soughe	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Shalper	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock, small stones
626:					
Soughe	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Vanwyper	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, hard to pack, large stones
Soughe	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
690:					
Welch	Severe: percs slowly	Moderate: slope, wetness	Severe: wetness	Moderate: flooding, wetness	Fair: too clayey
Welch	Severe: flooding, wetness, percs slowly	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Poor: wetness
920:					
Bullump	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Gando	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
921:					
Bullump	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Hackwood--------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
Cleavage--------	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
922:					
Bullump---------	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Cleavage--------	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Hapgood---------	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
1130:					
Clementine------	Severe: percs slowly	Slight	Moderate: flooding, too clayey	Moderate: flooding	Fair: too clayey
1131:					
Clementine------	Severe: percs slowly	Slight	Moderate: flooding, too clayey	Moderate: flooding	Fair: too clayey
Clementine------	Severe: percs slowly	Moderate: slope	Moderate: flooding, too clayey	Moderate: flooding	Fair: too clayey

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Clementine	Severe: flooding, wetness, percs slowly	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Fair: too clayey, wetness
1135:					
Clementine	Severe: percs slowly	Slight	Moderate: flooding, too clayey	Moderate: flooding	Fair: too clayey
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
1150:					
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
Wieland	Severe: percs slowly	Moderate: seepage, slope	Slight	Slight	Fair: small stones
1155:					
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
1156:					
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
Kortty	Moderate: cemented pan, percs slowly	Severe: seepage	Moderate: cemented pan	Slight	Fair: cemented pan, small stones, thin layer
1157:					
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Zevadez	Severe: percs slowly	Slight	Slight	Slight	Good
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
1190:					
Cherry Spring	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Enko	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
1191:					
Cherry Spring	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Wieland	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: small stones, slope
1193:					
Cherry Spring	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
1210:					
Skull Creek	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Shabliss	Severe: cemented pan, poor filter	Severe: seepage, cemented pan	Moderate: cemented pan, too sandy	Slight	Poor: cemented pan, seepage, small stones
Puett	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
1220:					
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Fulstone	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
1221:					
Hunnton	Severe: cemented pan, percs slowly, slope	Severe: cemented pan, slope	Severe: cemented pan, slope	Severe: slope	Poor: cemented pan, hard to pack, slope
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
Fulstone	Severe: cemented pan, slope	Severe: cemented pan, slope	Severe: cemented pan, slope	Severe: slope	Poor: cemented pan, hard to pack, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1223:					
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
Shabliss	Severe: cemented pan, poor filter	Severe: seepage, cemented pan	Moderate: cemented pan, too sandy	Slight	Poor: cemented pan, seepage, small stones
Puett	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
1224:					
Hunnton	Severe: cemented pan, percs slowly, slope	Severe: cemented pan, slope	Severe: cemented pan, slope	Severe: slope	Poor: cemented pan, hard to pack, slope
Trunk	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Shabliss	Severe: cemented pan, poor filter	Severe: seepage, cemented pan, slope	Moderate: cemented pan, slope, too sandy	Moderate: slope	Poor: cemented pan, seepage, small stones
1226:					
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Wieland---------	Severe: percs slowly	Moderate: seepage, slope	Slight	Slight	Fair: small stones
Clementine------	Severe: percs slowly	Moderate: slope	Moderate: flooding, too clayey	Moderate: flooding	Fair: too clayey
1227:					
Hunnton---------	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
Chiara----------	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan
Bilbo-----------	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope
1228:					
Hunnton---------	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Hunnton---------	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
1229:					
Hunnton---------	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Wieland---------	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: small stones, slope
1230:					
Fulstone--------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Hunnton---------	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
1231:					
Fulstone--------	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
Fulstone--------	Severe: cemented pan, slope	Severe: cemented pan, slope	Severe: cemented pan, slope	Severe: slope	Poor: cemented pan, hard to pack, slope
Hunnton---------	Severe: cemented pan, percs slowly, slope	Severe: cemented pan, slope	Severe: cemented pan, slope	Severe: slope	Poor: cemented pan, hard to pack, slope
1232:					
Fulstone--------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Fulstone--------	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Wieland---------	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: small stones, slope
1241:					
Enko------------	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
Shabliss--------	Severe: cemented pan, poor filter, slope	Severe: seepage, cemented pan, slope	Severe: slope	Severe: slope	Poor: cemented pan, seepage, small stones
Orovada---------	Moderate: percs slowly	Moderate: seepage, slope	Slight	Slight	Good
1242:					
Enko------------	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
Enko------------	Severe: percs slowly	Severe: seepage, slope	Moderate: slope	Moderate: slope	Fair: slope
1260:					
Kleckner--------	Severe: percs slowly	Severe: seepage, slope, large stones	Moderate: slope, large stones	Moderate: slope	Poor: small stones
Upville---------	Severe: poor filter	Severe: seepage	Severe: too sandy, large stones	Slight	Poor: seepage, too sandy, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Fulstone	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
1261:					
Kleckner	Severe: percs slowly	Severe: seepage, slope, large stones	Moderate: slope, large stones	Moderate: slope	Poor: small stones
Heechee	Severe: percs slowly, poor filter	Severe: seepage, slope, large stones	Severe: seepage, large stones	Severe: seepage	Poor: seepage, small stones
1290:					
Tweba	Severe: wetness	Moderate: seepage, wetness	Severe: wetness	Moderate: flooding, wetness	Fair: too sandy
1350:					
Shabliss	Severe: cemented pan, poor filter	Severe: seepage, cemented pan, slope	Moderate: cemented pan, slope, too sandy	Moderate: slope	Poor: cemented pan, seepage, small stones
Hunnton	Severe: cemented pan, percs slowly, slope	Severe: cemented pan, slope	Severe: cemented pan, slope	Severe: slope	Poor: cemented pan, hard to pack, slope
Bioya	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1351:					
Shabliss	Severe: cemented pan, poor filter	Severe: seepage, cemented pan	Moderate: cemented pan, too sandy	Slight	Poor: cemented pan, seepage, small stones
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
1352:					
Shabliss	Severe: cemented pan, poor filter	Severe: seepage, cemented pan, slope	Moderate: cemented pan, slope, too sandy	Moderate: slope	Poor: cemented pan, seepage, small stones
Skull Creek	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, small stones
Puett	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
1360:					
Orovada	Moderate: flooding, percs slowly	Moderate: seepage, slope	Moderate: flooding	Moderate: flooding	Good
1362:					
Orovada	Moderate: percs slowly	Moderate: seepage, slope	Slight	Slight	Good
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Wieland	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: small stones, slope
1363:					
Orovada	Moderate: flooding, percs slowly	Moderate: seepage	Moderate: flooding	Moderate: flooding	Good
Tweba	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Fair: wetness
Weso	Moderate: percs slowly	Severe: seepage	Moderate: too sandy	Slight	Fair: too sandy, small stones
1530:					
Creemon	Moderate: percs slowly	Severe: seepage	Severe: excess salt	Slight	Good
Placeritos	Moderate: percs slowly	Moderate: seepage	Moderate: too clayey	Slight	Fair: too clayey
1572:					
Weso	Moderate: percs slowly	Severe: seepage	Moderate: too sandy	Slight	Fair: too sandy, small stones
Orovada	Moderate: percs slowly	Moderate: seepage, slope	Slight	Slight	Good
Shabliss	Severe: cemented pan, poor filter, slope	Severe: seepage, cemented pan, slope	Severe: slope	Severe: slope	Poor: cemented pan, seepage, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1573:					
Weso	Moderate: percs slowly	Severe: seepage	Moderate: too sandy	Slight	Fair: too sandy, small stones
Orovada	Moderate: percs slowly	Moderate: seepage, slope	Slight	Slight	Good
Tweba	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness	Fair: wetness
1617:					
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Tweener	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, slope
1618:					
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1619:					
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Tusk	Severe: percs slowly, slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1621:					
Cleavage	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
Graley	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1622:					
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
1623:					
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1625:					
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1626:					
Cleavage	Severe: depth to rock	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
Carstump	Severe: depth to rock, percs slowly	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, small stones
Chen	Severe: depth to rock, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, too clayey, large stones	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
1628:					
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Chen	Severe: depth to rock, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, too clayey, large stones	Severe: depth to rock	Poor: depth to rock, too clayey, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Reluctan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1640:					
Tusk	Severe: percs slowly	Severe: slope	Moderate: slope, too clayey, large stones	Moderate: slope	Poor: small stones
Cleavage	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
Hackwood	Moderate: percs slowly, slope	Severe: slope	Moderate: slope, too clayey	Moderate: slope	Poor: small stones
1650:					
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Tusk	Severe: percs slowly, slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1651:					
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Reluctan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
1652:					
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Graley	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
1653:					
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Reluctan	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
Graley	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
1655:					
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Thwoop	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1656:					
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Gumble----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
1657:					
Ninemile--------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Alyan----------	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
1658:					
Ninemile--------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Vanwyper--------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, hard to pack, large stones
Ninemile--------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
1659:					
Ninemile--------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Carstump	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1660:					
Susie Creek	Severe: percs slowly	Severe: slope	Moderate: slope, too clayey	Moderate: slope	Fair: too clayey, slope
Pie Creek	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, slope
Pattani	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
1671:					
Linkup	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, hard to pack, large stones
Carstump	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Linkup	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Moderate: slope	Poor: depth to rock, hard to pack, large stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1672:					
Linkup	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, hard to pack, large stones
Carstump	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Linkup	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Moderate: slope	Poor: depth to rock, hard to pack, large stones
1673:					
Linkup	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack, small stones
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
1675:					
Linkup	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Snowmore	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
Ratsow	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack
1676:					
Linkup	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Moderate: slope	Poor: depth to rock, hard to pack, large stones
Quarz	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
1680:					
Carstump	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Reluctan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1685:					
Carstump	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Graley	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
1686:					
Carstump	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Reluctan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
1687:					
Carstump	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, large stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Linkup----------	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Moderate: slope	Poor: depth to rock, hard to pack, large stones
Carstump--------	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
1691:					
Pequop----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
Rock Outcrop.					
Rubble Land-----	Severe: poor filter, slope, large stones	Severe: seepage, slope, large stones	Severe: depth to rock, seepage, slope	Severe: seepage, slope	Poor: seepage, small stones, slope
1700:					
Cotant----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, slope
Quarz-----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Ninemile--------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1702:					
Cotant	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
McIvey	Severe: percs slowly	Severe: slope	Severe: too clayey, large stones	Moderate: slope	Poor: too clayey, small stones
Blitzen	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1703:					
Cotant	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, slope
Lerrow	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Bullump	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
1711:					
Reluctan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Ninemile--------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Cleavage--------	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
1712:					
Reluctan--------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Sumine----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Cleavage--------	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
1713:					
Reluctan--------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Erakatak--------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Rugar	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, too clayey	Severe: slope	Poor: too clayey, hard to pack, slope
1720:					
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
1725:					
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Loncan	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1726:					
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1730:					
Graley	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Erakatak	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Chen	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
1732:					
Graley	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Ninemile	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
1733:					
Graley	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Loncan	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1740:					
Erakatak	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Cleavage	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1741:					
Erakatak	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Chen	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
Tusk	Severe: percs slowly, slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1742:					
Erakatak	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Rugar	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, too clayey	Severe: slope	Poor: too clayey, hard to pack, slope
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, large stones	Severe: slope	Poor: small stones, slope
1744:					
Erakatak	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Graley	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, large stones	Severe: slope	Poor: small stones, slope
1746:					
Booford	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
Cotant	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, slope
Blitzen	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1800:					
Bregar	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Bregar	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Carstump	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, large stones, slope
1802:					
Bregar	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Moderate: slope	Poor: depth to rock
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1803:					
Bregar	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Rock Outcrop.					
1805:					
Bregar	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Deseed	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
Linkup	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Moderate: slope	Poor: depth to rock, hard to pack, large stones
1810:					
Shively	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: slope
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1830:					
Vanwyper	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, large stones
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Vanwyper	Severe: depth to rock, percs slowly	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack, large stones
1831:					
Vanwyper	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, hard to pack, large stones
Trunk	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Vanwyper	Severe: depth to rock, percs slowly	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Slight	Poor: depth to rock, hard to pack, large stones
1832:					
Vanwyper	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, hard to pack, large stones
Trunk	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
Trunk	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1833:					
Vanwyper	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, hard to pack, large stones
Rock Outcrop.					
Trunk	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
1852:					
Gumble	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Tuffo	Severe: depth to rock	Severe: seepage, depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
1853:					
Gumble	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Tuffo	Severe: depth to rock, slope	Severe: seepage, depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Rock Outcrop.					
1854:					
Gumble	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Chen	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
1855:					
Gumble	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Puett Variant	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Xeric Torriorthents	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
1870:					
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Graley	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1871:					
Chen	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
Cotant	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Graley	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
1872:					
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Tusel	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, large stones	Severe: slope	Poor: small stones, slope
1874:					
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Arcia	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
1875:					
Chen	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
Bregar	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
Ramires	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1876:					
Chen	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, small stones
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Arcia	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, hard to pack
1877:					
Chen	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Bregar	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
Loncan	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1880:					
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Blitzen	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1881:					
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Blitzen	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Loncan	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1888:					
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Pie Creek	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
1889:					
Chen	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1910:					
Mahala	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Ramires	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
1920:					
Lerrow	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Chen	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Cotant----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, slope
1921:					
Lerrow----------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Quarz----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Rugar----------	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, too clayey	Severe: slope	Poor: too clayey, hard to pack, slope
1931:					
Tweener---------	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, slope
Cleavage--------	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
Reluctan--------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
1932:					
Tweener	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, slope
Sumine	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Cleavage	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, small stones, slope
1933:					
Tweener	Severe: depth to rock, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope	Poor: depth to rock, slope
Pequop	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
Cleavage	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
1950:					
McIvey	Severe: percs slowly, slope	Severe: slope	Severe: slope, too clayey	Severe: slope	Poor: too clayey, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
McIvey----------	Severe: percs slowly, slope	Severe: slope, large stones	Severe: slope, too clayey, large stones	Severe: slope	Poor: too clayey, small stones, slope
Tusel----------	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, large stones	Severe: slope	Poor: small stones, slope
1980:					
Thwoop----------	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
Trunk----------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
Pequop----------	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
2000:					
Alyan----------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Cotant----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Akler	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
2001:					
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Bregar	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Alyan	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
2002:					
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Alyan	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
Quarz	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
2003:					
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Deepeek	Severe: cemented pan, percs slowly	Severe: cemented pan, slope, large stones	Moderate: cemented pan, slope	Moderate: slope	Poor: cemented pan
Susie Creek	Severe: percs slowly	Severe: slope	Moderate: slope, too clayey	Moderate: slope	Fair: too clayey, slope
2004:					
Alyan	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Ninemile	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Alyan	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones
2005:					
Alyan	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Graley----------	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope, too clayey	Severe: depth to rock, slope	Poor: depth to rock, too clayey, small stones
Rock Outcrop.					
2171:					
Deseed----------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Reluctan--------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Cleavage--------	Severe: depth to rock	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Severe: depth to rock	Poor: depth to rock, small stones
2173:					
Deseed----------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Quarz-----------	Severe: depth to rock	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Slight	Poor: depth to rock, small stones
2205:					
Coltroop--------	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Snowmore	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
2206:					
Coltroop	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
Vanwyper	Severe: depth to rock, percs slowly	Severe: depth to rock	Severe: depth to rock, large stones	Slight	Poor: depth to rock, hard to pack, large stones
2310:					
Bulake	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Deunah	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
Bulake	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
2311:					
Bulake	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Hatpeak	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan, too clayey	Severe: cemented pan	Poor: cemented pan, too clayey, hard to pack
Petan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, large stones	Severe: depth to rock, too clayey, large stones	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
2505:					
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Zevadez	Severe: percs slowly	Moderate: slope	Slight	Slight	Good
2511:					
Bilbo	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope
Alley	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope
Deepeek	Severe: cemented pan, percs slowly, slope	Severe: cemented pan, slope, large stones	Severe: slope	Severe: slope	Poor: cemented pan, slope
2514:					
Bilbo	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Susie Creek-----	Severe: percs slowly	Severe: slope	Moderate: slope, too clayey	Moderate: slope	Fair: too clayey, slope
Buffaran--------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
2521:					
Dewar-----------	Severe: cemented pan	Severe: seepage, cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2522:					
Dewar-----------	Severe: cemented pan	Severe: seepage, cemented pan, large stones	Severe: cemented pan	Slight	Poor: cemented pan
Sodhouse--------	Severe: cemented pan	Severe: seepage, cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2531:					
Clurde Variant--	Severe: flooding, depth to rock	Severe: seepage, depth to rock, flooding	Severe: flooding, depth to rock	Severe: flooding	Poor: depth to rock, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
Rock Outcrop.					
2541:					
Kelk	Severe: flooding, percs slowly	Severe: flooding	Severe: flooding	Severe: flooding	Good
2545:					
Kelk	Severe: percs slowly	Moderate: seepage	Slight	Slight	Good
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
2555:					
Piline	Severe: ponding, percs slowly	Severe: ponding	Severe: ponding, too clayey	Severe: ponding	Poor: too clayey, hard to pack, ponding
2560:					
McCleary	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, wetness
2561:					
McCleary	Severe: percs slowly	Slight	Severe: too clayey	Moderate: flooding	Poor: too clayey, hard to pack
2571:					
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2572:					
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2573:					
Chiara----------	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2575:					
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Dacker----------	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Shalake---------	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2577:					
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Orovada	Moderate: percs slowly	Moderate: seepage, slope	Slight	Slight	Good
2600:					
Shalake	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Shalake	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2611:					
Dacker	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
2612:					
Dacker	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Zevadez	Severe: percs slowly	Moderate: slope	Slight	Slight	Good
2615:					
Dacker	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2621:					
Gochea----------	Severe: percs slowly, poor filter	Severe: seepage	Severe: seepage, too sandy	Severe: seepage	Poor: seepage, too sandy, small stones
Susie Creek-----	Severe: percs slowly	Severe: slope	Moderate: slope, too clayey	Moderate: slope	Fair: too clayey, slope
Carstump--------	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope, large stones	Severe: depth to rock, slope, large stones	Severe: slope	Poor: depth to rock, large stones, slope
2641:					
Olac------------	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
Snowmore--------	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
2650:					
Wieland---------	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: small stones, slope
Bartome---------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Zevadez---------	Severe: percs slowly	Moderate: slope	Slight	Slight	Good

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
2651:					
Wieland	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: small stones, slope
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
2652:					
Wieland	Severe: percs slowly	Moderate: seepage, slope	Slight	Slight	Fair: small stones
Dacker	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Zevadez	Severe: percs slowly	Moderate: slope	Slight	Slight	Good
2655:					
Wieland	Severe: percs slowly	Severe: slope	Moderate: slope	Moderate: slope	Fair: small stones, slope
Gumble	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, hard to pack, small stones
Bilbo	Severe: percs slowly	Severe: seepage, slope	Moderate: slope	Moderate: slope	Poor: small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
2656:					
Wieland	Severe: percs slowly	Moderate: seepage, slope	Slight	Slight	Fair: small stones
Hunnton	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Thwoop	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan	Severe: depth to rock	Slight	Poor: depth to rock, small stones
2658:					
Wieland	Severe: percs slowly, slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
2666:					
Puett	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Orovada	Moderate: percs slowly, slope	Severe: slope	Moderate: slope	Moderate: slope	Fair: slope
2667:					
Puett	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Rock Outcrop.					
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
2668:					
Puett	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Yuko	Severe: depth to rock, slope	Severe: seepage, depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Zevadez	Severe: percs slowly	Moderate: slope	Slight	Slight	Good
2710:					
Ramires	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, large stones
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Bilbo	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope
2711:					
Ramires	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, large stones
Bilbo	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
2741:					
Wilsor	Moderate: depth to rock, percs slowly, slope	Severe: slope	Severe: depth to rock	Moderate: slope	Fair: depth to rock, small stones, slope
Wilsor	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: slope
2751:					
Yuko	Severe: depth to rock	Severe: seepage, depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
Chime	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
2775:					
Zevadez	Severe: percs slowly	Moderate: slope	Slight	Slight	Good
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Wieland	Severe: percs slowly	Moderate: seepage, slope	Slight	Slight	Fair: small stones
2776:					
Zevadez	Severe: percs slowly	Slight	Slight	Slight	Good

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Chiara----------	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2777:					
Zevadez---------	Severe: percs slowly	Slight	Slight	Slight	Good
Wieland---------	Severe: percs slowly	Moderate: seepage	Slight	Slight	Fair: small stones
Clurde----------	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
2778:					
Zevadez---------	Severe: percs slowly	Slight	Slight	Slight	Good
Yuko------------	Severe: depth to rock	Severe: seepage, depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
Kelk------------	Severe: percs slowly	Moderate: seepage	Slight	Slight	Good
2780:					
Snowmore--------	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
Snowmore--------	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
2781:					
Snowmore	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
Snowmore	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
Snowmore	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
2782:					
Snowmore	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
Zevadez	Severe: percs slowly	Slight	Slight	Slight	Good
Snowmore	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
2783:					
Snowmore	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
Willhill	Severe: depth to rock	Severe: depth to rock, slope, large stones	Severe: depth to rock, large stones	Moderate: slope	Poor: depth to rock, small stones

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
2790:					
Old Camp	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Troughs	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, large stones	Severe: depth to rock, cemented pan, large stones	Slight	Poor: depth to rock, small stones
Olac	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
2801:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Alley	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope
Clurde	Severe: percs slowly	Severe: seepage	Slight	Slight	Good
2802:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
2803:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, hard to pack
Ramires	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, large stones
2804:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2805:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2807:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Coltroop	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock
Zevadez	Severe: percs slowly	Moderate: slope	Slight	Slight	Good
2808:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Susie Creek	Severe: percs slowly	Moderate: slope	Moderate: too clayey	Slight	Fair: too clayey

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Wieland	Severe: percs slowly	Moderate: seepage, slope	Slight	Slight	Fair: small stones
2809:					
Bartome	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Dacker	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
2820:					
Alley	Severe: percs slowly	Severe: seepage, slope	Moderate: slope, large stones	Moderate: slope	Poor: small stones
Vanwyper	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock, large stones	Moderate: slope	Poor: depth to rock, hard to pack, large stones
Rock Outcrop.					
2822:					
Alley	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope
Rock Outcrop.					
Rubble Land.					
3000:					
Handy	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Wilsor	Moderate: depth to rock, percs slowly	Moderate: seepage, depth to rock, slope	Severe: depth to rock	Slight	Fair: depth to rock, small stones, thin layer
Deseed	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
3010:					
Relley	Severe: flooding	Severe: flooding	Severe: flooding, excess salt	Severe: flooding	Good
Kelk	Severe: percs slowly	Moderate: seepage	Slight	Slight	Good
3020:					
Sodhouse	Severe: cemented pan	Severe: seepage, cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
Chiara	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Slight	Poor: cemented pan
3030:					
Deepsek	Severe: cemented pan, percs slowly	Severe: cemented pan, slope, large stones	Moderate: cemented pan, slope	Moderate: slope	Poor: cemented pan
Alley	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope, large stones	Severe: slope	Poor: small stones, slope

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
3100:					
Ratsow	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Quarz	Severe: depth to rock	Severe: depth to rock, large stones	Severe: depth to rock, large stones	Slight	Poor: depth to rock, small stones
Susie Creek	Severe: percs slowly	Severe: slope	Moderate: slope, too clayey	Moderate: slope	Fair: too clayey, slope
3510:					
Midraw	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Slight	Poor: depth to rock, small stones
Troughs	Severe: depth to rock, cemented pan, large stones	Severe: depth to rock, cemented pan, slope	Severe: depth to rock, cemented pan, large stones	Moderate: slope	Poor: depth to rock, large stones
Midraw	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, slope	Severe: depth to rock, cemented pan	Moderate: slope	Poor: depth to rock, small stones
3710:					
Petan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, slope	Severe: depth to rock, too clayey, large stones	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Bulake----------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock, too clayey	Severe: depth to rock	Poor: depth to rock, too clayey, hard to pack
Rock Outcrop.					
3715:					
Petan----------	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, large stones	Severe: depth to rock, too clayey, large stones	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
Deunah----------	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
Hatpeak---------	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan, too clayey	Severe: cemented pan	Poor: cemented pan, too clayey, hard to pack
3721:					
Hatpeak---------	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan, too clayey	Severe: cemented pan	Poor: cemented pan, too clayey, hard to pack
Deunah----------	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack

TABLE 12.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
3722:					
Hatpeak---------	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: cemented pan, too clayey	Severe: cemented pan	Poor: cemented pan, too clayey, hard to pack
Hatpeak---------	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan, too clayey	Severe: cemented pan	Poor: cemented pan, too clayey, hard to pack

TABLE 13.--CONSTRUCTION MATERIALS

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1:				
Rubble Land	Poor: large stones, slope	Improbable: small stones, large stones	Improbable: large stones	Poor: area reclaim, small stones, slope
120:				
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Lerrow	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
126:				
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Lerrow	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Akler	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
127:				
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Lerrow	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
128:				
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Graley	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
129:				
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Chen	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Crooked Creek	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
130:				
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Booford	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
140:				
Upville	Fair: large stones	Probable	Probable	Poor: too sandy, small stones, area reclaim
Upville	Fair: large stones	Probable	Probable	Poor: too sandy, small stones, area reclaim
141:				
Upville	Fair: large stones	Probable	Probable	Poor: small stones, area reclaim
Kleckner	Fair: large stones	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
150:				
Gochea	Good	Probable	Probable	Poor: small stones, area reclaim

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
161:				
Sonoma	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey
162:				
Sonoma	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, excess salt
184:				
Crooked Creek	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
185:				
Crooked Creek	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Crooked Creek	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
186:				
Crooked Creek	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Crooked Creek	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Crooked Creek	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
188:				
Crooked Creek	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Welch	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Crooked Creek---	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
190:				
Heechee---	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: small stones, area reclaim
Heechee---	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: small stones, area reclaim
200:				
Lynnbow---	Poor: thin layer	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Rugar---	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
201:				
Lynnbow---	Poor: thin layer	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Lerrow---	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Crooked Creek---	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
210:				
Soonaker---	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Bulake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
220:				
Cavanaugh	Poor: depth to rock, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
Rugar	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
McIvey	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
221:				
Cavanaugh	Poor: depth to rock, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
Quarz	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
233:				
Bioya	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Fair: cemented pan, thin layer
Bilbo	Fair: slope	Probable	Probable	Poor: too clayey, small stones, area reclaim
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
234:				
Bioya	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Fair: cemented pan, thin layer
Shabliss	Good	Probable	Probable	Poor: cemented pan, small stones, area reclaim
Puett	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
235:				
Bioya	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Fair: cemented pan, thin layer
Trunk	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Alley	Fair: large stones, slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim, small stones, slope
236:				
Bioya	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Fair: cemented pan, thin layer
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Kleckner	Fair: large stones	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
241:				
Wickahoney	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Deunah	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Petan	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, cemented pan, too clayey

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
270:				
Pernty	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Loncan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Pernty	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
280:				
Humboldt	Poor: low strength, wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess salt, wetness
308:				
Akler	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Pattani	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
309:				
Akler	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Susie Creek	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
457:				
Donna	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
Stampede	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Short Creek	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
458:				
Donna	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
Stampede	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
464:				
Stampede	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
570:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
571:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Gando	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
572:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Reluctan	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
576:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
577:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Chen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
578:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
579:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Pernty	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
580:				
Sumine	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Pie Creek	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Reluctan	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
581:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
582:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
583:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Pernty	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
584:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
585:				
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Rock Outcrop.				

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Rubble Land-----	Poor: large stones, slope	Improbable: small stones, large stones	Improbable: large stones	Poor: area reclaim, small stones, slope
586:				
Sumine----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Loncan----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Cleavage--------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
600:				
Hapgood---------	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Bullump---------	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Gando-----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
601:				
Hapgood---------	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Blitzen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
602:				
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Hackwood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
623:				
Soughe	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Rock Outcrop.				
624:				
Soughe	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Soughe	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Rock Outcrop.				
625:				
Soughe	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Alyan	Poor: depth to rock, shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Shalper	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
626:				
Soughe	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Vanwyper	Poor: depth to rock, low strength, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
Soughe	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
690:				
Welch	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones
Welch	Fair: shrink-swell, low strength, wetness	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones
920:				
Bullump	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Gando	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
921:				
Bullump	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Hackwood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
922:				
Bullump	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1130:				
Clementine	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Good
1131:				
Clementine	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Good
Clementine	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Good
Clementine	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Good
1135:				
Clementine	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Good

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Clurde----------	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
1150:				
Clurde----------	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
Wieland---------	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1155:				
Clurde----------	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
1156:				
Clurde----------	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
Kortty----------	Fair: shrink-swell, thin layer	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim
1157:				
Clurde----------	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
1190:				
Cherry Spring	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Fair: cemented pan, too clayey, small stones
Enko	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
1191:				
Cherry Spring	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1193:				
Cherry Spring	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Fair: cemented pan, too clayey, small stones
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1210:				
Skull Creek-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Shabliss--------	Good	Probable	Probable	Poor: cemented pan, small stones, area reclaim
Puett-----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, slope
1220:				
Hunnton---------	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Hunnton---------	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Fulstone--------	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
1221:				
Hunnton---------	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Hunnton---------	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Fulstone	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
1223:				
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Shabliss	Good	Probable	Probable	Poor: cemented pan, small stones, area reclaim
Puett	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1224:				
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Trunk	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Shabliss	Good	Probable	Probable	Poor: cemented pan, small stones, area reclaim

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1226:				
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Clementine	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Good
1227:				
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Bilbo	Fair: slope	Probable	Probable	Poor: too clayey, small stones, area reclaim
1228:				
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1229:				
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1230:				
Fulstone	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1231:				
Fulstone	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
Fulstone	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1232:				
Fulstone	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
Fulstone	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1241:				
Enko	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Shabliss	Fair: slope	Probable	Probable	Poor: cemented pan, small stones, area reclaim
Orovada	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones, thin layer
1242:				
Enko	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Enko	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1260:				
Kleckner	Fair: large stones	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
Upville	Fair: large stones	Probable	Probable	Poor: too sandy, small stones, area reclaim
Fulstone	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
1261:				
Kleckner	Fair: large stones	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
Heechee	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: small stones, area reclaim
1290:				
Tweba	Good	Improbable: excess fines	Improbable: excess fines	Good
1350:				
Shabliss	Good	Probable	Probable	Poor: cemented pan, small stones, area reclaim

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Hunnton---	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Bioya---	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Fair: cemented pan, thin layer, slope
1351:				
Shabliss---	Good	Probable	Probable	Poor: cemented pan, small stones, area reclaim
Bartome---	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
1352:				
Shabliss---	Good	Probable	Probable	Poor: cemented pan, small stones, area reclaim
Skull Creek---	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Puett---	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1360:				
Orovada---	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones, thin layer

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1362:				
Orovada	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones, thin layer
Clurde	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1363:				
Orovada	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones, thin layer
Tweba	Good	Improbable: excess fines	Improbable: excess fines	Good
Weso	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
1530:				
Creemon	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Placeritos	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey
1572:				
Weso	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Orovada	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones, thin layer

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Shabliss--------	Fair: slope	Probable	Probable	Poor: cemented pan, small stones, area reclaim
1573:				
Weso----------	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Orovada---------	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones, thin layer
Tweba----------	Good	Improbable: excess fines	Improbable: excess fines	Good
1617:				
Cleavage--------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Hapgood---------	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Tweener---------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1618:				
Cleavage--------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Sumine----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Pequop----------	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1619:				
Cleavage--------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Tusk----------	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Sumine----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1621:				
Cleavage--------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Graley----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Cleavage--------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1622:				
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1623:				
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Hapgood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1625:				
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1626:				
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Carstump	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Chen	Poor: depth to rock, large stones	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1628:				
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Chen	Poor: depth to rock, large stones	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Reluctan	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1640:				
Tusk	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Hackwood	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim
1650:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Tusk	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1651:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Reluctan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1652:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Graley	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, large stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1653:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Reluctan	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Graley	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1655:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Thwoop	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Pequop	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1656:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Pequop	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Gumble	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1657:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1658:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Vanwyper	Poor: depth to rock, low strength, large stones	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1659:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Carstump	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1660:				
Susie Creek	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Pie Creek	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Pattani	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
1671:				
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Carstump	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
1672:				
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Carstump	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1673:				
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Quarz	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Alyan	Poor: depth to rock, shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1675:				
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Snowmore	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Ratsow	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
1676:				
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Quarz	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1680:				
Carstump	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Reluctan	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1685:				
Carstump	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Graley	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, large stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1686:				
Carstump	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Reluctan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1687:				
Carstump	Poor: depth to rock, large stones, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Carstump	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1691:				
Pequop	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Rock Outcrop.				

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Rubble Land-----	Poor: large stones, slope	Improbable: small stones, large stones	Improbable: large stones	Poor: area reclaim, small stones, slope
1700:				
Cotant----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Quarz----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Ninemile--------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1702:				
Cotant----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
McIvey----------	Fair: shrink-swell, low strength, large stones	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim
Blitzen---------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1703:				
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Lerrow	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Bullump	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1711:				
Reluctan	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
1712:				
Reluctan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1713:				
Reluctan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Erakatak	Poor: depth to rock, low strength, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones, slope
Rugar	Poor: shrink-swell, low strength, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1720:				
Quarz	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Alyan	Poor: depth to rock, shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1725:				
Quarz	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Loncan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1726:				
Quarz	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Pequop	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1730:				
Graley	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Erakatak	Poor: depth to rock, low strength, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones, slope
Chen	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1732:				
Graley	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Quarz	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1733:				
Graley	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Loncan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1740:				
Erakatak	Poor: depth to rock, low strength, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones, slope
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Hackwood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1741:				
Erakatak	Poor: depth to rock, low strength, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones, slope
Chen	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Tusk	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1742:				
Erakatak	Poor: depth to rock, low strength, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Rugar	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Tusel	Fair: depth to rock, shrink-swell, thin layer	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1744:				
Erakatak	Poor: depth to rock, low strength, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones, slope
Graley	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Tusel	Fair: depth to rock, shrink-swell, thin layer	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1746:				
Booford	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, slope
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Blitzen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1800:				
Bregar	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Bregar	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Carstump	Poor: depth to rock, large stones, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
1802:				
Bregar	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Pequop	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1803:				
Bregar	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Rock Outcrop.				
1805:				
Bregar	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Deseed	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Linkup	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
1810:				
Shively	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Hackwood--------	Fair: shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1830:				
Vanwyper--------	Poor: depth to rock, low strength, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones, slope
Alyan----------	Poor: depth to rock, shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Vanwyper--------	Poor: depth to rock, low strength	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones
1831:				
Vanwyper--------	Poor: depth to rock, low strength	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
Trunk----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Vanwyper--------	Poor: depth to rock, low strength	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1832:				
Vanwyper	Poor: depth to rock, low strength, large stones	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
Trunk	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Trunk	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1833:				
Vanwyper	Poor: depth to rock, low strength, large stones	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
Rock Outcrop.				
Trunk	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1852:				
Gumble	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey
Tuffo	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Hunnton---	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1853:				
Gumble---	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Tuffo---	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Rock Outcrop.				
1854:				
Gumble---	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Chen---	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1855:				
Gumble---	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Puett Variant---	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Xeric Torriorthents--	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1870:				
Chen----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Graley----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Quarz----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1871:				
Chen----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Cotant----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Graley----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1872:				
Chen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1874:				
Chen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Quarz	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Arcia	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1875:				
Chen	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Bregar----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Ramires---------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1876:				
Chen------------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Chen------------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Arcia-----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1877:				
Chen------------	Poor: depth to rock, large stones	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Bregar----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Loncan----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1880:				
Chen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Blitzen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Pequop	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1881:				
Chen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Blitzen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Loncan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1888:				
Chen	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Pie Creek	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1889:				
Chen	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1910:				
Mahala	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Ramires	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1920:				
Lerrow	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Chen	Poor: depth to rock, large stones	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1921:				
Lerrow	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Quarz	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Rugar	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1931:				
Tweener	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Reluctan	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1932:				
Tweener	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Sumine	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Cleavage	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1933:				
Tweener	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Pequop	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
1950:				
McIvey	Fair: shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
McIvey	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Tusel	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1980:				
Thwoop	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Trunk	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Pequop	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
2000:				
Alyan	Poor: depth to rock, shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Akler	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
2001:				
Alyan	Poor: depth to rock, shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Bregar	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
2002:				
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Quarz	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
2003:				
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Deepeek	Good	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
Susie Creek	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
2004:				
Alyan	Poor: depth to rock, shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
2005:				
Alyan	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Graley	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Rock Outcrop.				

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
2171:				
Deseed	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Reluctan	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Cleavage	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
2173:				
Deseed	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Quarz	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2205:				
Coltroop	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Snowmore	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2206:				
Coltroop	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
Vanwyper	Poor: depth to rock, low strength	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
2310:				
Bulake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Deunah	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Bulake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
2311:				
Bulake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Hatpeak	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Petan	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, cemented pan, too clayey
2505:				
Buffaran	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
2511:				
Bilbo	Poor: slope	Probable	Probable	Poor: too clayey, small stones, area reclaim
Alley	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim, small stones, slope
Deepeek	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones, slope
2514:				
Bilbo	Fair: slope	Probable	Probable	Poor: too clayey, small stones, area reclaim
Susie Creek	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Buffaran	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey
2521:				
Dewar	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Chiara----------	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Chiara----------	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, large stones
2522:				
Dewar-----------	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
Sodhouse--------	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
2531:				
Clurde Variant--	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Clurde----------	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
Rock Outcrop.				
2541:				
Kelk------------	Fair: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Fair: excess salt
2545:				
Kelk------------	Fair: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Fair: excess salt

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Clurde	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
2555:				
Piline	Poor: shrink-swell, low strength, wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, wetness
2560:				
McCleary	Poor: shrink-swell, low strength, wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, wetness
2561:				
McCleary	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
2571:				
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, large stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, large stones
2572:				
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
2573:				
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, large stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, large stones
2575:				
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Dacker	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Shalake	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2577:				
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Orovada	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones, thin layer
2600:				
Shalake	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Shalake	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2611:				
Dacker	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
2612:				
Dacker	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
2615:				
Dacker	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
2621:				
Gochea	Good	Probable	Probable	Poor: small stones, area reclaim
Susie Creek	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Carstump	Poor: depth to rock, large stones	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones, slope
2641:				
Olac	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Snowmore	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2650:				
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
2651:				
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Buffaran	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
2652:				
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Dacker	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
2655:				
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Gumble	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Bilbo	Good	Probable	Probable	Poor: too clayey, small stones, area reclaim
2656:				
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Hunnton	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Thwoop----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
2658:				
Wieland---------	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
2666:				
Puett-----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, slope
Orovada---------	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones, thin layer, slope
2667:				
Puett-----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Rock Outcrop.				
Clurde----------	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
2668:				
Puett-----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Yuko	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, slope
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
2710:				
Ramires	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Bilbo	Fair: slope	Probable	Probable	Poor: too clayey, small stones, area reclaim
2711:				
Ramires	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Bilbo	Poor: slope	Probable	Probable	Poor: too clayey, small stones, area reclaim
Buffaran	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey
2741:				
Wilsor	Poor: thin layer	Improbable: excess fines	Improbable: excess fines	Poor: small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Wilsor	Poor: thin layer	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
2751:				
Yuko	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
Chime	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Clurde	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
2775:				
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
2776:				
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
2777:				
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Wieland---------	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Clurde----------	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
2778:				
Zevadez---------	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Yuko------------	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
Kelk------------	Fair: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Fair: excess salt
2780:				
Snowmore--------	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Snowmore--------	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2781:				
Snowmore--------	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Snowmore--------	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Snowmore	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2782:				
Snowmore	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Snowmore	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2783:				
Snowmore	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Willhill	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2790:				
Old Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Troughs	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
Olac	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
2801:				
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Alley	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Clurde	Good	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones, area reclaim
2802:				
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Buffaran	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey
2803:				
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Buffaran	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey
Ramires	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
2804:				
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Chiara	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
2805:				
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
2807:				
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Coltroop	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Zevadez	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2808:				
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Susie Creek	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Wieland	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
2809:				
Bartome	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Dacker	Poor: cemented pan, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
2820:				
Alley	Fair: large stones	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim, small stones
Vanwyper	Poor: depth to rock, low strength	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, small stones
Rock Outcrop.				
2822:				
Alley	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim, small stones, slope
Rock Outcrop.				
Rubble Land.				
3000:				
Handy	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
Wilsor	Poor: thin layer	Improbable: excess fines	Improbable: excess fines	Poor: small stones

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Deseed----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
3010:				
Relley----------	Fair: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Kelk----------	Fair: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Fair: excess salt
3020:				
Sodhouse--------	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
Chiara----------	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
3030:				
Deepeek---------	Good	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
Alley----------	Fair: large stones, slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim, small stones, slope
3100:				
Ratsow----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Quarz	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Susie Creek	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
3510:				
Midraw	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
Troughs	Poor: depth to rock, large stones	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: cemented pan, small stones
Midraw	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
3710:				
Petan	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, cemented pan, too clayey
Bulake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Rock Outcrop.				
3715:				
Petan	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, cemented pan, too clayey

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Deunah	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Hatpeak	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
3721:				
Hatpeak	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Deunah	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
3722:				
Hatpeak	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Hatpeak	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey

TABLE 14.--WATER MANAGEMENT

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1:						
Rubble Land-----	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones
120:						
Cotant----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Lerrow----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
Cotant----------	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Percs slowly
126:						
Cotant----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Lerrow----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Akler-----------	Severe: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Erodes easily
127:						
Cotant----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Ninemile--------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Lerrow----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
128:						
Cotant----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Graley----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
129:						
Cotant----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Chen------------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Crooked Creek---	Slight	Severe: wetness	Severe: slow refill	Percs slowly, Flooding, Frost action	Wetness, Percs slowly, Flooding	Wetness, Percs slowly
130:						
Cotant----------	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Booford	Moderate: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Erodes easily, Percs slowly
140:						
Upville	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Large stones, Droughty, Flooding	Large stones, Too sandy
Upville	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Large stones, Droughty	Large stones, Too sandy
141:						
Upville	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Too sandy
Kleckner	Severe: seepage	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Percs slowly
150:						
Gochea	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, Droughty, Rooting depth	Too sandy
161:						
Sonoma	Slight	Moderate: piping	Severe: no water	Deep to water	Erodes easily	Erodes easily
162:						
Sonoma	Slight	Moderate: piping, wetness	Severe: slow refill	Deep to water	Erodes easily, Flooding, Excess salt	Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
184:						
Crooked Creek---	Slight	Severe: wetness	Severe: slow refill	Percs slowly, Flooding, Frost action	Wetness, Percs slowly, Flooding	Wetness, Percs slowly
185:						
Crooked Creek---	Slight	Severe: wetness	Severe: slow refill	Percs slowly, Flooding, Frost action	Wetness, Percs slowly, Flooding	Wetness, Percs slowly
Crooked Creek---	Slight	Severe: wetness	Severe: slow refill	Percs slowly, Flooding, Frost action	Wetness, Percs slowly, Flooding	Wetness, Percs slowly
186:						
Crooked Creek---	Slight	Severe: wetness	Severe: slow refill	Percs slowly, Flooding, Frost action	Wetness, Percs slowly, Flooding	Wetness, Percs slowly
Crooked Creek---	Slight	Severe: wetness	Severe: slow refill	Percs slowly, Flooding, Frost action	Wetness, Percs slowly, Flooding	Wetness, Percs slowly
Crooked Creek---	Slight	Moderate: hard to pack	Severe: no water	Deep to water	Percs slowly, Erodes easily	Erodes easily, Percs slowly
188:						
Crooked Creek---	Slight	Severe: wetness	Severe: slow refill	Percs slowly, Flooding, Frost action	Wetness, Percs slowly, Flooding	Wetness, Percs slowly
Welch----------	Moderate: slope	Slight	Severe: slow refill	Deep to water	Slope	Favorable
Crooked Creek---	Slight	Moderate: hard to pack	Severe: no water	Deep to water	Percs slowly, Erodes easily	Erodes easily, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
190:						
Heechee	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones
Heechee	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones
200:						
Lynnbow	Moderate: depth to rock, slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly, Erodes easily	Erodes easily
Rugar	Moderate: depth to rock, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly	Percs slowly
201:						
Lynnbow	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly, Erodes easily	Slope, Erodes easily
Lerrow	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
Crooked Creek	Moderate: slope	Severe: wetness	Severe: slow refill	Percs slowly, Flooding, Frost action	Slope, Wetness, Percs slowly	Wetness, Percs slowly
210:						
Soonaker	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Depth to rock, Erodes easily, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Bulake	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Percs slowly
220:						
Cavanaugh	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Rugar	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly	Slope, Percs slowly
McIvey	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Percs slowly
221:						
Cavanaugh	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
Alyan	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
233:						
Bioya	Moderate: seepage, cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Bilbo	Severe: seepage, slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Percs slowly
Chiara	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
234:						
Bioya	Moderate: seepage, cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
Shabliss	Severe: seepage, cemented pan	Severe: seepage	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Too sandy
Puett	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Depth to rock
235:						
Bioya	Moderate: seepage, cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
Trunk	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Alley	Severe: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Large stones, Excess salt	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
236:						
Bioya	Moderate: seepage, cemented pan	Severe: piping	Severe: no water	Deep to water	Soil blowing, Cemented pan, Erodes easily	Cemented pan, Erodes easily, Soil blowing
Wieland	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Erodes easily
Kleckner	Severe: seepage	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Percs slowly
241:						
Wickahoney	Severe: depth to rock	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Depth to rock, Percs slowly
Deunah	Moderate: depth to rock, cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Cemented pan, Erodes easily
Petan	Severe: depth to rock, cemented pan	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Depth to rock, Cemented pan
270:						
Pernty	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
Loncan	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Pernty	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
280:						
Humboldt	Moderate: seepage	Severe: hard to pack, wetness, excess salt	Severe: slow refill, salty water	Flooding, Frost action, Excess salt	Wetness, Erodes easily, Flooding	Erodes easily, Wetness
308:						
Akler	Severe: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Erodes easily
Pattani	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Slow intake, Percs slowly	Slope, Depth to rock, Percs slowly
Cotant	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
309:						
Akler	Severe: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Erodes easily
Susie Creek	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly	Slope
457:						
Donna	Severe: seepage	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Stampede	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily
Short Creek	Severe: slope	Slight	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope
458:						
Donna	Severe: seepage	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
Stampede	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily
464:						
Stampede	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
570:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
571:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones
Gando	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
572:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
576:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
577:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
578:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
579:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Pernty	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
580:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Pie Creek	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Depth to rock
581:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
582:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones	Slope, Large stones
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
583:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Pernty	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
584:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones	Slope, Large stones
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
585:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Rock Outcrop.						
Rubble Land	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
586:						
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Loncan	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
600:						
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Bullump	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Gando	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
601:						
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Blitzen	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
602:						
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Hackwood	Severe: slope	Slight	Severe: no water	Deep to water	Slope, Erodes easily	Slope, Erodes easily
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones
623:						
Soughe	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Rock Outcrop.						
624:						
Soughe	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Soughe	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Rock Outcrop.						
625:						
Soughe	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Alyan	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Shalper	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Depth to rock
626:						
Soughe	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
Vanwyper	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Soughe	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
690:						
Welch	Moderate: slope	Slight	Severe: slow refill	Deep to water	Slope	Favorable
Welch	Moderate: slope	Severe: wetness	Severe: slow refill	Flooding, Frost action, Slope	Slope, Wetness, Flooding	Wetness
920:						
Bullump	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Gando	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
921:						
Bullump	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Hackwood	Severe: slope	Slight	Severe: no water	Deep to water	Slope, Erodes easily	Slope, Erodes easily
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
922:						
Bullump	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
1130:						
Clementine	Slight	Moderate: piping	Severe: no water	Deep to water	Erodes easily	Erodes easily
1131:						
Clementine	Slight	Moderate: piping	Severe: no water	Deep to water	Erodes easily	Erodes easily
Clementine	Moderate: slope	Moderate: piping	Severe: no water	Deep to water	Slope, Erodes easily	Erodes easily
Clementine	Slight	Severe: wetness	Severe: slow refill	Flooding, Frost action	Wetness, Erodes easily, Flooding	Erodes easily, Wetness

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1135:						
Clementine------	Slight	Moderate: piping	Severe: no water	Deep to water	Erodes easily	Erodes easily
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Soil blowing	Soil blowing
1150:						
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope, Soil blowing	Soil blowing
Wieland---------	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Favorable
1155:						
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Soil blowing	Soil blowing
1156:						
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Soil blowing	Soil blowing
Kortty----------	Severe: seepage	Severe: piping	Severe: no water	Deep to water	Rooting depth, Erodes easily, Excess salt	Erodes easily
1157:						
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Soil blowing	Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Zevadez	Slight	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Rooting depth	Erodes easily, Soil blowing, Percs slowly
Chiara	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
1190:						
Cherry Spring	Moderate: cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
Enko	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing, Percs slowly
1191:						
Cherry Spring	Moderate: cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan	Cemented pan, Erodes easily
Wieland	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope
1193:						
Cherry Spring	Moderate: cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
Hunnton	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
1210:						
Skull Creek-----	Moderate: seepage, cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
Shabliss--------	Severe: seepage, cemented pan	Severe: seepage	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Too sandy
Puett----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Slope, Depth to rock, Soil blowing
1220:						
Hunnton---------	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily
Hunnton---------	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
Fulstone--------	Severe: cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Percs slowly
1221:						
Hunnton---------	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Hunnton---------	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily
Fulstone--------	Severe: cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Percs slowly
1223:						
Hunnton---------	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily
Shabliss--------	Severe: seepage, cemented pan	Severe: seepage	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Too sandy
Puett-----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Fast intake	Slope, Depth to rock
1224:						
Hunnton---------	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily
Trunk-----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
Shabliss--------	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Cemented pan, Rooting depth	Slope, Cemented pan, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1226:						
Hunnton	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
Wieland	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Favorable
Clementine	Moderate: slope	Moderate: piping	Severe: no water	Deep to water	Slope, Erodes easily	Erodes easily
1227:						
Hunnton	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily
Chiara	Severe: cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Slope, Cemented pan, Erodes easily
Bilbo	Severe: seepage, slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Percs slowly
1228:						
Hunnton	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
Hunnton	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1229:						
Hunnton	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
Chiara	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
Wieland	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Erodes easily
1230:						
Fulstone	Severe: cemented pan	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Percs slowly
Hunnton	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily
1231:						
Fulstone	Severe: cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Large stones, Cemented pan
Fulstone	Severe: cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Large stones, Cemented pan
Hunnton	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1232:						
Fulstone	Severe: cemented pan	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Percs slowly
Fulstone	Severe: cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Percs slowly
Wieland	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Erodes easily
1241:						
Enko	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing, Percs slowly
Shabliss	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Slope, Cemented pan, Erodes easily
Orovada	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Erodes easily	Erodes easily, Soil blowing
1242:						
Enko	Moderate: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Erodes easily	Erodes easily, Soil blowing, Percs slowly
Enko	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Slope, Erodes easily, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1260:						
Kleckner	Severe: seepage, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Percs slowly
Upville	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Too sandy
Fulstone	Severe: cemented pan	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Large stones, Cemented pan, Percs slowly
1261:						
Kleckner	Severe: seepage, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Percs slowly
Heechee	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones
1290:						
Tweba	Moderate: seepage	Severe: piping	Severe: cutbanks cave	Deep to water	Soil blowing, Erodes easily	Erodes easily, Too sandy, Soil blowing
1350:						
Shabliss	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Cemented pan, Rooting depth	Slope, Cemented pan, Erodes easily
Hunnton	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Bioya----------	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Slope, Cemented pan, Erodes easily
1351:						
Shabliss--------	Severe: seepage, cemented pan	Severe: seepage	Severe: no water	Deep to water	Soil blowing, Cemented pan, Rooting depth	Cemented pan, Erodes easily, Too sandy
Bartome---------	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Soil blowing
1352:						
Shabliss--------	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Slope, Cemented pan, Erodes easily
Skull Creek-----	Moderate: seepage, cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
Puett----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Depth to rock
1360:						
Orovada---------	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Erodes easily	Erodes easily, Soil blowing
1362:						
Orovada---------	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Erodes easily	Erodes easily, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope, Soil blowing	Soil blowing
Wieland---------	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Erodes easily
1363:						
Orovada---------	Moderate: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, Erodes easily, Excess salt	Erodes easily, Soil blowing
Tweba-----------	Moderate: seepage	Severe: piping	Severe: cutbanks cave	Deep to water	Droughty, Soil blowing	Erodes easily, Soil blowing
Weso------------	Severe: seepage	Moderate: seepage, piping, excess salt	Severe: no water	Deep to water	Soil blowing, Erodes easily, Excess salt	Erodes easily, Too sandy, Soil blowing
1530:						
Creemon---------	Severe: seepage	Severe: piping, excess salt	Severe: no water	Deep to water	Erodes easily, Excess salt	Erodes easily
Placeritos------	Moderate: seepage	Severe: piping	Severe: no water	Deep to water	Erodes easily	Erodes easily
1572:						
Weso------------	Severe: seepage	Moderate: seepage, piping, excess salt	Severe: no water	Deep to water	Soil blowing, Erodes easily, Excess salt	Erodes easily, Too sandy, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Orovada	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Erodes easily	Erodes easily, Soil blowing
Shabliss	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Slope, Cemented pan, Erodes easily
1573:						
Weso	Severe: seepage	Moderate: seepage, piping, excess salt	Severe: no water	Deep to water	Slope, Soil blowing, Erodes easily	Erodes easily, Too sandy, Soil blowing
Orovada	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Erodes easily, Excess salt	Erodes easily
Tweba	Moderate: seepage	Severe: piping	Severe: cutbanks cave	Deep to water	Droughty, Soil blowing	Erodes easily, Soil blowing
1617:						
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Tweener	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1618:						
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones
1619:						
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Tusk	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1621:						
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1622:						
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
1623:						
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Hapgood	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1625:						
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1626:						
Cleavage	Severe: depth to rock	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Large stones, Depth to rock
Carstump	Moderate: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Large stones, Depth to rock, Percs slowly
Chen	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1628:						
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Chen	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Depth to rock
1640:						
Tusk	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Hackwood	Severe: slope	Slight	Severe: no water	Deep to water	Slope, Erodes easily	Slope, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1650:						
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Tusk	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
1651:						
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
1652:						
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Graley	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1653:						
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Large stones, Depth to rock
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
1655:						
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
Thwoop	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones
1656:						
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Gumble----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1657:						
Ninemile--------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Alyan----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1658:						
Ninemile--------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Vanwyper--------	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Ninemile--------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1659:						
Ninemile--------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Carstump--------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1660:						
Susie Creek-----	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly	Slope
Pie Creek-------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Erodes easily
Pattani---------	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Slow intake, Percs slowly	Slope, Depth to rock, Percs slowly
1671:						
Linkup----------	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Carstump--------	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Linkup----------	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1672:						
Linkup----------	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Carstump--------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Linkup----------	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1673:						
Linkup	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Percs slowly
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
Alyan	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
1675:						
Linkup	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Snowmore	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Depth to rock, Cemented pan, Soil blowing
Ratsow	Moderate: depth to rock, cemented pan	Severe: thin layer	Severe: no water	Deep to water	Percs slowly, Depth to rock, Cemented pan	Depth to rock, Cemented pan, Percs slowly
1676:						
Linkup	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1680:						
Carstump	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
1685:						
Carstump	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Graley	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1686:						
Carstump	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
1687:						
Carstump	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Linkup	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Carstump	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
1691:						
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones
Rock Outcrop.						
Rubble Land	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones
1700:						
Cotant	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
1702:						
Cotant	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
McIvey	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Percs slowly
Blitzen	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
1703:						
Cotant	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Lerrow	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Bullump	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty	Slope
1711:						
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
1712:						
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Large stones, Depth to rock
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
1713:						
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Depth to rock
Erakatak	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Rugar	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly	Slope, Percs slowly
1720:						
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Alyan	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
1725:						
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Loncan	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1726:						
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1730:						
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
Erakatak	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1732:						
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
1733:						
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Loncan	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1740:						
Erakatak	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Hackwood	Severe: slope	Slight	Severe: no water	Deep to water	Slope, Erodes easily	Slope, Erodes easily
1741:						
Erakatak	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Tusk	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
1742:						
Erakatak	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Rugar	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly	Slope, Percs slowly
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1744:						
Erakatak	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones	Slope, Large stones
1746:						
Booford	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Erodes easily
Cotant	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Blitzen	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
1800:						
Bregar	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Bregar	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Carstump	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
1802:						
Bregar	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones
1803:						
Bregar	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Rock Outcrop.						
1805:						
Bregar	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Deseed	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Linkup----------	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1810:						
Shively---------	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Erodes easily	Slope, Erodes easily
Ninemile--------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Hackwood--------	Severe: slope	Slight	Severe: no water	Deep to water	Slope, Erodes easily	Slope, Erodes easily
1830:						
Vanwyper--------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Alyan-----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Vanwyper--------	Moderate: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Depth to rock, Percs slowly
1831:						
Vanwyper--------	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Trunk-----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Vanwyper	Moderate: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Depth to rock, Percs slowly
1832:						
Vanwyper	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Trunk	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Trunk	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1833:						
Vanwyper	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Rock Outcrop.						
Trunk	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1852:						
Gumble	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Slope, Depth to rock, Soil blowing
Tuffo	Severe: depth to rock, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Slope, Depth to rock, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Hunnton	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
1853:						
Gumble	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Tuffo	Severe: depth to rock, slope	Severe: piping	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Depth to rock
Rock Outcrop.						
1854:						
Gumble	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1855:						
Gumble	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Puett Variant	Severe: depth to rock, slope	Severe: piping	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Depth to rock
Xeric Torriorthents	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Soil blowing	Slope, Depth to rock, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1870:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
1871:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cotant	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
1872:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones	Slope, Large stones
1874:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
Arcia	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1875:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Bregar	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Ramires	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
1876:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Arcia	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1877:						
Chen	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Bregar	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Loncan	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1880:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Blitzen	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1881:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Blitzen	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
Loncan	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
1888:						
Chen	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Pie Creek	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Alyan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1889:						
Chen	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1910:						
Mahala	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Erodes easily
Ramires	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
1920:						
Lerrow	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
Chen	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cotant	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
1921:						
Lerrow	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
Quarz	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock
Rugar	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly	Slope, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
1931:						
Tweener	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Large stones, Depth to rock
1932:						
Tweener	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Sumine	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
1933:						
Tweener	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Cleavage	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Slope, Large stones, Depth to rock
1950:						
McIvey	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Percs slowly	Slope, Large stones, Percs slowly
McIvey	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Percs slowly
Tusel	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones	Slope, Large stones
1980:						
Thwoop	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
Trunk	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Pequop	Severe: slope	Moderate: large stones	Severe: no water	Deep to water	Slope, Droughty	Slope, Large stones
2000:						
Alyan	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Cotant----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Akler----------	Severe: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Erodes easily
2001:						
Alyan----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Bregar----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Alyan----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
2002:						
Alyan----------	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Alyan----------	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Quarz----------	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
2003:						
Alyan	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Deepeek	Severe: cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Excess salt	Slope, Large stones, Cemented pan
Susie Creek	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Slope, Erodes easily, Soil blowing
2004:						
Alyan	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Depth to rock, Percs slowly
Ninemile	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Alyan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
2005:						
Alyan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Graley	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Rock Outcrop.						

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
2171:						
Deseed	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Reluctan	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Depth to rock
Cleavage	Severe: depth to rock	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Large stones, Depth to rock
2173:						
Deseed	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Quarz	Moderate: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Depth to rock, Soil blowing
2205:						
Coltroop	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Depth to rock, Cemented pan	Depth to rock, Cemented pan, Erodes easily
Snowmore	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Depth to rock, Cemented pan, Soil blowing
2206:						
Coltroop	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Depth to rock, Cemented pan	Depth to rock, Cemented pan, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Vanwyper	Moderate: depth to rock	Severe: large stones	Severe: no water	Deep to water	Large stones, Droughty, Percs slowly	Large stones, Depth to rock, Percs slowly
2310:						
Bulake	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Percs slowly
Deunah	Moderate: depth to rock, cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Cemented pan, Erodes easily
Bulake	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Large stones, Depth to rock, Percs slowly
2311:						
Bulake	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Large stones, Depth to rock, Percs slowly
Hatpeak	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Percs slowly
Petan	Severe: depth to rock, cemented pan	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Depth to rock, Cemented pan
2505:						
Buffaran	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Percs slowly, Cemented pan	Cemented pan, Soil blowing, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Zevadez	Moderate: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing, Percs slowly
2511:						
Bilbo	Severe: seepage, slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Percs slowly
Alley	Severe: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Large stones, Excess salt	Slope, Large stones
Deepeek	Severe: cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Excess salt	Slope, Large stones, Cemented pan
2514:						
Bilbo	Severe: seepage, slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Percs slowly
Susie Creek	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Slope, Erodes easily, Soil blowing
Buffaran	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Cemented pan, Soil blowing, Percs slowly
2521:						
Dewar	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Large stones, Cemented pan	Slope, Large stones, Cemented pan

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan	Large stones, Cemented pan, Erodes easily
2522:						
Dewar----------	Severe: seepage, cemented pan	Severe: seepage	Severe: no water	Deep to water	Slope, Large stones, Cemented pan	Large stones, Cemented pan
Sodhouse--------	Severe: seepage, cemented pan	Moderate: seepage, piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
2531:						
Clurde Variant--	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Depth to rock, Flooding	Depth to rock
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Soil blowing	Soil blowing
Rock Outcrop.						
2541:						
Kelk----------	Moderate: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Erodes easily	Erodes easily, Soil blowing, Percs slowly
2545:						
Kelk----------	Moderate: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Erodes easily	Erodes easily, Soil blowing, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Soil blowing	Soil blowing
2555:						
Piline----------	Slight	Severe: ponding	Severe: no water	Ponding, Percs slowly	Ponding, Percs slowly	Ponding, Percs slowly
2560:						
McCleary--------	Slight	Severe: wetness	Severe: no water	Percs slowly, Flooding	Wetness, Percs slowly, Erodes easily	Erodes easily, Wetness, Percs slowly
2561:						
McCleary--------	Slight	Moderate: hard to pack	Severe: no water	Deep to water	Percs slowly	Percs slowly
2571:						
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Soil blowing, Cemented pan, Erodes easily	Cemented pan, Erodes easily, Soil blowing
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan	Large stones, Cemented pan, Erodes easily
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan	Large stones, Cemented pan, Erodes easily
2572:						
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Soil blowing, Cemented pan, Erodes easily	Cemented pan, Erodes easily, Soil blowing
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Cemented pan, Erodes easily	Cemented pan, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
2573:						
Chiara	Severe: cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan	Slope, Large stones, Cemented pan
Chiara	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan	Large stones, Cemented pan, Erodes easily
2575:						
Chiara	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Soil blowing, Cemented pan, Erodes easily	Cemented pan, Erodes easily, Soil blowing
Dacker	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
Shalake	Moderate: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Cemented pan, Rooting depth	Cemented pan, Soil blowing
2577:						
Chiara	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
Orovada	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Erodes easily	Erodes easily, Soil blowing
2600:						
Shalake	Moderate: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Cemented pan, Rooting depth	Cemented pan, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Soil blowing, Cemented pan, Erodes easily	Cemented pan, Erodes easily, Soil blowing
Shalake---------	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Soil blowing
2611:						
Dacker----------	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
Hunnton---------	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
2612:						
Dacker----------	Moderate: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Cemented pan, Erodes easily	Cemented pan, Erodes easily, Soil blowing
Zevadez---------	Moderate: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing, Percs slowly
2615:						
Dacker----------	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Soil blowing, Cemented pan, Erodes easily	Cemented pan, Erodes easily, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
2621:						
Gochea	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, Droughty, Rooting depth	Too sandy
Susie Creek	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly	Slope
Carstump	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Percs slowly	Slope, Large stones, Depth to rock
2641:						
Olac	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
Snowmore	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Depth to rock, Cemented pan, Soil blowing
2650:						
Wieland	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope
Bartome	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Cemented pan	Cemented pan, Soil blowing
Zevadez	Moderate: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
2651:						
Wieland	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Erodes easily
Buffaran	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Percs slowly, Cemented pan	Cemented pan, Soil blowing, Percs slowly
2652:						
Wieland	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Erodes easily
Dacker	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
Zevadez	Moderate: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing, Percs slowly
2655:						
Wieland	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Erodes easily
Gumble	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
Bilbo	Severe: seepage, slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
2656:						
Wieland	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Erodes easily
Hunnton	Moderate: cemented pan, slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Erodes easily, Percs slowly
Thwoop	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Large stones, Depth to rock, Cemented pan
2658:						
Wieland	Severe: slope	Moderate: thin layer	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Percs slowly
2666:						
Puett	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Slope, Depth to rock, Soil blowing
Orovada	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Erodes easily	Slope, Erodes easily, Soil blowing
2667:						
Puett	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Depth to rock
Rock Outcrop.						

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Clurde	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope, Soil blowing	Soil blowing
2668:						
Puett	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Depth to rock
Yuko	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Slope, Depth to rock, Erodes easily
Zevadez	Moderate: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing, Percs slowly
2710:						
Ramires	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
Bartome	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Soil blowing
Bilbo	Severe: seepage, slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Percs slowly
2711:						
Ramires	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Bilbo	Severe: seepage, slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Slope, Large stones, Percs slowly
Buffaran	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Cemented pan, Soil blowing, Percs slowly
2741:						
Wilsor	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Excess salt	Slope
Wilsor	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Excess salt	Slope
2751:						
Yuko	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Slope, Depth to rock, Erodes easily
Chime	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock	Slope, Depth to rock
Clurde	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope, Soil blowing	Soil blowing
2775:						
Zevadez	Moderate: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing, Percs slowly
Bartome	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions
Wieland	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Percs slowly	Erodes easily
2776:						
Zevadez	Slight	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Rooting depth	Erodes easily, Soil blowing, Percs slowly
Chiara	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
2777:						
Zevadez	Slight	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Rooting depth	Erodes easily, Soil blowing, Percs slowly
Wieland	Moderate: seepage	Severe: piping	Severe: no water	Deep to water	Droughty, Percs slowly, Erodes easily	Erodes easily
Clurde	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Soil blowing	Soil blowing
2778:						
Zevadez	Slight	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Rooting depth	Erodes easily, Soil blowing, Percs slowly
Yuko	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Slope, Depth to rock, Erodes easily

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Kelk	Moderate: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Erodes easily	Erodes easily, Soil blowing, Percs slowly
2780:						
Snowmore	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock, Cemented pan	Large stones, Depth to rock, Cemented pan
Snowmore	Moderate: depth to rock, cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Depth to rock, Cemented pan	Depth to rock, Cemented pan, Soil blowing
2781:						
Snowmore	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock, Cemented pan	Large stones, Depth to rock, Cemented pan
Snowmore	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock, Cemented pan	Large stones, Depth to rock, Cemented pan
Snowmore	Moderate: depth to rock, cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Depth to rock, Cemented pan	Depth to rock, Cemented pan, Soil blowing
2782:						
Snowmore	Moderate: depth to rock, cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Depth to rock, Cemented pan	Depth to rock, Cemented pan, Soil blowing
Zevadez	Slight	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Rooting depth	Erodes easily, Soil blowing, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Snowmore	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Depth to rock, Cemented pan	Large stones, Depth to rock, Cemented pan
2783:						
Snowmore	Moderate: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Depth to rock, Cemented pan, Soil blowing
Willhill	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
2790:						
Old Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Troughs	Severe: cemented pan	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Depth to rock	Large stones, Depth to rock, Cemented pan
Olac	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Droughty, Depth to rock	Slope, Large stones, Depth to rock
2801:						
Bartome	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Soil blowing
Alley	Severe: seepage, slope	Moderate: thin layer, seepage	Severe: no water	Deep to water	Slope, Excess salt	Slope

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Clurde----------	Severe: seepage	Moderate: thin layer, piping	Severe: no water	Deep to water	Soil blowing	Soil blowing
2802:						
Bartome---------	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Soil blowing
Buffaran--------	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Percs slowly, Cemented pan	Cemented pan, Soil blowing, Percs slowly
2803:						
Bartome---------	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Soil blowing
Buffaran--------	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Percs slowly, Cemented pan	Cemented pan, Soil blowing, Percs slowly
Ramires---------	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Large stones, Depth to rock
2804:						
Bartome---------	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Cemented pan	Cemented pan, Soil blowing
Chiara----------	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Erodes easily, Soil blowing
2805:						
Bartome---------	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Cemented pan	Cemented pan, Soil blowing

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
2807:						
Bartome	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Soil blowing, Cemented pan	Cemented pan, Soil blowing
Coltroop	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Depth to rock	Depth to rock, Cemented pan, Erodes easily
Zevadez	Moderate: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly, Rooting depth	Erodes easily, Percs slowly
2808:						
Bartome	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Soil blowing, Cemented pan	Cemented pan, Soil blowing
Susie Creek	Moderate: slope	Severe: piping	Severe: no water	Deep to water	Slope, Soil blowing, Percs slowly	Erodes easily, Soil blowing
Wieland	Moderate: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Droughty, Soil blowing	Erodes easily, Soil blowing
2809:						
Bartome	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Cemented pan	Cemented pan
Dacker	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
2820:						
Alley	Severe: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Large stones, Excess salt	Slope, Large stones

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Vanwyper	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Rock Outcrop.						
2822:						
Alley	Severe: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Large stones, Excess salt	Slope, Large stones
Rock Outcrop.						
Rubble Land.						
3000:						
Handy	Severe: seepage, slope	Severe: seepage	Severe: no water	Deep to water	Slope, Percs slowly	Slope, Too sandy
Wilsor	Moderate: seepage, depth to rock, slope	Severe: piping	Severe: no water	Deep to water	Slope, Excess salt	Favorable
Deseed	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Percs slowly
3010:						
Relley	Moderate: seepage	Severe: piping, excess salt	Severe: no water	Deep to water	Erodes easily, Flooding, Excess salt	Erodes easily
Kelk	Moderate: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, Percs slowly, Erodes easily	Erodes easily, Soil blowing, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
3020:						
Sodhouse	Severe: seepage, cemented pan	Moderate: seepage, piping	Severe: no water	Deep to water	Cemented pan, Erodes easily, Excess salt	Cemented pan, Erodes easily
Chiara	Severe: cemented pan	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Erodes easily	Cemented pan, Erodes easily
3030:						
Deepeek	Severe: cemented pan, slope	Severe: piping	Severe: no water	Deep to water	Slope, Cemented pan, Excess salt	Slope, Large stones, Cemented pan
Alley	Severe: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, Large stones, Excess salt	Slope, Large stones
3100:						
Ratsow	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Cemented pan
Quarz	Moderate: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Depth to rock, Soil blowing
Susie Creek	Severe: slope	Severe: piping	Severe: no water	Deep to water	Slope, Percs slowly	Slope
3510:						
Midraw	Severe: cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Cemented pan, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
Troughs	Severe: cemented pan, slope	Severe: piping, large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Midraw	Severe: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Slope, Depth to rock, Cemented pan
3710:						
Petan	Severe: depth to rock, cemented pan, slope	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Slope, Large stones, Depth to rock
Bulake	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Percs slowly
Rock Outcrop.						
3715:						
Petan	Severe: depth to rock, cemented pan	Severe: large stones	Severe: no water	Deep to water	Slope, Large stones, Droughty	Large stones, Depth to rock, Cemented pan
Deunah	Moderate: depth to rock, cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Cemented pan, Erodes easily
Hatpeak	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Percs slowly

TABLE 14.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions
3721:						
Hatpeak	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Percs slowly
Deunah	Moderate: depth to rock, cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, Percs slowly, Depth to rock	Depth to rock, Cemented pan, Erodes easily
3722:						
Hatpeak	Moderate: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Cemented pan, Percs slowly
Hatpeak	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, Percs slowly, Cemented pan	Slope, Cemented pan, Percs slowly

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TABLE 15.--ENGINEERING INDEX PROPERTIES

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	
1:												
Rubble Land-----	0-60	Fragmental material	GP	A-1	30-65	30-65	0-10	0-5	0-5	0	0-14	NP
120:												
Cotant----------	0-3	Gravelly clay loam	GC, CL	A-6, A-7	0	0	60-85	50-70	40-65	35-60	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
Lerrow----------	0-9	Gravelly loam	SC	A-6	0	0-10	70-80	60-75	55-65	40-50	30-35	10-15
	9-14	Clay loam, gravelly clay loam	CL, GC	A-7	0	0	55-90	50-85	45-80	35-65	40-50	20-25
	14-27	Cobbly clay, gravelly clay, clay	CH	A-7	0-5	10-25	75-95	65-85	60-75	55-70	50-60	25-35
	27-31	Weathered bedrock			0	0	0	0	0	0	---	NP
Cotant----------	0-3	Gravelly clay loam	GC, CL	A-6, A-7	0	0	60-85	50-70	40-65	35-60	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
126:												
Cotant----------	0-3	Very gravelly loam	GC	A-2	0	0-5	50-60	35-50	30-45	25-35	30-35	10-15
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	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	
Lerrow----------	0-9	Cobbly loam	SC, CL	A-6	0	30-40	80-95	75-90	65-75	45-55	30-35	10-15
	9-14	Clay loam, gravelly clay loam	CL, GC	A-7	0	0	55-90	50-85	45-80	35-65	40-50	20-25
	14-27	Cobbly clay, gravelly clay, clay	CH	A-7	0-5	10-25	75-95	65-85	60-75	55-70	50-60	25-35
	27-31	Weathered bedrock			0	0	0	0	0	0	---	NP
Akler----------	0-4	Loam	CL, SC	A-6	0	0-10	80-90	75-85	65-80	45-65	30-35	10-15
	4-18	Clay	CH	A-7	0	0	80-100	75-100	65-90	50-70	55-70	30-45
	18-22	Weathered bedrock			0	0	0	0	0	0	---	NP
127:												
Cotant----------	0-3	Very gravelly silty clay loam	GC	A-2	0	0	35-55	30-50	25-45	25-35	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Lerrow----------	0-9	Gravelly loam	SC	A-6	0	0-10	70-80	60-75	55-65	40-50	30-35	10-15
	9-14	Clay loam, gravelly clay loam	CL, GC	A-7	0	0	55-90	50-85	45-80	35-65	40-50	20-25
	14-27	Cobbly clay, gravelly clay, clay	CH	A-7	0-5	10-25	75-95	65-85	60-75	55-70	50-60	25-35
	27-31	Weathered bedrock			0	0	0	0	0	0	---	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	
128:												
Cotant	0-3	Very gravelly loam	GC	A-2	0	0-5	50-60	35-50	30-45	25-35	30-35	10-15
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
Graley	0-12	Very gravelly loam	GM	A-1, A-2	0	0-5	30-50	25-45	20-40	15-30	20-25	NP-5
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
129:												
Cotant	0-3	Very gravelly clay loam	GC	A-2	0	0	35-55	30-50	25-45	25-35	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
Chen	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Crooked Creek	0-4	Silty clay loam	CL	A-6	0	0	95-100	95-100	95-100	80-90	30-35	10-15
	4-37	Clay, silty clay	CH	A-7	0	0	95-100	95-100	90-100	75-95	50-65	25-35
	37-60	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	60-85	35-50	15-25

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:												
Cotant	0-3	Gravelly clay loam	GC, CL	A-6, A-7	0	0	60-85	50-70	40-65	35-60	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
Booford	0-10	Silt loam	CL	A-6	0	0	90-100	85-100	55-95	50-95	25-35	10-15
	10-19	Silty clay loam, clay loam, clay	ML, MH	A-7	0	0	80-95	75-90	65-90	60-85	45-60	15-25
	19-36	Silty clay, clay	MH	A-7	0	0	80-90	75-85	70-80	65-75	50-65	20-30
	36-46	Weathered bedrock			0	0	0	0	0	0	---	NP
140:												
Upville	0-10	Gravelly loam	SC-SM, CL-ML	A-4	0	0-10	70-90	60-85	55-80	40-65	25-30	5-10
	10-21	Very gravelly loam, gravelly coarse sandy loam, very gravelly sandy loam	GM-GC, GC, SC-SM, SC	A-2, A-4, A-6	0	0-20	45-80	40-75	35-65	30-50	25-35	5-15
	21-60	Extremely gravelly coarse sand, extremely cobbly sand, extremely cobbly loamy sand	GP, GP-GM	A-1	0	25-50	15-40	10-35	10-25	0-10	---	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	
Upville---------	0-10	Gravelly loam	SC-SM, CL-ML	A-4	0	0-10	70-90	60-85	55-80	40-65	25-30	5-10
	10-21	Very gravelly loam, gravelly coarse sandy loam, very gravelly sandy loam	GM-GC, SC-SM, GC, SC	A-2, A-4, A-6	0	0-20	45-80	40-75	35-65	30-50	25-35	5-15
	21-60	Extremely gravelly coarse sand, extremely cobbly sand, extremely cobbly loamy sand	GP, GP-GM	A-1	0	25-50	15-40	10-35	10-25	0-10	---	NP
141:												
Upville---------	0-12	Gravelly loam	SC-SM, CL-ML	A-4	0	0-10	70-90	60-85	55-80	40-65	25-30	5-10
	12-26	Very gravelly loam, gravelly coarse sandy loam, very gravelly sandy loam	GM-GC, SC-SM, GC, SC	A-2, A-4, A-6	0	0-20	45-80	40-75	35-65	30-50	25-35	5-15
	26-60	Extremely gravelly coarse sand, extremely cobbly sand, extremely cobbly loamy sand	GP, GP-GM	A-1	0	25-50	15-40	10-35	10-25	0-10	---	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	
Kleckner--------	0-8	Gravelly loam	CL-ML, ML	A-4	0	0-25	65-90	60-85	55-80	50-75	25-35	5-10
	8-20	Very gravelly clay loam, very cobbly clay loam, very cobbly clay	GC, SC	A-2, A-7	0	10-45	45-70	30-60	30-55	25-45	40-55	25-35
	20-42	Very gravelly clay loam, very gravelly clay, very cobbly clay	GC, SC	A-2, A-7	0	0-45	45-90	25-50	25-45	20-40	40-55	25-35
	42-60	Extremely gravelly sandy loam	GM-GC, GP-GC	A-1, A-2	0	0-10	20-30	15-25	10-20	5-15	25-30	5-10
150:												
Gochea----------	0-9	Gravelly loam	GM-GC, SC-SM, GM, SM	A-2, A-4	0	0	55-80	50-75	30-55	25-50	20-30	NP-10
	9-25	Gravelly clay loam, gravelly sandy clay loam, clay loam	GC, SC, CL	A-6, A-7	0	0	60-95	50-90	45-85	35-65	30-45	10-20
	25-30	Sandy loam, gravelly loam	ML, SM, GM	A-4, A-2	0	0	60-95	55-90	35-75	25-55	20-25	NP-5
	30-60	Very gravelly sand, extremely gravelly sand	GP	A-1	0	0	25-50	15-35	10-20	0-5	---	NP
161:												
Sonoma----------	0-12	Silt loam	CL	A-6	0	0	100	100	100	95-100	30-35	10-15
	12-60	Stratified silt loam to silty clay loam	ML, CL	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25

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:												
Sonoma----------	0-12	Silt loam	CL	A-6	0	0	95-100	95-100	85-100	70-90	30-35	10-15
	12-60	Stratified silt loam to silty clay loam	CL, ML	A-6, A-7	0	0	100	100	100	95-100	35-50	10-25
184:												
Crooked Creek---	0-3	Silty clay loam	CL	A-6	0	0	95-100	95-100	95-100	80-90	30-35	10-15
	3-37	Clay, silty clay	CH	A-7	0	0	95-100	95-100	90-100	75-95	50-65	25-35
	37-60	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	60-85	35-50	15-25
185:												
Crooked Creek---	0-4	Silty clay loam	CL	A-6	0	0	95-100	95-100	95-100	80-90	30-35	10-15
	4-37	Clay, silty clay	CH	A-7	0	0	95-100	95-100	90-100	75-95	50-65	25-35
	37-60	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	60-85	35-50	15-25
Crooked Creek---	0-4	Silty clay loam	CL	A-6	0	0	95-100	95-100	95-100	80-90	30-35	10-15
	4-37	Clay, silty clay	CH	A-7	0	0	95-100	95-100	90-100	75-95	50-65	25-35
	37-60	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	60-85	35-50	15-25
186:												
Crooked Creek---	0-4	Silty clay loam	CL	A-6	0	0	95-100	95-100	95-100	80-90	30-35	10-15
	4-37	Clay, silty clay	CH	A-7	0	0	95-100	95-100	90-100	75-95	50-65	25-35
	37-60	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	60-85	35-50	15-25

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	
Crooked Creek---	0-4	Silty clay loam	CL	A-6	0	0	95-100	95-100	95-100	80-90	30-35	10-15
	4-37	Clay, silty clay	CH	A-7	0	0	95-100	95-100	90-100	75-95	50-65	25-35
	37-60	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	60-85	35-50	15-25
Crooked Creek---	0-4	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-100	80-90	35-45	15-20
	4-37	Silty clay, clay	CL, CH	A-7	0	0	90-100	80-100	70-90	65-85	40-55	20-25
	37-60	Silty clay loam, clay loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	70-90	35-45	15-20
188:												
Crooked Creek---	0-4	Silty clay loam	CL	A-6	0	0	95-100	95-100	95-100	80-90	30-35	10-15
	4-37	Clay, silty clay	CH	A-7	0	0	95-100	95-100	90-100	75-95	50-65	25-35
	37-60	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	60-85	35-50	15-25
Welch-----------	0-10	Silt loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	10-60	Stratified sandy loam to silty clay loam	CL	A-6, A-7	0	0	80-100	75-100	65-90	50-70	35-45	15-20
Crooked Creek---	0-4	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	85-100	80-90	35-45	15-20
	4-37	Silty clay, clay	CL, CH	A-7	0	0	90-100	80-100	70-90	65-85	40-55	20-25
	37-60	Silty clay loam, clay loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	70-90	35-45	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	
190:												
Heechee---------	0-7	Gravelly loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0-5	75-85	55-75	40-60	40-55	25-35	5-15
	7-27	Very cobbly clay loam, very gravelly sandy clay loam, very cobbly loam	GC	A-2, A-6	0-15	15-50	45-75	35-65	30-60	25-50	30-40	10-20
	27-61	Extremely cobbly sandy loam, extremely cobbly coarse sandy loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-10
Heechee---------	0-7	Cobbly loam	CL-ML, CL, SC-SM, SC	A-4, A-6	0-10	15-25	80-95	70-80	60-75	45-60	25-35	5-15
	7-27	Very cobbly clay loam, very gravelly sandy clay loam, very cobbly loam	GC	A-2, A-6	0-15	25-50	45-75	35-65	30-60	25-50	30-40	10-20
	27-61	Extremely cobbly sandy loam, extremely cobbly coarse sandy loam, extremely cobbly loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-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	
200:												
Lynnbow---	0-4	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	90-100	85-95	70-80	25-35	5-15
	4-26	Silty clay, clay	CH	A-7	0	0	80-100	75-100	75-100	65-90	55-70	30-40
	26-40	Silty clay, clay	CL, CH	A-7	0	0	80-100	75-100	75-100	65-90	45-65	20-35
	40-58	Loam	SC-SM, SM	A-4	0	0	80-100	75-100	55-85	35-50	25-35	5-10
	58-68	Weathered bedrock			0	0	0	0	0	0	---	NP
Rugar---	0-2	Loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-95	60-85	50-70	25-35	5-15
	2-20	Clay loam	CL	A-6, A-7	0	0	80-100	75-95	65-90	55-75	35-45	15-20
	20-43	Clay	CL, CH	A-7	0	0-5	80-100	75-95	65-90	55-70	45-60	25-35
	43-47	Weathered bedrock			0	0	0	0	0	0	---	NP
201:												
Lynnbow---	0-4	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	90-100	85-95	70-80	25-35	5-15
	4-26	Silty clay, clay	CH	A-7	0	0	80-100	75-100	75-100	65-90	55-70	30-40
	26-40	Silty clay, clay	CL, CH	A-7	0	0	80-100	75-100	75-100	65-90	45-65	20-35
	40-58	Loam	SC-SM, SM	A-4	0	0	80-100	75-100	55-85	35-50	25-35	5-10
	58-68	Weathered bedrock			0	0	0	0	0	0	---	NP
Lerrow---	0-9	Gravelly loam	SC	A-6	0	0-10	70-80	60-75	55-65	40-50	30-35	10-15
	9-14	Clay loam, gravelly clay loam	CL, GC	A-7	0	0	55-90	50-85	45-80	35-65	40-50	20-25
	14-27	Cobbly clay, gravelly clay, clay	CH	A-7	0-5	10-25	75-95	65-85	60-75	55-70	50-60	25-35
	27-31	Weathered bedrock			0	0	0	0	0	0	---	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	
Crooked Creek---	0-4	Silty clay loam	CL	A-6	0	0	95-100	95-100	95-100	80-90	30-35	10-15
	4-37	Clay, silty clay	CH	A-7	0	0	95-100	95-100	90-100	75-95	50-65	25-35
	37-60	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	85-100	80-100	75-95	60-85	35-50	15-25
210:												
Soonaker---------	0-3	Fine sandy loam	SM, ML	A-4	0	0	95-100	85-100	65-85	45-55	20-25	NP-5
	3-16	Loam	CL, CL-ML	A-4, A-6	0	0	95-100	75-100	75-95	60-75	25-35	5-15
	16-24	Gravelly sandy loam, very gravelly sandy loam, gravelly loam	GM, GM-GC, GC, SC-SM	A-2, A-1, A-4, A-6	0	0-5	55-80	45-75	30-45	15-40	20-35	NP-15
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
Bulake----------	0-7	Gravelly loam	GC, CL	A-6	0	0-10	60-80	55-75	50-75	40-60	25-35	10-15
	7-19	Clay, gravelly clay	CH	A-7	0	0-10	60-95	55-90	55-85	50-80	50-60	30-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
220:												
Cavanaugh-------	0-5	Very stony loam	CL-ML, ML	A-4	5-20	5-15	90-100	85-95	75-85	60-70	25-35	5-10
	5-9	Cobbly clay loam, cobbly clay	CH, CL	A-7	0-5	15-40	85-95	80-90	70-80	55-75	40-55	20-30
	9-21	Very cobbly clay, extremely cobbly clay loam, very gravelly clay loam	GC, CH, CL	A-7	0-5	35-65	50-70	45-65	40-60	35-55	40-55	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	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	
Rugar----------	0-2	Clay loam	CL	A-6, A-7	0	0	80-100	75-95	65-90	55-75	35-45	15-20
	2-20	Clay loam	CL	A-6, A-7	0	0	80-100	75-95	65-90	55-75	35-45	15-20
	20-43	Clay	CL, CH	A-7	0	0-5	80-100	75-95	65-90	55-70	45-60	25-35
	43-47	Weathered bedrock			0	0	0	0	0	0	---	NP
McIvey----------	0-16	Cobbly loam	CL	A-6	0	15-25	75-95	65-90	60-80	50-70	30-40	10-15
	16-29	Very gravelly clay loam, gravelly clay loam	GC, SC, CL	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	29-65	Very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-7, A-2	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35
221:												
Cavanaugh-------	0-5	Very stony loam	CL-ML, ML	A-4	5-20	5-15	90-100	85-95	75-85	60-70	25-35	5-10
	5-9	Cobbly clay loam, cobbly clay	CH, CL	A-7	0-5	15-40	85-95	80-90	70-80	55-75	40-55	20-30
	9-21	Very cobbly clay, extremely cobbly clay loam, very gravelly clay loam	GC, CH, CL	A-7	0-5	35-65	50-70	45-65	40-60	35-55	40-55	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	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	
Quarz	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
Alyan	0-9	Gravelly clay loam	GC, CL	A-2, A-7, A-6	0	0-5	55-80	50-75	40-65	30-60	35-45	15-20
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
233:												
Bioya	0-10	Loam	ML, CL-ML	A-4	0	0	100	95-100	80-100	50-80	20-30	NP-10
	10-36	Silt loam, loam	CL, CL-ML	A-6, A-4	0	0	100	95-100	85-100	50-80	25-35	5-15
	36-60	Indurated			0	0	0	0	0	0	---	NP
Bilbo	0-5	Gravelly loam	GM-GC, GC, CL-ML, CL	A-4, A-6	0	0-10	65-90	55-75	50-70	40-55	25-35	5-15
	5-40	Very gravelly sandy clay, very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	45-65	35-50	30-45	20-40	40-55	20-35
	40-60	Extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, GM	A-1	0	0-10	30-60	15-50	10-40	5-20	15-25	NP-5

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	
Chiara----------	0-6	Silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-40	Indurated			0	0	0	0	0	0	---	NP
234:												
Bioya----------	0-10	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	95-100	85-100	50-80	20-30	NP-10
	10-36	Silt loam, loam	CL, CL-ML	A-6, A-4	0	0	100	95-100	85-100	50-80	25-35	5-15
	36-60	Indurated			0	0	0	0	0	0	---	NP
Shabliss--------	0-10	Very fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	55-65	20-25	NP-5
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5
Puett----------	0-3	Stony sandy loam	SM	A-4	1-5	5-10	90-100	90-100	60-75	35-50	15-20	NP-5
	3-10	Coarse sandy loam, gravelly sandy loam, loam	SM, ML, GM	A-1, A-2, A-4	0	0	55-95	50-90	30-80	15-55	---	NP
	10-14	Weathered bedrock			0	0	0	0	0	0	---	NP
235:												
Bioya----------	0-10	Loam	ML, CL-ML	A-4	0	0	100	95-100	80-100	50-80	20-30	NP-10
	10-36	Silt loam, loam	CL, CL-ML	A-6, A-4	0	0	100	95-100	85-100	50-80	25-35	5-15
	36-60	Indurated			0	0	0	0	0	0	---	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	
Trunk----------	0-5	Gravelly loam	GM-GC, SC-SM, GM, SM	A-4	0	0-5	55-80	50-75	45-70	35-50	20-30	NP-10
	5-23	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-85	50-80	45-75	40-65	40-55	20-30
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
Alley----------	0-7	Very stony loam	SM	A-4	15-25	10-15	80-90	65-80	50-60	35-45	25-30	NP-5
	7-20	Gravelly clay loam, gravelly sandy clay loam, gravelly loam	SC, GC	A-6	0	0-10	65-80	55-75	50-65	35-50	30-35	15-20
	20-40	Gravelly fine sandy loam, cobbly fine sandy loam, gravelly sandy loam	SM, GM	A-2, A-4	0-10	0-40	60-85	50-80	35-75	25-40	25-30	NP-5
	40-60	Very cobbly fine sandy loam	SM	A-2	0-15	30-45	70-75	60-70	45-55	25-35	25-30	NP-5
236:												
Bioya----------	0-10	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	95-100	85-100	50-80	20-30	NP-10
	10-36	Silt loam, loam	CL, CL-ML	A-6, A-4	0	0	100	95-100	85-100	50-80	25-35	5-15
	36-60	Indurated			0	0	0	0	0	0	---	NP
Wieland---------	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	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	
Kleckner--------	0-8	Gravelly loam	CL-ML, ML	A-4	0	0-25	65-90	60-85	55-80	50-75	25-35	5-10
	8-20	Very gravelly clay loam, very cobbly clay loam, very cobbly clay	GC, SC	A-2, A-7	0	10-45	45-70	30-60	30-55	25-45	40-55	25-35
	20-42	Very gravelly clay loam, very gravelly clay, very cobbly clay	GC, SC	A-2, A-7	0	0-45	45-90	25-50	25-45	20-40	40-55	25-35
	42-60	Extremely gravelly sandy loam	GM-GC, GP-GC	A-1, A-2	0	0-10	20-30	15-25	10-20	5-15	25-30	5-10
241: Wickahoney------	0-2	Extremely stony loam	CL	A-6	15-30	20-30	80-90	75-85	60-75	50-65	30-35	10-15
	2-6	Cobbly clay loam, very stony clay loam, stony loam	SC, CL	A-6	5-25	5-30	75-90	70-85	60-80	45-65	30-40	10-20
	6-14	Very cobbly clay, very gravelly clay, very gravelly clay loam	CL, CH, GC, SC	A-7	5-25	20-50	55-95	50-90	45-85	40-75	40-55	20-35
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Deunah----------	0-9	Loam	CL-ML, CL	A-4, A-6	0	0-10	95-100	95-100	80-100	70-90	20-35	5-15
	9-26	Clay	CH	A-7	0	0-10	95-100	95-100	90-100	85-95	60-80	30-45
	26-33	Indurated			0	0	0	0	0	0	---	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	
Petan----------	0-6	Very cobbly loam	CL	A-6	1-5	40-55	70-90	65-85	60-70	50-60	25-35	10-15
	6-19	Very cobbly clay, very stony clay	CH	A-7	20-45	15-40	65-85	60-80	55-75	50-70	50-65	25-40
	19-20	Indurated			0	0	0	0	0	0	---	NP
	20-30	Unweathered bedrock			0	0	0	0	0	0	---	NP
270:												
Pernty----------	0-5	Very gravelly loam	GC	A-2	0	0-10	40-55	35-50	25-35	20-30	30-35	10-15
	5-14	Very cobbly clay loam, very gravelly clay loam, very gravelly loam	GC	A-6, A-7	0-5	10-30	50-60	45-55	40-50	35-45	35-45	15-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Loncan----------	0-17	Very gravelly loam	GC	A-2	0	10-15	40-60	30-45	25-40	20-35	30-35	10-15
	17-30	Very gravelly loam, extremely cobbly loam, very gravelly sandy clay loam	GC	A-2	0-5	5-55	35-60	30-50	25-40	20-35	30-35	10-15
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	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	
Pernty----------	0-5	Very gravelly loam	GC	A-2	0	0-10	40-55	35-50	25-35	20-30	30-35	10-15
	5-14	Very cobbly clay loam, very gravelly clay loam, very gravelly loam	GC	A-6, A-7	0-5	10-30	50-60	45-55	40-50	35-45	35-45	15-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
280:												
Humboldt--------	0-12	Silty clay loam	CL	A-7	0	0	100	100	100	90-100	40-50	20-25
	12-52	Stratified silty clay loam to clay	MH	A-7	0	0	90-100	90-100	85-100	80-100	50-60	15-25
	52-60	Stratified silt loam to silty clay	ML, CL	A-6, A-7	0	0	90-100	90-100	85-100	80-100	30-50	10-20
308:												
Akler-----------	0-4	Loam	CL, SC	A-6	0	0-10	80-90	75-85	65-80	45-65	30-35	10-15
	4-18	Clay	CH	A-7	0	0	80-100	75-100	65-90	50-70	55-70	30-45
	18-22	Weathered bedrock			0	0	0	0	0	0	---	NP
Pattani---------	0-14	Clay	CH	A-7	0	0	95-100	90-100	80-90	70-80	50-60	30-40
	14-37	Clay loam, silty clay loam, clay	CL, CH	A-7	0	0	85-95	80-90	75-85	65-80	40-55	25-35
	37-41	Weathered bedrock			0	0	0	0	0	0	---	NP
Cotant----------	0-3	Cobbly loam	CL	A-6	0	15-30	80-90	70-80	60-70	50-60	25-35	10-15
	3-20	Clay	CL, CH	A-7	0	0-5	90-100	75-100	60-95	50-85	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	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	
309:												
Akler	0-4	Loam	CL, SC	A-6	0	0-10	80-90	75-85	65-80	45-65	30-35	10-15
	4-18	Clay	CH	A-7	0	0	80-100	75-100	65-90	50-70	55-70	30-45
	18-22	Weathered bedrock			0	0	0	0	0	0	---	NP
Susie Creek	0-10	Loam	CL	A-6	0	0	90-100	75-100	70-95	55-75	30-35	10-15
	10-30	Clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	70-100	70-95	40-60	20-30
	30-60	Loam, clay loam	CL-ML, CL	A-4, A-6	0	0-10	90-100	85-100	65-85	50-70	25-35	5-15
457:												
Donna	0-10	Gravelly loam	CL	A-6	0	0	65-75	60-75	55-70	50-60	30-40	10-20
	10-30	Clay	CH	A-7	0	0	80-90	75-85	75-80	70-80	60-70	30-40
	30-48	Indurated			0	0	0	0	0	0	---	NP
	48-60	Stratified extremely gravelly sandy loam to gravelly sandy clay loam	GC	A-2	0-5	10-35	40-55	30-40	20-30	10-20	30-40	10-20
Stampede	0-16	Gravelly loam	CL	A-6	0	0	70-80	65-75	60-70	50-65	25-35	10-15
	16-37	Clay, silty clay	CH	A-7	0	0-10	90-100	85-95	80-90	70-85	50-60	30-40
	37-60	Indurated			0	0	0	0	0	0	---	NP
Short Creek	0-8	Gravelly clay loam	GC, SC	A-6	0	0-15	60-80	50-75	45-65	35-50	35-40	20-25
	8-23	Very gravelly clay	GC	A-2, A-7	0	0-10	45-55	35-50	35-45	30-40	50-55	35-40
	23-60	Extremely gravelly sandy clay, extremely gravelly clay loam, extremely gravelly sandy clay loam	GP-GC, GC	A-2	0	0-15	30-35	15-25	15-20	5-15	35-45	20-30

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	
458:												
Donna	0-10	Gravelly loam	CL	A-6	0	0	65-75	60-75	55-70	50-60	30-40	10-20
	10-30	Clay	CH	A-7	0	0	80-90	75-85	75-80	70-80	60-70	30-40
	30-48	Indurated			0	0	0	0	0	0	---	NP
	48-60	Stratified extremely gravelly sandy loam to gravelly sandy clay loam	GC	A-2	0-5	10-35	40-55	30-40	20-30	10-20	30-40	10-20
Stampede	0-16	Gravelly loam	CL	A-6	0	0	70-80	65-75	60-70	50-65	25-35	10-15
	16-37	Clay, silty clay	CH	A-7	0	0-10	90-100	85-95	80-90	70-85	50-60	30-40
	37-60	Indurated			0	0	0	0	0	0	---	NP
464:												
Stampede	0-16	Silt loam	CL	A-6	0	0	90-100	85-95	75-90	65-80	25-35	10-15
	16-37	Clay, silty clay	CH	A-7	0	0-10	90-100	85-95	80-90	70-85	50-60	30-40
	37-60	Indurated			0	0	0	0	0	0	---	NP
570:												
Sumine	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Cleavage---------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
571:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Tusel----------	0-17	Gravelly loam	SM, GM	A-4	0	0-10	55-80	50-75	45-70	35-50	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	NP
Gando----------	0-9	Very gravelly loam	GM-GC, GM	A-2, A-1	0	0-5	40-60	25-50	20-35	15-30	20-30	NP-10
	9-17	Extremely gravelly loam, very gravelly loam, extremely gravelly sandy loam	GM	A-2, A-1	0-5	0-30	30-40	20-35	15-30	10-25	20-35	NP-10
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
572:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Reluctan--------	0-9	Cobbly loam	SC-SM, CL-ML	A-4	0-5	10-30	80-90	70-90	60-85	40-70	20-30	5-10
	9-27	Gravelly loam, gravelly clay loam	GC, CL	A-6, A-7	0-5	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
576:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cleavage---------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
577: Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
Chen------------	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
578:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Tusel----------	0-17	Gravelly loam	SM, GM	A-4	0	0-10	55-80	50-75	45-70	35-50	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
579:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Pernty----------	0-5	Very stony loam	GC	A-2	5-25	5-10	50-60	45-55	35-45	25-35	30-35	10-15
	5-14	Very cobbly clay loam, very gravelly clay loam, very gravelly loam	GC	A-6, A-7	0	10-35	50-60	45-55	40-50	35-45	35-45	15-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tusel----------	0-17	Very gravelly loam	GM	A-2	0	0-15	50-60	40-50	35-45	25-35	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	NP
580:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Pie Creek-------	0-5	Very cobbly silt loam	GM-GC, GC, CL-ML, CL	A-4, A-6	0	30-40	50-70	45-70	35-65	35-65	25-35	5-15
	5-23	Clay	CH	A-7	0	0	95-100	90-100	85-95	80-90	65-70	35-40
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	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	
Reluctan--------	0-9	Gravelly loam	SC-SM, CL-ML	A-4	0	5-10	70-80	60-75	50-65	40-55	25-30	5-10
	9-27	Gravelly clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-31	Unweathered bedrock			0	0	0	0	0	0	---	NP
581:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	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	
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
582:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tusel----------	0-17	Very gravelly loam	GM	A-2	0	0-15	50-60	40-50	35-45	25-35	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	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	
Cleavage	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
583:												
Sumine	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	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	
Pernty----------	0-5	Very gravelly loam	GC	A-2	0	0-10	40-55	35-50	25-35	20-30	30-35	10-15
	5-14	Very cobbly clay loam, very gravelly clay loam, very gravelly loam	GC	A-6, A-7	0-5	10-30	50-60	45-55	40-50	35-45	35-45	15-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
584:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tusel-----------	0-17	Very gravelly loam	GM	A-2	0	0-15	50-60	40-50	35-45	25-35	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	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	
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
585:												
Rock Outcrop.												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Rubble Land-----	0-60	Fragmental material	GP	A-1	30-65	30-65	0-10	0-5	0-5	0	0-14	NP
586:												
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Loncan----------	0-17	Very gravelly loam	GC	A-2	0	10-15	40-60	30-45	25-40	20-35	30-35	10-15
	17-30	Very gravelly loam, extremely cobbly loam, very gravelly sandy clay loam	GC	A-2	0-5	5-55	35-60	30-50	25-40	20-35	30-35	10-15
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
600:												
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	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	
Bullump	0-12	Very gravelly loam	GC, SC	A-2	0	0-10	45-70	35-50	30-45	25-35	25-35	10-15
	12-46	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0	0-15	40-65	30-50	25-45	15-40	35-45	15-20
	46-50	Unweathered bedrock			0	0	0	0	0	0	---	NP
Gando	0-9	Very gravelly loam	GM-GC, GM	A-2, A-1	0	0-5	40-60	25-50	20-35	15-30	20-30	NP-10
	9-17	Extremely gravelly loam, very gravelly loam, extremely gravelly sandy loam	GM	A-2, A-1	0-5	0-30	30-40	20-35	15-30	10-25	20-35	NP-10
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
601:												
Hapgood	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	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	
Blitzen---------	0-10	Very gravelly loam	GC	A-2	0	0-10	35-55	30-50	25-40	20-30	30-35	10-15
	10-33	Very gravelly clay, very gravelly clay loam	GC	A-2	0	0-10	35-55	30-50	25-40	20-35	45-65	20-35
	33-37	Weathered bedrock			0	0	0	0	0	0	---	NP
Tusel-----------	0-17	Gravelly loam	SM, GM	A-4	0	0-10	55-80	50-75	45-70	35-50	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	NP
602:												
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	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	
Hackwood--------	0-26	Silt loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	70-90	60-80	20-35	5-15
	26-34	Gravelly loam, gravelly silt loam	GM-GC, SC-SM, CL-ML, CL	A-4, A-6	0	0	60-80	50-75	40-70	35-65	25-35	5-15
	34-60	Very gravelly clay loam, very gravelly silty clay loam, very gravelly loam	GC	A-2, A-6	0	0	40-60	35-50	30-45	25-40	35-40	15-20
Tusel----------	0-17	Gravelly loam	SM, GM	A-4	0	0-10	55-80	50-75	45-70	35-50	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	NP
623: Rock Outcrop.												
Soughe----------	0-10	Very cobbly loam	GM-GC, GM	A-4	0-1	20-40	55-70	50-60	45-55	35-45	20-30	NP-10
	10-19	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam	GC, SC	A-2	0	0-15	35-65	25-55	15-25	10-20	35-40	15-20
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
624: 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	
Soughe----------	0-13	Very stony loam	GM-GC, GM	A-4	5-15	15-35	55-70	50-60	45-55	35-45	20-30	NP-10
	13-20	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam	GC, SC	A-2	0	0-15	35-65	25-55	15-25	10-20	35-40	15-20
	20-24	Unweathered bedrock			0	0	0	0	0	0	---	NP
Soughe----------	0-13	Very stony loam	GM-GC, GM	A-4	5-15	15-35	55-70	50-60	45-55	35-45	20-30	NP-10
	13-20	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam	GC, SC	A-2	0	0-15	35-65	25-55	15-25	10-20	35-40	15-20
	20-24	Unweathered bedrock			0	0	0	0	0	0	---	NP
625:												
Soughe----------	0-13	Very cobbly loam	GM-GC, GM	A-4	0-1	20-40	55-70	50-60	45-55	35-45	20-30	NP-10
	13-20	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam	GC, SC	A-2	0	0-15	35-65	25-55	15-25	10-20	35-40	15-20
	20-24	Unweathered bedrock			0	0	0	0	0	0	---	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	
Alyan----------	0-9	Very gravelly loam	GC	A-2	0	0-5	30-55	25-50	20-40	15-35	25-35	10-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	20-40	45-60	20-35
	32-42	Unweathered bedrock			0	0	0	0	0	0	---	NP
Shalper---------	0-2	Very gravelly loam	GC	A-2, A-6	0	0-10	30-55	25-50	20-45	20-40	25-35	10-15
	2-11	Very gravelly clay loam, very gravelly loam	GC	A-2, A-6	0	0-15	30-55	25-50	20-45	15-40	30-40	15-20
	11-15	Unweathered bedrock			0	0	0	0	0	0	---	NP
626:												
Soughe----------	0-13	Cobbly loam	ML, CL-ML, SM, SC-SM	A-4	0	25-30	80-95	70-90	55-65	45-55	20-30	NP-10
	13-20	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam	GC, SC	A-2	0	0-15	35-65	25-55	15-25	10-20	35-40	15-20
	20-24	Unweathered bedrock			0	0	0	0	0	0	---	NP
Vanwyper--------	0-10	Cobbly loam	CL	A-6	0	15-25	85-90	80-90	60-85	55-75	25-35	10-15
	10-25	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-10	30-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	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	
Soughe----------	0-13	Very cobbly loam	GM-GC, GM	A-4	0-1	20-40	55-70	50-60	45-55	35-45	20-30	NP-10
	13-20	Very gravelly clay loam, very gravelly sandy clay loam, very gravelly loam	GC, SC	A-2	0	0-15	35-65	25-55	15-25	10-20	35-40	15-20
	20-24	Unweathered bedrock			0	0	0	0	0	0	---	NP
690:												
Welch----------	0-10	Silt loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	10-60	Stratified sandy loam to silty clay loam	CL	A-6, A-7	0	0	80-100	75-100	65-90	50-70	35-45	15-20
Welch----------	0-10	Silt loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	10-60	Stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
920:												
Bullump----------	0-12	Very gravelly loam	GC, SC	A-2	0	0-10	45-70	35-50	30-45	25-35	25-35	10-15
	12-46	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0	0-15	40-65	30-50	25-45	15-40	35-45	15-20
	46-50	Unweathered bedrock			0	0	0	0	0	0	---	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	
Gando	0-9	Very gravelly loam	GM-GC, GM	A-2, A-1	0	0-5	40-60	25-50	20-35	15-30	20-30	NP-10
	9-17	Extremely gravelly loam, very gravelly loam, extremely gravelly sandy loam	GM	A-2, A-1	0-5	0-30	30-40	20-35	15-30	10-25	20-35	NP-10
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tusel	0-17	Gravelly loam	SM, GM	A-4	0	0-10	55-80	50-75	45-70	35-50	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	NP
921:												
Bullump	0-12	Very gravelly loam	GC, SC	A-2	0	0-10	45-70	35-50	30-45	25-35	25-35	10-15
	12-46	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0	0-15	40-65	30-50	25-45	15-40	35-45	15-20
	46-50	Unweathered bedrock			0	0	0	0	0	0	---	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	
Hackwood--------	0-26	Silt loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	70-90	60-80	20-35	5-15
	26-34	Gravelly loam, gravelly silt loam	GM-GC, SC-SM, CL-ML, CL	A-4, A-6	0	0	60-80	50-75	40-70	35-65	25-35	5-15
	34-60	Very gravelly clay loam, very gravelly silty clay loam, very gravelly loam	GC	A-2, A-6	0	0	40-60	35-50	30-45	25-40	35-40	15-20
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
922:												
Bullump---------	0-12	Very gravelly loam	GC, SC	A-2	0	0-10	45-70	35-50	30-45	25-35	25-35	10-15
	12-46	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0	0-15	40-65	30-50	25-45	15-40	35-45	15-20
	46-50	Unweathered bedrock			0	0	0	0	0	0	---	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	
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
1130: Clementine------	0-3	Silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	75-90	25-35	5-10
	3-44	Stratified silt loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	80-95	35-45	10-15
	44-60	Stratified loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	70-80	35-45	10-15

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	
1131:												
Clementine------	0-3	Silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	75-90	25-35	5-10
	3-44	Stratified silt loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	80-95	35-45	10-15
	44-60	Stratified loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	70-80	35-45	10-15
Clementine------	0-3	Silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	75-90	25-35	5-10
	3-44	Stratified silt loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	80-95	35-45	10-15
	44-60	Stratified loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	70-80	35-45	10-15
Clementine------	0-3	Silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	75-90	25-35	5-10
	3-44	Stratified silt loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	80-95	35-45	10-15
	44-60	Stratified loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	70-80	35-45	10-15
1135:												
Clementine------	0-3	Silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	75-90	25-35	5-10
	3-44	Stratified silt loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	80-95	35-45	10-15
	44-60	Stratified loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	70-80	35-45	10-15

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	
Clurde----------	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
1150:												
Clurde----------	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
Wieland----------	0-4	Gravelly loam	GC, CL, SC	A-6	0	0-5	60-85	50-75	45-70	35-60	25-35	10-15
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	50-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	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	
1155:												
Clurde----------	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
1156:												
Clurde----------	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
Kortty----------	0-6	Silt loam	ML, CL-ML	A-4	0	0	80-100	75-100	70-100	65-90	20-30	NP-10
	6-12	Loam, clay loam	CL	A-6	0	0	80-100	75-100	65-95	50-75	30-40	10-20
	12-42	Loam, gravelly silt loam, gravelly loam	CL-ML, CL	A-4, A-6	0	0-10	75-100	70-90	65-85	50-70	25-35	5-15
	42-55	Very gravelly sandy loam	GM-GC	A-2	0	0-10	45-55	35-50	25-35	10-20	20-30	5-10
	55-60	Cemented			0	0	0	0	0	0	---	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	
1157:												
Clurde----------	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
Zevadez----------	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-26	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	26-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
Chiara----------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-40	Indurated			0	0	0	0	0	0	---	NP
1190:												
Cherry Spring---	0-8	Very fine sandy loam	ML	A-4	0	0	95-100	95-100	85-95	70-80	20-25	NP-5
	8-23	Loam, silt loam, clay loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	80-95	75-90	65-75	25-40	5-20
	23-45	Cemented			0	0	0	0	0	0	---	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	
Enko----------	0-8	Very fine sandy loam	CL-ML	A-4	0	0	95-100	85-100	75-100	50-70	20-30	5-10
	8-15	Loam, sandy loam, fine sandy loam	SC-SM, CL-ML	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	15-38	Sandy loam, fine sandy loam, loam	SC-SM, CL-ML	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	38-60	Sandy loam, fine sandy loam, loam	SC-SM, CL-ML	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
1191:												
Cherry Spring---	0-8	Gravelly loam	GM-GC, GM, CL-ML, ML	A-4	0	0-10	65-85	55-75	45-70	35-55	20-30	NP-10
	8-23	Loam, silt loam, clay loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	80-95	75-90	65-75	25-40	5-20
	23-45	Cemented			0	0	0	0	0	0	---	NP
Wieland---------	0-4	Gravelly loam	GC, CL, SC	A-6	0	0-5	60-85	50-75	45-70	35-60	25-35	10-15
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	50-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
1193:												
Cherry Spring---	0-8	Silt loam	ML	A-4	0	0	95-100	95-100	85-95	70-80	20-25	NP-5
	8-23	Loam, silt loam, clay loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	80-95	75-90	65-75	25-40	5-20
	23-45	Cemented			0	0	0	0	0	0	---	NP
Hunnton---------	0-3	Silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	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	
Chiara----------	0-6	Silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-40	Indurated			0	0	0	0	0	0	---	NP
1210:												
Skull Creek-----	0-6	Very fine sandy loam	ML	A-4	0	0-10	95-100	85-100	80-95	50-65	15-25	NP-5
	6-34	Gravelly loam, gravelly sandy loam, loam	SM, ML	A-2, A-4, A-1	0	0-10	65-100	55-100	35-95	20-75	15-25	NP-5
	34-38	Indurated			0	0	0	0	0	0	---	NP
Shabliss--------	0-10	Very fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	55-65	20-25	NP-5
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5
Puett----------	0-3	Sandy loam	SM	A-4	0	0	90-100	85-95	60-80	35-50	---	NP
	3-10	Coarse sandy loam, fine sandy loam, sandy loam	SM, ML	A-1, A-2, A-4	0	0	80-100	75-95	40-80	15-55	---	NP
	10-14	Weathered bedrock			0	0	0	0	0	0	---	NP
1220:												
Hunnton---------	0-3	Loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	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	
Hunnton---------	0-3	Loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Fulstone--------	0-5	Cobbly loam	GM-GC, SC-SM	A-4	0	15-30	65-80	65-75	50-60	35-50	20-30	5-10
	5-17	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	17-40	Indurated			0	0	0	0	0	0	---	NP
1221:												
Hunnton---------	0-3	Gravelly loam	GC, CL	A-6	0	0-5	60-75	55-70	50-65	45-55	25-35	10-15
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Hunnton---------	0-3	Loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Fulstone--------	0-5	Gravelly loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	75-95	65-75	45-60	40-55	25-35	5-15
	5-17	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	17-40	Indurated			0	0	0	0	0	0	---	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	
1223:												
Hunnton	0-3	Gravelly loam	GC, CL	A-6	0	0-5	60-75	55-70	50-65	45-55	25-35	10-15
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Shabliss	0-10	Very fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	55-65	20-25	NP-5
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5
Puett	0-3	Very cobbly loamy sand	SM	A-1	0	30-45	65-80	55-70	30-50	10-20	---	NP
	3-10	Sandy loam	SM	A-2, A-4	0	0	85-100	75-100	45-70	25-40	15-25	NP-5
	10-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1224:												
Hunnton	0-3	Loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	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	
Trunk	0-5	Very cobbly loam	GM-GC, SC-SM, SC, GC	A-4, A-6	0-5	30-45	55-80	50-75	45-70	35-50	25-35	5-15
	5-23	Gravelly clay, gravelly clay loam	CL, GC, CH	A-7	0	0-10	55-85	50-80	45-75	40-65	40-55	20-30
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
Shabliss	0-10	Gravelly loam	CL-ML, SC-SM, GM-GC	A-2, A-4	0	0	55-80	50-75	40-60	30-55	20-30	5-10
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5
1226:												
Hunnton	0-3	Gravelly loam	GC, CL	A-6	0	0-5	60-75	55-70	50-65	45-55	25-35	10-15
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Wieland	0-4	Gravelly loam	GC, CL, SC	A-6	0	0-5	60-85	50-75	45-70	35-60	25-35	10-15
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	50-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	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	
Clementine------	0-3	Silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	75-90	25-35	5-10
	3-44	Stratified silt loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	80-95	35-45	10-15
	44-60	Stratified loam to silty clay loam	ML	A-6, A-7	0	0	100	100	95-100	70-80	35-45	10-15
1227:												
Hunnton---------	0-3	Silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Chiara----------	0-6	Silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-40	Indurated			0	0	0	0	0	0	---	NP
Bilbo-----------	0-5	Cobbly loam	GC, CL, GM-GC, CL-ML	A-6, A-4	0	15-25	70-95	70-90	60-75	45-65	25-35	5-15
	5-40	Very gravelly sandy clay, very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-5	0-25	45-65	35-50	30-45	20-40	40-55	20-35
	40-60	Extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, GM	A-1	0	0-10	30-60	15-50	10-40	5-20	15-25	NP-5

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	
1228:												
Hunnton---	0-3	Silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Hunnton---	0-3	Silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
1229:												
Hunnton---	0-3	Silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-44	Indurated			0	0	0	0	0	0	---	NP
Chiara---	0-6	Silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-40	Indurated			0	0	0	0	0	0	---	NP
Wieland---	0-4	Silt loam	CL-ML	A-4	0	0	95-100	90-100	85-95	75-85	20-30	5-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	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	
1230:												
Fulstone--------	0-5	Gravelly loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	75-95	65-75	45-60	40-55	25-35	5-15
	5-17	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	17-40	Indurated			0	0	0	0	0	0	---	NP
Hunnton---------	0-3	Loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
1231:												
Fulstone--------	0-5	Very cobbly silt loam	GM-GC, GC, SC-SM, SC	A-4, A-6	0	30-45	55-75	45-60	40-55	35-50	25-35	5-15
	5-17	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	17-40	Indurated			0	0	0	0	0	0	---	NP
Fulstone--------	0-5	Very cobbly silt loam	GM-GC, GC, SC-SM, SC	A-4, A-6	0	30-45	55-75	45-60	40-55	35-50	25-35	5-15
	5-17	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	17-40	Indurated			0	0	0	0	0	0	---	NP
Hunnton---------	0-3	Loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	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	
1232:												
Fulstone--------	0-5	Gravelly loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	75-95	65-75	45-60	40-55	25-35	5-15
	5-17	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	17-40	Indurated			0	0	0	0	0	0	---	NP
Fulstone--------	0-5	Cobbly loam	GM-GC, SC-SM	A-4	0	15-30	65-80	65-75	50-60	35-50	20-30	5-10
	5-17	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	17-40	Indurated			0	0	0	0	0	0	---	NP
Wieland---------	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
1241:												
Enko------------	0-8	Fine sandy loam	SC-SM	A-4	0	0	95-100	85-100	60-75	35-50	20-30	5-10
	8-15	Loam, sandy loam, fine sandy loam	SC-SM, CL-ML	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	15-38	Sandy loam, fine sandy loam, loam	SC-SM, CL-ML	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	38-60	Sandy loam, fine sandy loam, loam	SC-SM, CL-ML	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	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	
Shabliss--------	0-10	Very fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	55-65	20-25	NP-5
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5
Orovada---------	0-5	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	80-95	60-75	20-30	NP-5
	5-29	Fine sandy loam, loam	SM, ML	A-4	0	0	75-100	75-100	60-80	40-60	20-30	NP-5
	29-60	Stratified fine sandy loam to silt loam	SM, ML	A-4	0	0	75-100	75-100	60-85	35-55	20-30	NP-5
1242:												
Enko----------	0-8	Fine sandy loam	SC-SM	A-4	0	0	95-100	85-100	60-75	35-50	20-30	5-10
	8-15	Loam, sandy loam, fine sandy loam	SC-SM, CL-ML	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	15-38	Sandy loam, fine sandy loam, loam	SC-SM, CL-ML	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	38-60	Sandy loam, fine sandy loam, loam	SC-SM, CL-ML	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	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	
Enko----------	0-8	Fine sandy loam	SC-SM	A-4	0	0	95-100	85-100	60-75	35-50	20-30	5-10
	8-15	Loam, sandy loam, fine sandy loam	SC-SM, CL-ML	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	15-38	Sandy loam, fine sandy loam, loam	SC-SM, CL-ML	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	38-60	Sandy loam, fine sandy loam, loam	SC-SM, CL-ML	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
1260:												
Kleckner---------	0-8	Gravelly loam	CL-ML, ML	A-4	0	0-25	65-90	60-85	55-80	50-75	25-35	5-10
	8-20	Very gravelly clay loam, very cobbly clay loam, very cobbly clay	GC, SC	A-2, A-7	0	10-45	45-70	30-60	30-55	25-45	40-55	25-35
	20-42	Very gravelly clay loam, very gravelly clay, very cobbly clay	GC, SC	A-2, A-7	0	0-45	45-90	25-50	25-45	20-40	40-55	25-35
	42-60	Extremely gravelly sandy loam	GM-GC, GP-GC	A-1, A-2	0	0-10	20-30	15-25	10-20	5-15	25-30	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	
Upville---------	0-10	Gravelly loam	SC-SM, CL-ML	A-4	0	0-10	70-90	60-85	55-80	40-65	25-30	5-10
	10-19	Very gravelly loam, gravelly coarse sandy loam, very gravelly sandy loam	GM-GC, SC-SM, GC, SC	A-2, A-4, A-6	0	0-20	45-80	40-75	35-65	30-50	25-35	5-15
	19-61	Extremely gravelly coarse sand, extremely cobbly sand, extremely cobbly loamy sand	GP, GP-GM	A-1	0	25-50	15-40	10-35	10-25	0-10	---	NP
Fulstone--------	0-5	Very cobbly loam	GM-GC, GC, SC-SM, SC	A-4, A-6	0	30-45	55-75	45-60	40-55	35-50	25-35	5-15
	5-17	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	17-40	Indurated			0	0	0	0	0	0	---	NP
1261:												
Kleckner--------	0-8	Gravelly loam	CL-ML, ML	A-4	0	0-25	65-90	60-85	55-80	50-75	25-35	5-10
	8-20	Very gravelly clay loam, very cobbly clay loam, very cobbly clay	GC, SC	A-2, A-7	0	10-45	45-70	30-60	30-55	25-45	40-55	25-35
	20-42	Very gravelly clay loam, very gravelly clay, very cobbly clay	GC, SC	A-2, A-7	0	0-45	45-90	25-50	25-45	20-40	40-55	25-35
	42-60	Extremely gravelly sandy loam	GM-GC, GP-GC	A-1, A-2	0	0-10	20-30	15-25	10-20	5-15	25-30	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	
Heechee---------	0-7	Cobbly loam	CL-ML, CL, SC-SM, SC	A-4, A-6	0-10	15-25	80-95	70-80	60-75	45-60	25-35	5-15
	7-27	Very cobbly clay loam, very gravelly sandy clay loam, very cobbly loam	GC	A-2, A-6	0-15	25-50	45-75	35-65	30-60	25-50	30-40	10-20
	27-61	Extremely cobbly sandy loam, extremely cobbly coarse sandy loam, extremely cobbly loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-10
1290:												
Tweba-----------	0-15	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	85-95	50-65	20-30	NP-10
	15-27	Fine sandy loam, very fine sandy loam, loam	ML	A-4	0	0	100	100	80-95	50-65	20-25	NP-5
	27-60	Stratified very fine sandy loam to loamy sand	SM	A-2, A-4	0	0	90-100	90-100	55-75	25-45	---	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	
1350:												
Shabliss--------	0-10	Gravelly loam	CL-ML, SC-SM, GM-GC	A-2, A-4	0	0	55-80	50-75	40-60	30-55	20-30	5-10
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5
Hunnton---------	0-3	Gravelly loam	GC, CL	A-6	0	0-5	60-75	55-70	50-65	45-55	25-35	10-15
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Bioya----------	0-10	Loam	ML, CL-ML	A-4	0	0	100	95-100	80-100	50-80	20-30	NP-10
	10-36	Silt loam, loam	CL, CL-ML	A-6, A-4	0	0	100	95-100	85-100	50-80	25-35	5-15
	36-60	Indurated			0	0	0	0	0	0	---	NP
1351:												
Shabliss--------	0-10	Very fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	55-65	20-25	NP-5
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5

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	
Bartome---------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
1352:												
Shabliss--------	0-10	Very fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	55-65	20-25	NP-5
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5
Skull Creek-----	0-6	Very fine sandy loam	ML	A-4	0	0-10	95-100	85-100	80-95	50-65	15-25	NP-5
	6-34	Gravelly loam, gravelly sandy loam, loam	SM, ML	A-2, A-4, A-1	0	0-10	65-100	55-100	35-95	20-75	15-25	NP-5
	34-38	Indurated			0	0	0	0	0	0	---	NP
Puett-----------	0-3	Very cobbly sandy loam	SM, GM	A-1, A-2	0	30-45	50-75	45-70	30-55	15-35	15-25	NP-5
	3-10	Sandy loam	SM	A-2, A-4	0	0	85-100	75-100	45-70	25-40	15-25	NP-5
	10-20	Weathered bedrock			0	0	0	0	0	0	---	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	
1360:												
Orovada	0-5	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	80-95	60-75	20-30	NP-5
	5-29	Fine sandy loam, loam	SM, ML	A-4	0	0	75-100	75-95	60-80	40-60	20-30	NP-5
	29-60	Stratified fine sandy loam to silt loam	SM, ML	A-4	0	0	75-100	75-95	60-85	35-55	20-30	NP-5
1362:												
Orovada	0-5	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	80-95	60-75	20-30	NP-5
	5-29	Fine sandy loam, loam	SM, ML	A-4	0	0	75-100	75-100	60-80	40-60	20-30	NP-5
	29-60	Stratified fine sandy loam to silt loam	SM, ML	A-4	0	0	75-100	75-100	60-85	35-55	20-30	NP-5
Clurde	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
Wieland	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	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	
1363:												
Orovada	0-5	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	80-95	60-75	20-30	NP-5
	5-29	Fine sandy loam, loam	SM, ML	A-4	0	0	75-100	75-95	60-80	40-60	20-30	NP-5
	29-60	Stratified fine sandy loam to silt loam	SM, ML	A-4	0	0	75-100	75-95	60-85	35-55	20-30	NP-5
Tweba	0-5	Sandy loam	SM, SC-SM, CL-ML, ML	A-2, A-4	0	0	100	100	60-80	30-55	20-30	NP-10
	5-35	Fine sandy loam, very fine sandy loam, loam	ML	A-4	0	0	100	100	80-95	50-65	20-25	NP-5
	35-60	Stratified very fine sandy loam to loamy sand	SM	A-2, A-4	0	0	90-100	90-100	55-75	25-45	15-20	NP-5
Weso	0-6	Very fine sandy loam	SM, ML	A-4	0	0	95-100	90-100	80-90	40-55	15-25	NP-5
	6-12	Fine sandy loam, very fine sandy loam, loam	ML, CL-ML, SM, SC-SM	A-4	0	0	95-100	85-100	70-85	45-60	15-30	NP-10
	12-25	Fine sandy loam, very fine sandy loam	ML, SM	A-4	0	0	95-100	85-100	70-85	45-60	15-25	NP-5
	25-60	Stratified very gravelly loamy sand to fine sandy loam	SM	A-1, A-2	0	0	80-90	70-80	45-55	20-30	---	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	
1530:												
Creemon	0-8	Silt loam	ML	A-4	0	0	100	100	95-100	85-90	---	NP
	8-14	Very fine sandy loam, silt loam	ML	A-4	0	0	100	100	95-100	85-90	25-30	NP-5
	14-47	Stratified very fine sandy loam to silt loam	ML	A-4	0	0	100	100	95-100	85-90	25-30	NP-5
	47-60	Stratified gravelly very fine sandy loam to fine sandy loam	SM	A-4	0	0	80-90	70-85	60-70	35-50	---	NP
Placeritos	0-13	Silt loam	ML	A-4, A-6	0	0	100	100	95-100	75-95	30-40	5-15
	13-60	Stratified very fine sandy loam to silty clay loam	ML	A-4, A-6	0	0	100	100	95-100	85-100	30-40	5-15
1572:												
Weso	0-6	Very fine sandy loam	SM, ML	A-4	0	0	95-100	90-100	80-90	40-55	15-25	NP-5
	6-12	Fine sandy loam, very fine sandy loam, loam	ML, CL-ML, SM, SC-SM	A-4	0	0	95-100	85-100	70-85	45-60	15-30	NP-10
	12-25	Fine sandy loam, very fine sandy loam	ML, SM	A-4	0	0	95-100	85-100	70-85	45-60	15-25	NP-5
	25-60	Stratified very gravelly loamy sand to fine sandy loam	SM	A-1, A-2	0	0	80-90	70-80	45-55	20-30	---	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	
Orovada---------	0-5	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	80-95	60-75	20-30	NP-5
	5-29	Fine sandy loam, loam	SM, ML	A-4	0	0	75-100	75-100	60-80	40-60	20-30	NP-5
	29-60	Stratified fine sandy loam to silt loam	SM, ML	A-4	0	0	75-100	75-100	60-85	35-55	20-30	NP-5
Shabliss--------	0-10	Very fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	55-65	20-25	NP-5
	10-16	Cemented			0	0	0	0	0	0	---	NP
	16-35	Loam, fine sandy loam	ML	A-4	0	0	90-100	75-100	65-90	50-60	15-25	NP-5
	35-60	Very gravelly fine sandy loam, very gravelly loamy sand	SM, GM, SP-SM, GP-GM	A-1	0	0	50-75	25-50	15-40	5-25	15-25	NP-5
1573:												
Weso------------	0-6	Very fine sandy loam	SM, ML	A-4	0	0	95-100	90-100	80-90	40-55	15-25	NP-5
	6-12	Fine sandy loam, very fine sandy loam, loam	ML, CL-ML, SM, SC-SM	A-4	0	0	95-100	85-100	70-85	45-60	15-30	NP-10
	12-25	Fine sandy loam, very fine sandy loam	ML, SM	A-4	0	0	95-100	85-100	70-85	45-60	15-25	NP-5
	25-60	Stratified very gravelly loamy sand to fine sandy loam	SM	A-1, A-2	0	0	80-90	70-80	45-55	20-30	---	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	
Orovada---------	0-5	Loam	ML	A-4	0	0	95-100	90-100	80-95	60-75	25-35	NP-5
	5-29	Fine sandy loam, loam	SM, ML	A-4	0	0	75-100	75-100	60-80	40-60	20-30	NP-5
	29-60	Stratified fine sandy loam to silt loam	SM, ML	A-4	0	0	75-100	75-100	60-85	35-55	20-30	NP-5
Tweba-----------	0-5	Sandy loam	SM, SC-SM, CL-ML, ML	A-2, A-4	0	0	100	100	60-80	30-55	20-30	NP-10
	5-35	Fine sandy loam, very fine sandy loam, loam	ML	A-4	0	0	100	100	80-95	50-65	20-25	NP-5
	35-60	Stratified very fine sandy loam to loamy sand	SM	A-2, A-4	0	0	90-100	90-100	55-75	25-45	15-20	NP-5
1617:												
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tweener---------	0-5	Very cobbly sandy loam	GM-GC, SC-SM	A-2	10-25	30-35	55-85	50-80	30-55	15-30	25-30	5-10
	5-8	Very cobbly clay loam, very cobbly loam	GC, SC	A-2, A-6, A-7	10-25	35-40	60-80	55-75	40-70	30-50	30-45	10-20
	8-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
1618:												
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
Sumine	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Pequop	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15
1619:												
Cleavage	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
Tusk----------	0-14	Loam	CL-ML, CL	A-4, A-6	0	0-5	80-100	75-100	65-95	55-90	20-35	5-15
	14-38	Gravelly clay loam	CL, GC, SC	A-6	0-5	0-15	65-80	60-75	55-70	40-55	35-40	15-20
	38-60	Very cobbly loam, extremely cobbly loam, very gravelly clay loam	GC, SC	A-2, A-6	0-5	15-45	30-75	25-60	20-50	15-40	25-40	10-20
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
1621:												
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
Graley----------	0-12	Stony loam	SC-SM, SM, CL-ML, ML	A-4	1-5	5-15	70-95	60-90	50-85	35-65	20-30	NP-10
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
1622:												
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood----------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
1623:												
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
Hapgood---------	0-13	Very gravelly loam	GM-GC, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	13-41	Very gravelly loam, very gravelly fine sandy loam	GM-GC, GC	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	41-55	Very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	55-59	Unweathered bedrock			0	0	0	0	0	0	---	NP
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
1625: Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
Ninemile--------	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
1626:												
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Carstump--------	0-14	Gravelly loam	ML, CL-ML	A-4	0	0-10	65-85	60-80	55-75	50-70	20-30	NP-10
	14-36	Very gravelly clay, very cobbly clay	SC, SM	A-2, A-7	0	0-50	65-75	35-50	35-45	30-40	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	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	
Chen----------	0-7	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	0-10	45-55	55-65	50-60	45-55	30-40	25-35	5-15
	7-15	Very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2	0-15	5-50	45-55	30-50	25-40	25-35	55-65	35-40
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
1628:												
Cleavage----------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Chen----------	0-7	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	0-10	45-55	55-65	50-60	45-55	30-40	25-35	5-15
	7-15	Very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2	0-15	5-50	45-55	30-50	25-40	25-35	55-65	35-40
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	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	
Reluctan--------	0-9	Gravelly loam	SC-SM, CL-ML	A-4	0	5-10	70-80	60-75	50-65	40-55	25-30	5-10
	9-27	Gravelly clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-31	Unweathered bedrock			0	0	0	0	0	0	---	NP
1640:												
Tusk------------	0-14	Gravelly loam	GM-GC, GC, CL-ML, CL	A-4, A-6	0	0-5	60-80	50-75	40-70	35-65	20-35	5-15
	14-38	Gravelly clay loam	CL, GC, SC	A-6	0-5	0-15	65-80	60-75	55-70	40-55	35-40	15-20
	38-60	Very cobbly loam, extremely cobbly loam, very gravelly clay loam	GC, SC	A-2, A-6	0-5	15-45	30-75	25-60	20-50	15-40	25-40	10-20
Cleavage--------	0-4	Very cobbly loam	GM-GC, GC	A-2, A-4, A-6	0-5	30-45	55-75	45-65	40-60	25-50	25-35	5-15
	4-18	Very cobbly clay loam, extremely cobbly sandy clay loam, very gravelly clay loam	GC	A-2	5-15	10-40	40-55	30-45	25-45	20-35	30-45	10-20
	18-28	Unweathered bedrock			0	0	0	0	0	0	---	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	
Hackwood--------	0-26	Silt loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	70-90	60-80	20-35	5-15
	26-34	Gravelly loam, gravelly silt loam	GM-GC, SC-SM, CL-ML, CL	A-4, A-6	0	0	60-80	50-75	40-70	35-65	25-35	5-15
	34-60	Very gravelly clay loam, very gravelly silty clay loam, very gravelly loam	GC	A-2, A-6	0	0	40-60	35-50	30-45	25-40	35-40	15-20
1650:												
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tusk------------	0-14	Gravelly loam	GM-GC, GC, CL-ML, CL	A-4, A-6	0	0-5	60-80	50-75	40-70	35-65	20-35	5-15
	14-38	Gravelly clay loam	CL, GC, SC	A-6	0-5	0-15	65-80	60-75	55-70	40-55	35-40	15-20
	38-60	Very cobbly loam, extremely cobbly loam, very gravelly clay loam	GC, SC	A-2, A-6	0-5	15-45	30-75	25-60	20-50	15-40	25-40	10-20
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	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	
1651:												
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Reluctan--------	0-9	Cobbly loam	SC-SM, CL-ML	A-4	0-5	10-30	80-90	70-90	60-85	40-70	20-30	5-10
	9-27	Gravelly loam, gravelly clay loam	GC, CL	A-6, A-7	0-5	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1652:												
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Graley----------	0-12	Very cobbly loam	GM-GC, GM, SC-SM, SM	A-4	0	30-55	65-80	65-70	55-65	35-50	20-30	NP-10
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	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	
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1653:												
Ninemile--------	0-4	Cobbly loam	ML	A-4	1-5	10-25	85-95	80-90	65-85	50-65	30-35	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Reluctan--------	0-9	Very gravelly loam	GM-GC	A-2, A-4	0	10-25	35-65	30-55	25-55	20-40	25-30	5-10
	9-27	Gravelly clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-31	Unweathered bedrock			0	0	0	0	0	0	---	NP
Graley----------	0-7	Stony loam	SC-SM, SM, CL-ML, ML	A-4	1-5	5-15	70-95	60-90	50-85	35-65	20-30	NP-10
	7-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
1655:												
Ninemile--------	0-4	Very stony loam	CL-ML	A-4	5-25	15-40	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	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	
Thwoop----------	0-4	Gravelly silt loam	GM-GC, CL-ML	A-4	0	0-10	70-95	55-75	40-65	40-65	25-30	5-10
	4-10	Silt loam	CL	A-6	0	0-10	90-95	85-90	50-75	50-75	30-35	10-15
	10-25	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	10-25	45-60	40-55	30-45	30-45	40-55	20-30
	25-27	Indurated			0	0	0	0	0	0	---	NP
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
Pequop----------	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15
1656:												
Ninemile--------	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	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	
Pequop----------	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15
Gumble----------	0-4	Very gravelly sandy loam	GM-GC	A-1, A-2	0	5-15	50-60	40-50	25-35	15-25	25-30	5-10
	4-18	Clay, gravelly clay	CH, GC	A-7	0	0-15	65-100	60-90	55-85	45-70	50-65	25-40
	18-22	Weathered bedrock			0	0	0	0	0	0	---	NP
1657:												
Ninemile--------	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Alyan----------	0-9	Gravelly loam	GM-GC, CL-ML, GC, CL	A-2, A-4, A-6	0	0-5	55-80	50-75	35-60	25-55	25-35	5-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	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	
1658:												
Ninemile--------	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Vanwyper--------	0-10	Very cobbly loam	SC	A-2, A-6	0-5	30-45	70-80	55-65	40-55	30-40	25-35	10-15
	10-25	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-10	30-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1659:												
Ninemile--------	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Carstump--------	0-14	Gravelly loam	ML, CL-ML	A-4	0	0-10	65-85	60-80	55-75	50-70	20-30	NP-10
	14-36	Very gravelly clay, very cobbly clay	SC, SM	A-2, A-7	0	0-50	65-75	35-50	35-45	30-40	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	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	
1660:												
Susie Creek-----	0-10	Loam	CL	A-6	0	0	90-100	75-100	70-95	55-75	30-35	10-15
	10-30	Clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	70-100	70-95	40-60	20-30
	30-60	Loam, clay loam	CL-ML, CL	A-4, A-6	0	0-10	90-100	85-100	65-85	50-70	25-35	5-15
Pie Creek-------	0-5	Loam	ML	A-4	0	0-10	95-100	90-100	80-90	60-70	25-30	NP-5
	5-23	Clay	CH	A-7	0	0	95-100	90-100	85-95	80-90	65-70	35-40
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
Pattani---------	0-14	Clay	CH	A-7	0	0	95-100	90-100	80-90	70-80	50-60	30-40
	14-37	Clay loam, silty clay loam, clay	CL, CH	A-7	0	0	85-95	80-90	75-85	65-80	40-55	25-35
	37-41	Weathered bedrock			0	0	0	0	0	0	---	NP
1671:												
Linkup----------	0-3	Cobbly loam	CL-ML	A-4	0	15-30	75-95	70-90	60-80	50-60	20-30	5-10
	3-5	Cobbly clay loam, very cobbly clay loam, cobbly clay	CL	A-6, A-7	0	25-45	80-100	75-90	70-80	55-70	35-50	15-25
	5-17	Clay, cobbly clay	CH	A-7	0	0-40	90-100	85-100	75-90	70-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Carstump--------	0-14	Very gravelly loam	SM, SC-SM	A-2	0	0	65-75	35-50	35-45	25-35	25-35	5-10
	14-36	Very gravelly clay, very cobbly clay	SC, SM	A-2, A-7	0	0-50	65-75	35-50	35-45	30-40	45-60	15-30
	36-60	Unweathered bedrock			0	0	0	0	0	0	---	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	
Linkup----------	0-3	Very cobbly loam	GM-GC	A-2, A-4	0-5	30-45	50-75	45-70	35-60	25-50	20-30	5-10
	3-5	Cobbly clay loam, very cobbly clay loam, cobbly clay	CL	A-6, A-7	0	25-45	80-100	75-90	70-80	55-70	35-50	15-25
	5-17	Clay, cobbly clay	CH	A-7	0	0-40	90-100	85-100	75-90	70-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
1672:												
Linkup----------	0-3	Very cobbly loam	GM-GC	A-2, A-4	0-5	30-45	50-75	45-70	35-60	25-50	20-30	5-10
	3-5	Cobbly clay loam, very cobbly clay loam, cobbly clay	CL	A-6, A-7	0	25-45	80-100	75-90	70-80	55-70	35-50	15-25
	5-17	Clay, cobbly clay	CH	A-7	0	0-40	90-100	85-100	75-90	70-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Carstump--------	0-14	Gravelly loam	ML, CL-ML	A-4	0	0-10	65-85	60-80	55-75	50-70	20-30	NP-10
	14-36	Very gravelly clay, very cobbly clay	SC, SM	A-2, A-7	0	0-50	65-75	35-50	35-45	30-40	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	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	
Linkup----------	0-3	Very cobbly loam	GM-GC	A-2, A-4	0-5	30-45	50-75	45-70	35-60	25-50	20-30	5-10
	3-5	Cobbly clay loam, very cobbly clay loam, cobbly clay	CL	A-6, A-7	0	25-45	80-100	75-90	70-80	55-70	35-50	15-25
	5-17	Clay, cobbly clay	CH	A-7	0	0-40	90-100	85-100	75-90	70-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
1673:												
Linkup----------	0-3	Very gravelly loam	GM-GC	A-2	0	0-15	40-60	30-50	25-50	20-35	20-30	5-10
	3-5	Clay loam, gravelly clay loam, gravelly clay	CL, GC	A-6, A-7	0	0-10	55-100	50-90	45-80	40-75	35-50	15-25
	5-17	Clay, gravelly clay	CH, GC	A-7	0	0-10	55-100	50-90	45-85	40-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Quarz----------	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
Alyan----------	0-9	Cobbly loam	SC, CL	A-6	0-1	15-30	80-100	70-90	60-85	40-70	25-35	10-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CH, CL	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-7, A-2	0	0-5	40-55	40-50	35-45	20-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	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	
1675:												
Linkup----------	0-3	Gravelly clay loam	CL	A-6, A-7	0	0-10	65-90	60-85	55-80	50-70	35-45	15-20
	3-5	Clay loam, gravelly clay loam, gravelly clay	CL, GC	A-6, A-7	0	0-10	55-100	50-90	45-80	40-75	35-50	15-25
	5-17	Clay, gravelly clay	CH, GC	A-7	0	0-10	55-100	50-90	45-85	40-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Snowmore--------	0-4	Very fine sandy loam	CL-ML	A-4	0	0-10	90-100	85-100	70-85	50-65	25-30	5-10
	4-13	Loam, clay loam, sandy clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-15
	13-22	Loam, clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-10	70-100	60-100	50-80	40-75	35-45	15-25
	22-28	Indurated			0	0	0	0	0	0	---	NP
	28-32	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ratsow----------	0-7	Loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	7-29	Clay loam, clay	CL, CH	A-7	0	0	80-100	75-100	70-90	55-70	40-55	20-30
	29-30	Indurated			0	0	0	0	0	0	---	NP
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	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	
1676:												
Linkup----------	0-3	Cobbly loam	CL-ML	A-4	0	15-30	75-95	70-90	60-80	50-60	20-30	5-10
	3-5	Cobbly clay loam, very cobbly clay loam, cobbly clay	CL	A-6, A-7	0	25-45	80-100	75-90	70-80	55-70	35-50	15-25
	5-17	Clay, cobbly clay	CH	A-7	0	0-40	90-100	85-100	75-90	70-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Quarz----------	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
1680:												
Carstump--------	0-14	Very gravelly loam	SM, SC-SM	A-2	0	0	65-75	35-50	35-45	25-35	25-35	5-10
	14-36	Very gravelly clay, very cobbly clay	SC, SM	A-2, A-7	0	0-50	65-75	35-50	35-45	30-40	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	NP
Reluctan--------	0-9	Cobbly loam	SC-SM, CL-ML	A-4	0-5	10-30	80-90	70-90	60-85	40-70	20-30	5-10
	9-27	Gravelly loam, gravelly clay loam	GC, CL	A-6, A-7	0-5	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	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	
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1685:												
Carstump--------	0-14	Very gravelly loam	SM, SC-SM	A-2	0	0	65-75	35-50	35-45	25-35	25-35	5-10
	14-36	Very gravelly clay, very cobbly clay	SC, SM	A-2, A-7	0	0-50	65-75	35-50	35-45	30-40	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Graley----------	0-12	Very cobbly loam	GM-GC, GM, SC-SM, SM	A-4	0	30-55	65-80	65-70	55-65	35-50	20-30	NP-10
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
1686:												
Carstump--------	0-14	Gravelly loam	ML, CL-ML	A-4	0	0-10	65-85	60-80	55-75	50-70	20-30	NP-10
	14-36	Very gravelly clay, very cobbly clay	SC, SM	A-2, A-7	0	0-50	65-75	35-50	35-45	30-40	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	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	
Reluctan--------	0-9	Cobbly loam	SC-SM, CL-ML	A-4	0-5	10-30	80-90	70-90	60-85	40-70	20-30	5-10
	9-27	Gravelly loam, gravelly clay loam	GC, CL	A-6, A-7	0-5	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Very stony loam	CL-ML	A-4	5-25	15-40	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1687:												
Carstump--------	0-14	Cobbly loam	ML, CL-ML	A-4	0	15-30	90-95	80-90	75-85	60-70	20-30	NP-10
	14-36	Very cobbly clay, very gravelly clay	SC, SM, GC, GM	A-2, A-7	0	30-65	45-90	35-80	35-60	30-50	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	NP
Linkup----------	0-3	Cobbly loam	CL-ML	A-4	0	15-30	75-95	70-90	60-80	50-60	20-30	5-10
	3-5	Cobbly clay loam, very cobbly clay loam, cobbly clay	CL	A-6, A-7	0	25-45	80-100	75-90	70-80	55-70	35-50	15-25
	5-17	Clay, cobbly clay	CH	A-7	0	0-40	90-100	85-100	75-90	70-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Carstump--------	0-14	Gravelly loam	ML, CL-ML	A-4	0	0-10	65-85	60-80	55-75	50-70	20-30	NP-10
	14-36	Very gravelly clay, very cobbly clay	SC, SM	A-2, A-7	0	0-50	65-75	35-50	35-45	30-40	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	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	
1691:												
Rock Outcrop.												
Pequop----------	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15
Rubble Land-----	0-60	Fragmental material	GP	A-1	30-65	30-65	0-10	0-5	0-5	0	0-14	NP
1700:												
Cotant----------	0-3	Gravelly clay loam	GC, CL	A-6, A-7	0	0	60-85	50-70	40-65	35-60	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
Quarz-----------	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	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	
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1702:												
Cotant----------	0-3	Gravelly clay loam	GC, CL	A-6, A-7	0	0	60-85	50-70	40-65	35-60	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
McIvey----------	0-16	Cobbly loam	CL	A-6	0	15-25	75-95	65-90	60-80	50-70	30-40	10-15
	16-29	Very gravelly clay loam, gravelly clay loam	GC, SC, CL	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	29-65	Very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-7, A-2	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35
Blitzen----------	0-10	Very gravelly clay loam	GC	A-2	0	0-10	35-55	30-50	25-40	20-30	35-45	15-20
	10-33	Very gravelly clay, very gravelly clay loam	GC	A-2	0	0-10	35-55	30-50	25-40	20-35	45-65	20-35
	33-37	Weathered bedrock			0	0	0	0	0	0	---	NP
1703:												
Cotant----------	0-3	Gravelly clay loam	GC, CL	A-6, A-7	0	0	60-85	50-70	40-65	35-60	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	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	
Lerrow----------	0-9	Cobbly loam	SC, CL	A-6	0	30-40	80-95	75-90	65-75	45-55	30-35	10-15
	9-14	Clay loam, gravelly clay loam	CL, GC	A-7	0	0	55-90	50-85	45-80	35-65	40-50	20-25
	14-27	Cobbly clay, gravelly clay, clay	CH	A-7	0-5	10-25	75-95	65-85	60-75	55-70	50-60	25-35
	27-31	Weathered bedrock			0	0	0	0	0	0	---	NP
Bullump---------	0-12	Very gravelly loam	GC, SC	A-2	0	0-10	45-70	35-50	30-45	25-35	25-35	10-15
	12-46	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0	0-15	40-65	30-50	25-45	15-40	35-45	15-20
	46-50	Unweathered bedrock			0	0	0	0	0	0	---	NP
1711:												
Reluctan--------	0-9	Cobbly loam	SC-SM, CL-ML	A-4	0-5	10-30	80-90	70-90	60-85	40-70	20-30	5-10
	9-27	Gravelly loam, gravelly clay loam	GC, CL	A-6, A-7	0-5	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Cobbly loam	ML	A-4	1-5	10-25	85-95	80-90	65-85	50-65	30-35	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	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	
Cleavage--------	0-4	Gravelly loam	SC-SM, SC	A-2, A-4, A-6	0	0-10	75-90	55-75	40-60	25-50	25-35	5-15
	4-18	Very cobbly clay loam, extremely cobbly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
1712:												
Reluctan--------	0-9	Cobbly loam	SC-SM, CL-ML	A-4	0-5	10-30	80-90	70-90	60-85	40-70	20-30	5-10
	9-27	Gravelly loam, gravelly clay loam	GC, CL	A-6, A-7	0-5	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
1713:												
Reluctan--------	0-9	Gravelly loam	SC-SM, CL-ML	A-4	0	5-10	70-80	60-75	50-65	40-55	25-30	5-10
	9-27	Gravelly clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-31	Unweathered bedrock			0	0	0	0	0	0	---	NP
Erakatak--------	0-4	Gravelly loam	CL-ML, CL, GM-GC, GC	A-2, A-4, A-6	0	0-5	60-80	50-75	40-60	30-55	25-35	5-15
	4-19	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	40-55	15-30
	19-32	Very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	45-65	20-35
	32-35	Weathered bedrock			0	0	0	0	0	0	---	NP
	35-45	Unweathered bedrock			0	0	0	0	0	0	---	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	
Rugar----------	0-2	Loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-95	60-85	50-70	25-35	5-15
	2-20	Clay loam	CL	A-6, A-7	0	0	80-100	75-95	65-90	55-75	35-45	15-20
	20-43	Clay	CL, CH	A-7	0	0-5	80-100	75-95	65-90	55-70	45-60	25-35
	43-47	Weathered bedrock			0	0	0	0	0	0	---	NP
1720:												
Quarz----------	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
Alyan----------	0-9	Cobbly loam	SC, CL	A-6	0-1	15-30	80-100	70-90	60-85	40-70	25-35	10-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CH, CL	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-7, A-2	0	0-5	40-55	40-50	35-45	20-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	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	
1725:												
Quarz	0-6	Very stony loam	GC, CL, SC	A-6	0-10	25-50	60-85	55-80	50-70	35-60	25-35	10-20
	6-9	Very cobbly clay loam, very gravelly clay loam	GC	A-6, A-7, A-2	0-10	10-40	35-60	30-55	25-50	20-40	35-45	15-25
	9-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0-5	5-25	30-55	25-50	20-45	15-40	45-55	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cleavage	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Loncan	0-17	Very gravelly loam	GC	A-2	0	10-15	40-60	30-45	25-40	20-35	30-35	10-15
	17-30	Very gravelly loam, extremely cobbly loam, very gravelly sandy clay loam	GC	A-2	0-5	5-55	35-60	30-50	25-40	20-35	30-35	10-15
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	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	
1726:												
Quarz	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Pequop	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15
1730:												
Graley	0-12	Very gravelly loam	GM	A-1, A-2	0	0-5	30-50	25-45	20-40	15-30	20-25	NP-5
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	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	
Erakatak--------	0-4	Very gravelly loam	GM-GC, GC	A-2	0	0-10	35-60	25-50	20-40	15-35	25-35	5-15
	4-19	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	40-55	15-30
	19-32	Very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	45-65	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
Chen------------	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
1732:												
Graley----------	0-12	Very stony loam	GM	A-1, A-2	5-10	0-5	40-50	30-40	25-35	20-30	20-25	NP-5
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Quarz-----------	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	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	
Ninemile--------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1733:												
Graley----------	0-12	Very stony loam	GM	A-1, A-2	5-10	0-5	40-50	30-40	25-35	20-30	20-25	NP-5
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Loncan----------	0-17	Very gravelly loam	GC	A-2	0	10-15	40-60	30-45	25-40	20-35	30-35	10-15
	17-30	Very gravelly loam, extremely cobbly loam, very gravelly sandy clay loam	GC	A-2	0-5	5-55	35-60	30-50	25-40	20-35	30-35	10-15
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	NP
1740:												
Erakatak--------	0-4	Very gravelly loam	GM-GC, GC	A-2	0	0-10	35-60	25-50	20-40	15-35	25-35	5-15
	4-19	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	40-55	15-30
	19-32	Very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	45-65	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	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	
Cleavage--------	0-4	Extremely gravelly loam	GM-GC	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hackwood--------	0-26	Silt loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	70-90	60-80	20-35	5-15
	26-34	Gravelly loam, gravelly silt loam	GM-GC, SC-SM, CL-ML, CL	A-4, A-6	0	0	60-80	50-75	40-70	35-65	25-35	5-15
	34-60	Very gravelly clay loam, very gravelly silty clay loam, very gravelly loam	GC	A-2, A-6	0	0	40-60	35-50	30-45	25-40	35-40	15-20
1741:												
Erakatak--------	0-4	Very gravelly clay loam	GC	A-2, A-6, A-7	0	0-5	35-60	25-50	20-45	15-40	35-45	15-20
	4-19	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	40-55	15-30
	19-32	Very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	45-65	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	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	
Chen----------	0-7	Very gravelly sandy clay loam	GC, SC	A-2	0	0-15	50-65	35-50	30-40	15-25	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tusk----------	0-14	Gravelly loam	GM-GC, GC, CL-ML, CL	A-4, A-6	0	0-5	60-80	50-75	40-70	35-65	20-35	5-15
	14-38	Gravelly clay loam	CL, GC, SC	A-6	0-5	0-15	65-80	60-75	55-70	40-55	35-40	15-20
	38-60	Very cobbly loam, extremely cobbly loam, very gravelly clay loam	GC, SC	A-2, A-6	0-5	15-45	30-75	25-60	20-50	15-40	25-40	10-20
1742: Erakatak--------	0-4	Gravelly loam	CL-ML, CL, GM-GC, GC	A-2, A-4, A-6	0	0-5	60-80	50-75	40-60	30-55	25-35	5-15
	4-19	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	40-55	15-30
	19-32	Very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	45-65	20-35
	32-35	Weathered bedrock			0	0	0	0	0	0	---	NP
	35-45	Unweathered bedrock			0	0	0	0	0	0	---	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	
Rugar----------	0-2	Clay loam	CL	A-6, A-7	0	0	80-100	75-95	65-90	55-75	35-45	15-20
	2-20	Clay loam	CL	A-6, A-7	0	0	80-100	75-95	65-90	55-75	35-45	15-20
	20-43	Clay	CL, CH	A-7	0	0-5	80-100	75-95	65-90	55-70	45-60	25-35
	43-47	Weathered bedrock			0	0	0	0	0	0	---	NP
Tusel----------	0-17	Very gravelly loam	GM	A-2	0	0-15	50-60	40-50	35-45	25-35	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	NP
1744:												
Erakatak--------	0-4	Very gravelly clay loam	GC	A-2, A-6, A-7	0	0-5	35-60	25-50	20-45	15-40	35-45	15-20
	4-19	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	40-55	15-30
	19-32	Very cobbly clay	GC, CL, CH	A-7	0-5	25-55	60-75	50-65	45-60	40-55	45-65	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	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	
Graley----------	0-12	Very gravelly loam	GM	A-1, A-2	0	0-5	30-50	25-45	20-40	15-30	20-25	NP-5
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tusel----------	0-17	Very gravelly loam	GM	A-2	0	0-15	50-60	40-50	35-45	25-35	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	NP
1746:												
Booford---------	0-10	Silt loam	CL	A-6	0	0	90-100	85-100	55-95	50-95	25-35	10-15
	10-19	Silty clay loam, clay loam, clay	ML, MH	A-7	0	0	80-95	75-90	65-90	60-85	45-60	15-25
	19-36	Silty clay, clay	MH	A-7	0	0	80-90	75-85	70-80	65-75	50-65	20-30
	36-46	Weathered bedrock			0	0	0	0	0	0	---	NP
Cotant----------	0-3	Gravelly clay loam	GC, CL	A-6, A-7	0	0	60-85	50-70	40-65	35-60	35-45	15-20
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	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	
Blitzen---------	0-10	Gravelly clay loam	GC, CL, SC	A-2, A-6, A-7	0	0-10	60-80	55-75	40-60	30-55	35-45	15-20
	10-33	Very gravelly clay, very gravelly clay loam	GC	A-2	0	0-10	35-55	30-50	25-40	20-35	45-65	20-35
	33-37	Weathered bedrock			0	0	0	0	0	0	---	NP
1800:												
Bregar----------	0-6	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	10-20	55-70	40-55	35-50	25-40	25-35	5-15
	6-11	Very gravelly sandy clay loam, extremely cobbly clay loam, very gravelly clay loam	GC	A-2	0	5-45	40-50	25-35	20-30	10-25	35-45	15-25
	11-15	Unweathered bedrock			0	0	0	0	0	0	---	NP
Bregar----------	0-6	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	10-20	55-70	40-55	35-50	25-40	25-35	5-15
	6-11	Very gravelly sandy clay loam, extremely cobbly clay loam, very gravelly clay loam	GC	A-2	0	5-45	40-50	25-35	20-30	10-25	35-45	15-25
	11-15	Unweathered bedrock			0	0	0	0	0	0	---	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	
Carstump--------	0-14	Very cobbly loam	GM, GM-GC	A-2, A-4	0	50-60	60-75	60-70	50-65	30-50	20-30	NP-10
	14-36	Very cobbly clay, very gravelly clay	SC, SM, GC, GM	A-2, A-7	0	30-65	45-90	35-80	35-60	30-50	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	NP
1802:												
Bregar----------	0-2	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	10-20	55-70	40-55	35-50	25-40	25-35	5-15
	2-7	Very gravelly sandy clay loam, extremely cobbly clay loam, very gravelly clay loam	GC	A-2	0	5-45	40-50	25-35	20-30	10-25	35-45	15-25
	7-11	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	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	
Pequop----------	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15
1803: Rock Outcrop.												
Bregar----------	0-2	Very gravelly sandy loam	GM	A-1	0	0-5	45-60	35-50	20-40	10-20	20-25	NP-5
	2-7	Very gravelly sandy clay loam, extremely cobbly clay loam, very gravelly clay loam	GC	A-2	0	5-45	40-50	25-35	20-30	10-25	35-45	15-25
	7-11	Unweathered bedrock			0	0	0	0	0	0	---	NP
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	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	
1805:												
Bregar----------	0-2	Extremely cobbly loam	GC, GM-GC	A-2	0	50-60	50-65	35-45	30-40	25-35	25-35	5-15
	2-11	Very gravelly clay loam, extremely gravelly loam, extremely cobbly sandy clay loam	GC	A-2	0-20	0-40	25-60	20-50	15-45	15-35	35-45	15-25
	11-15	Unweathered bedrock			0	0	0	0	0	0	---	NP
Deseed----------	0-4	Gravelly loam	CL-ML, CL	A-4, A-6	0	5-15	70-85	65-80	55-70	50-60	25-35	5-15
	4-26	Gravelly clay loam, gravelly clay	GC, CL	A-7	0	0-10	60-80	55-75	50-70	45-70	40-50	20-30
	26-30	Unweathered bedrock			0	0	0	0	0	0	---	NP
Linkup----------	0-3	Very cobbly loam	GM-GC	A-2, A-4	0-5	30-45	50-75	45-70	35-60	25-50	20-30	5-10
	3-5	Cobbly clay loam, very cobbly clay loam, cobbly clay	CL	A-6, A-7	0	25-45	80-100	75-90	70-80	55-70	35-50	15-25
	5-17	Clay, cobbly clay	CH	A-7	0	0-40	90-100	85-100	75-90	70-80	50-60	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	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	
1810:												
Shively---------	0-9	Loam	ML	A-4	0	0-2	90-100	80-95	65-85	50-60	20-25	NP-5
	9-21	Fine sandy loam, loam	ML	A-4	0	0-5	80-100	75-100	65-85	50-60	20-25	NP-5
	21-41	Fine sandy loam, sandy loam, loam, sandy clay loam	SC-SM, CL-ML, SM, ML	A-4	0	0-5	80-100	75-100	60-70	45-60	20-30	NP-10
	41-60	Weathered bedrock			0	0	0	0	0	0	---	NP
Ninemile---------	0-4	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	55-65	30-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hackwood---------	0-26	Silt loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	70-90	60-80	20-35	5-15
	26-34	Gravelly loam, gravelly silt loam	GM-GC, SC-SM, CL-ML, CL	A-4, A-6	0	0	60-80	50-75	40-70	35-65	25-35	5-15
	34-60	Very gravelly clay loam, very gravelly silty clay loam, very gravelly loam	GC	A-2, A-6	0	0	40-60	35-50	30-45	25-40	35-40	15-20
1830:												
Vanwyper---------	0-10	Gravelly loam	GC, SC	A-6	0	0-5	55-75	50-70	45-65	35-50	25-35	10-15
	10-25	Very cobbly clay, very cobbly clay loam	GC, CL, CH	A-7	0-10	25-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	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	
Alyan----------	0-9	Gravelly loam	GM-GC, CL-ML, GC, CL	A-2, A-4, A-6	0	0-5	55-80	50-75	35-60	25-55	25-35	5-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
Vanwyper--------	0-10	Gravelly loam	GC, SC	A-6	0	0-5	55-75	50-70	45-65	35-50	25-35	10-15
	10-25	Very cobbly clay, very cobbly clay loam	GC, CL, CH	A-7	0-10	25-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
1831:												
Vanwyper--------	0-10	Cobbly loam	CL	A-6	0	15-25	85-90	80-90	60-85	55-75	25-35	10-15
	10-25	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-10	30-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
Trunk----------	0-5	Gravelly loam	GM-GC, SC-SM, GM, SM	A-4	0	0-5	55-80	50-75	45-70	35-50	20-30	NP-10
	5-23	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-85	50-80	45-75	40-65	40-55	20-30
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	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	
Vanwyper--------	0-10	Cobbly loam	CL	A-6	0	15-25	85-90	80-90	60-85	55-75	25-35	10-15
	10-25	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-10	30-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
1832:												
Vanwyper--------	0-10	Very cobbly loam	SC	A-2, A-6	0-5	30-45	70-80	55-65	40-55	30-40	25-35	10-15
	10-25	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-10	30-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
Trunk-----------	0-5	Cobbly clay loam	CL	A-6, A-7	0	15-30	75-95	70-90	65-85	55-70	35-45	15-20
	5-23	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-85	50-80	45-75	40-65	40-55	20-30
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
Trunk-----------	0-5	Cobbly clay loam	CL	A-6, A-7	0	15-30	75-95	70-90	65-85	55-70	35-45	15-20
	5-23	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-85	50-80	45-75	40-65	40-55	20-30
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
1833: 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	
Vanwyper--------	0-10	Very cobbly loam	SC	A-2, A-6	0-5	30-45	70-80	55-65	40-55	30-40	25-35	10-15
	10-25	Very cobbly clay loam, very cobbly clay	GC, CL, CH	A-7	0-10	30-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
Trunk----------	0-5	Cobbly loam	CL-ML, ML	A-4	0	15-30	75-95	70-90	60-90	50-70	20-30	NP-10
	5-23	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-85	50-80	45-75	40-65	40-55	20-30
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
1852:												
Gumble----------	0-4	Fine sandy loam	SC-SM	A-2	0	0	85-95	75-85	65-75	25-30	25-30	5-10
	4-18	Clay	CH	A-7	0	0	85-100	75-90	70-85	60-70	50-65	25-40
	18-22	Weathered bedrock			0	0	0	0	0	0	---	NP
Tuffo----------	0-6	Fine sandy loam	SM	A-2, A-4	0	0	80-95	75-90	60-80	30-45	15-20	NP-5
	6-13	Very fine sandy loam, gravelly sandy loam, fine sandy loam	SM	A-2, A-4	0	0	65-95	60-90	55-80	30-50	15-20	NP-5
	13-17	Weathered bedrock			0	0	0	0	0	0	---	NP
Hunnton---------	0-3	Silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	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	
1853:												
Rock Outcrop.												
Gumble	0-4	Very gravelly sandy loam	GM-GC	A-1, A-2	0	5-15	50-60	40-50	25-35	15-25	25-30	5-10
	4-18	Clay, gravelly clay	CH, GC	A-7	0	0-15	65-100	60-90	55-85	45-70	50-65	25-40
	18-28	Weathered bedrock			0	0	0	0	0	0	---	NP
Tuffo	0-6	Gravelly sandy loam	SM	A-1, A-2	0	0	65-80	60-75	35-50	20-30	15-20	NP-5
	6-13	Very fine sandy loam, gravelly sandy loam, fine sandy loam	SM	A-2, A-4	0	0	65-95	60-90	55-80	30-50	15-20	NP-5
	13-17	Weathered bedrock			0	0	0	0	0	0	---	NP
1854:												
Gumble	0-4	Very gravelly sandy loam	GM-GC	A-1, A-2	0	5-15	50-60	40-50	25-35	15-25	25-30	5-10
	4-18	Clay, gravelly clay	CH, GC	A-7	0	0-15	65-100	60-90	55-85	45-70	50-65	25-40
	18-28	Weathered bedrock			0	0	0	0	0	0	---	NP
Chen	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	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	
1855:												
Gumble	0-4	Gravelly sandy loam	SC-SM	A-1, A-2	0	0-10	60-70	50-60	30-40	15-25	25-30	5-10
	4-18	Clay, gravelly clay	CH, GC	A-7	0	0-15	65-100	60-90	55-85	45-70	50-65	25-40
	18-28	Weathered bedrock			0	0	0	0	0	0	---	NP
Puett Variant	0-2	Gravelly loam	GM, ML	A-4	0	0-10	65-80	60-75	60-70	45-55	20-25	NP-5
	2-17	Gravelly loam	GM, ML	A-4	0	0-10	60-80	55-75	50-70	45-55	20-25	NP-5
	17-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
Xeric Torriorthents	0-3	Gravelly fine sandy loam	SM, GM	A-2, A-4, A-1	0	0-10	40-80	35-75	20-50	10-40	15-20	NP-5
	3-7	Weathered bedrock			0	0	0	0	0	0	---	NP
1870:												
Chen	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Graley	0-12	Very gravelly loam	GM	A-1, A-2	0	0-5	30-50	25-45	20-40	15-30	20-25	NP-5
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	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	
Quarz	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
1871:												
Chen	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cotant	0-3	Very gravelly loam	GC	A-2	0	0-5	50-60	35-50	30-45	25-35	30-35	10-15
	3-20	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
Graley	0-12	Very gravelly loam	GM	A-1, A-2	0	0-5	30-50	25-45	20-40	15-30	20-25	NP-5
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	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	
1872:												
Chen----------	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tusel----------	0-17	Very gravelly loam	GM	A-2	0	0-15	50-60	40-50	35-45	25-35	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	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	
1874:												
Chen----------	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Quarz----------	0-6	Gravelly clay loam	GC, CL	A-6, A-7	0	0-10	55-80	50-75	45-70	35-55	35-45	15-20
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
Arcia----------	0-15	Silt loam	CL-ML, CL	A-4, A-6	0	0	90-100	85-100	75-90	55-85	25-35	5-15
	15-21	Clay loam, gravelly clay loam	CL	A-6, A-7	0	0-10	65-100	60-100	55-90	50-80	35-45	15-25
	21-39	Cobbly clay, gravelly clay, clay	GC, CL, CH	A-7	0	0-25	60-95	55-90	45-85	40-75	45-65	30-45
	39-43	Unweathered bedrock			0	0	0	0	0	0	---	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	
1875:												
Chen----------	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Bregar----------	0-6	Extremely gravelly loam	GM-GC, GC	A-2	0	10-20	35-50	20-30	15-25	10-20	25-35	5-15
	6-11	Very gravelly sandy clay loam, extremely cobbly clay loam, very gravelly clay loam	GC	A-2	0	5-45	40-50	25-35	20-30	10-25	35-45	15-25
	11-15	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ramires----------	0-5	Clay loam	CL	A-6	0	0-10	90-100	75-90	70-90	65-80	35-40	15-20
	5-40	Gravelly clay, gravelly clay loam, clay	CL, CH	A-7	0	0-10	75-95	65-85	60-80	50-65	45-55	25-35
	40-44	Unweathered bedrock			0	0	0	0	0	0	---	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	
1876:												
Chen	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Chen	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Arcia	0-15	Silt loam	CL-ML, CL	A-4, A-6	0	0	90-100	85-100	75-90	55-85	25-35	5-15
	15-21	Clay loam, gravelly clay loam	CL	A-6, A-7	0	0-10	65-100	60-100	55-90	50-80	35-45	15-25
	21-39	Cobbly clay, gravelly clay, clay	GC, CL, CH	A-7	0	0-25	60-95	55-90	45-85	40-75	45-65	30-45
	39-43	Unweathered bedrock			0	0	0	0	0	0	---	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	
1877:												
Chen----------	0-7	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	0-10	45-55	55-65	50-60	45-55	30-40	25-35	5-15
	7-15	Very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2	0-15	5-50	45-55	30-50	25-40	25-35	55-65	35-40
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Bregar----------	0-2	Very gravelly sandy loam	GM	A-1	0	0-5	45-60	35-50	20-40	10-20	20-25	NP-5
	2-7	Very gravelly sandy clay loam, extremely cobbly clay loam, very gravelly clay loam	GC	A-2	0	5-45	40-50	25-35	20-30	10-25	35-45	15-25
	7-11	Unweathered bedrock			0	0	0	0	0	0	---	NP
Loncan----------	0-17	Very gravelly loam	GC	A-2	0	10-15	40-60	30-45	25-40	20-35	30-35	10-15
	17-30	Very gravelly loam, extremely cobbly loam, very gravelly sandy clay loam	GC	A-2	0-5	5-55	35-60	30-50	25-40	20-35	30-35	10-15
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	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	
1880:												
Chen	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Blitzen	0-9	Very gravelly loam	GC	A-2	0	0-10	35-55	30-50	25-40	20-30	30-35	10-15
	9-33	Very gravelly clay, very gravelly clay loam	GC	A-2	0	0-10	35-55	30-50	25-40	20-35	45-65	20-35
	33-43	Weathered bedrock			0	0	0	0	0	0	---	NP
Pequop	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15

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	
1881:												
Chen----------	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Blitzen---------	0-10	Gravelly clay loam	GC, CL, SC	A-2, A-6, A-7	0	0-10	60-80	55-75	40-60	30-55	35-45	15-20
	10-33	Very gravelly clay, very gravelly clay loam	GC	A-2	0	0-10	35-55	30-50	25-40	20-35	45-65	20-35
	33-37	Weathered bedrock			0	0	0	0	0	0	---	NP
Loncan----------	0-17	Very gravelly loam	GC	A-2	0	10-15	40-60	30-45	25-40	20-35	30-35	10-15
	17-30	Very gravelly loam, extremely cobbly loam, very gravelly sandy clay loam	GC	A-2	0-5	5-55	35-60	30-50	25-40	20-35	30-35	10-15
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	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	
1888:												
Chen	0-7	Cobbly loam	SC-SM, SM	A-4	0	20-25	80-90	60-80	55-70	40-50	25-35	5-10
	7-15	Very gravelly clay, very cobbly clay, extremely gravelly clay	GC	A-2	0	5-45	45-55	30-50	25-40	25-35	45-60	20-30
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Pie Creek	0-5	Very cobbly loam	ML	A-4	0	40-50	85-95	60-90	55-80	50-60	25-30	NP-5
	5-16	Clay	CH	A-7	0	0	95-100	90-100	85-95	80-90	65-70	35-40
	16-23	Clay loam, clay	CL	A-7	0	0	95-100	90-100	80-90	70-80	45-50	20-25
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
Alyan	0-9	Gravelly loam	GM-GC, CL-ML, GC, CL	A-2, A-4, A-6	0	0-5	55-80	50-75	35-60	25-55	25-35	5-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
1889:												
Chen	0-7	Very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	7-15	Very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	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	
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
1910:												
Mahala----------	0-5	Silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	5-10
	5-14	Clay, gravelly clay	CH	A-7	0	0	80-100	70-100	70-100	60-90	50-65	25-35
	14-26	Clay, clay loam	CL, CH	A-7	0	0	80-100	75-100	70-95	60-90	40-65	20-35
	26-30	Weathered bedrock			0	0	0	0	0	0	---	NP
Ramires----------	0-5	Clay loam	CL	A-6	0	0-10	90-100	75-90	70-90	65-80	35-40	15-20
	5-40	Gravelly clay, gravelly clay loam, clay	CL, CH	A-7	0	0-10	75-95	65-85	60-80	50-65	45-55	25-35
	40-44	Unweathered bedrock			0	0	0	0	0	0	---	NP
1920:												
Lerrow----------	0-9	Cobbly loam	SC, CL	A-6	0	30-40	80-95	75-90	65-75	45-55	30-35	10-15
	9-14	Clay loam, gravelly clay loam	CL, GC	A-7	0	0	55-90	50-85	45-80	35-65	40-50	20-25
	14-27	Cobbly clay, gravelly clay, clay	CH	A-7	0-5	10-25	75-95	65-85	60-75	55-70	50-60	25-35
	27-31	Weathered bedrock			0	0	0	0	0	0	---	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	
Chen----------	0-7	Very cobbly loam	GC, GM-GC	A-2, A-4, A-6	0-10	45-55	55-65	50-60	45-55	30-40	25-35	5-15
	7-15	Very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2	0-15	5-50	45-55	30-50	25-40	25-35	55-65	35-40
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cotant----------	0-3	Cobbly loam	CL	A-6	0	15-30	80-90	70-80	60-70	50-60	25-35	10-15
	3-20	Clay	CL, CH	A-7	0	0-5	90-100	75-100	60-95	50-85	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
1921:												
Lerrow----------	0-9	Gravelly loam	SC	A-6	0	0-10	70-80	60-75	55-65	40-50	30-35	10-15
	9-14	Clay loam, gravelly clay loam	CL, GC	A-7	0	0	55-90	50-85	45-80	35-65	40-50	20-25
	14-27	Cobbly clay, gravelly clay, clay	CH	A-7	0-5	10-25	75-95	65-85	60-75	55-70	50-60	25-35
	27-31	Weathered bedrock			0	0	0	0	0	0	---	NP
Quarz----------	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	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	
Rugar----------	0-2	Loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-95	60-85	50-70	25-35	5-15
	2-20	Clay loam	CL	A-6, A-7	0	0	80-100	75-95	65-90	55-75	35-45	15-20
	20-43	Clay	CL, CH	A-7	0	0-5	80-100	75-95	65-90	55-70	45-60	25-35
	43-47	Weathered bedrock			0	0	0	0	0	0	---	NP
1931:												
Tweener---------	0-5	Very cobbly sandy loam	GM-GC, SC-SM	A-2	10-25	30-35	55-85	50-80	30-55	15-30	25-30	5-10
	5-8	Very cobbly clay loam, very cobbly loam	GC, SC	A-2, A-6, A-7	10-25	35-40	60-80	55-75	40-70	30-50	30-45	10-20
	8-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Reluctan--------	0-9	Cobbly loam	SC-SM, CL-ML	A-4	0-5	10-30	80-90	70-90	60-85	40-70	20-30	5-10
	9-27	Gravelly loam, gravelly clay loam	GC, CL	A-6, A-7	0-5	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	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	
1932:												
Tweener---------	0-5	Very gravelly sandy loam	GM-GC	A-2	0	5-15	35-55	30-50	15-35	10-20	25-30	5-10
	5-8	Very cobbly clay loam, very cobbly loam	GC, SC	A-2, A-6, A-7	0-5	45-60	60-80	55-75	40-70	30-50	30-45	10-20
	8-12	Unweathered bedrock			0	0	0	0	0	0	---	NP
Sumine----------	0-10	Very gravelly loam	GM-GC	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	10-29	Very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-6, A-7	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	29-33	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
1933:												
Tweener---------	0-5	Very cobbly sandy loam	GM-GC, SC-SM	A-2	10-25	30-35	55-85	50-80	30-55	15-30	25-30	5-10
	5-8	Very cobbly clay loam, very cobbly loam	GC, SC	A-2, A-6, A-7	10-25	35-40	60-80	55-75	40-70	30-50	30-45	10-20
	8-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Pequop----------	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	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	
1950:												
McIvey----------	0-16	Gravelly silt loam	GC, SC, CL	A-6	0	0-10	60-85	50-75	50-70	40-60	30-40	10-15
	16-29	Very gravelly clay loam, gravelly clay loam	GC, SC, CL	A-7	0	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	29-65	Very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2, A-7	0	0-55	45-60	35-50	35-45	30-45	45-55	20-30
McIvey----------	0-16	Very cobbly silt loam	GC	A-6	0	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	16-29	Very gravelly clay loam, gravelly clay loam	GC, SC, CL	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	29-65	Very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-7, A-2	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35
Tusel----------	0-17	Very gravelly loam	GM	A-2	0	0-15	50-60	40-50	35-45	25-35	25-35	NP-10
	17-58	Extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20
	58-62	Unweathered bedrock			0	0	0	0	0	0	---	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	
1980:												
Thwoop----------	0-4	Gravelly silt loam	GM-GC, CL-ML	A-4	0	0-10	70-95	55-75	40-65	40-65	25-30	5-10
	4-10	Silt loam	CL	A-6	0	0-10	90-95	85-90	50-75	50-75	30-35	10-15
	10-25	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	10-25	45-60	40-55	30-45	30-45	40-55	20-30
	25-27	Indurated			0	0	0	0	0	0	---	NP
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
Trunk----------	0-5	Gravelly loam	GM-GC, SC-SM, GM, SM	A-4	0	0-5	55-80	50-75	45-70	35-50	20-30	NP-10
	5-23	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-85	50-80	45-75	40-65	40-55	20-30
	23-27	Unweathered bedrock			0	0	0	0	0	0	---	NP
Pequop----------	0-12	Gravelly loam	GM-GC, CL-ML	A-4	0	5-10	60-80	55-75	40-70	35-55	20-30	5-10
	12-50	Very gravelly sandy clay loam, extremely gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0	10-30	30-55	25-50	10-40	10-35	30-40	10-20
	50-60	Very gravelly loam, extremely gravelly loam	GC	A-2	0	15-40	15-55	15-50	10-40	10-35	25-35	10-15

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	
2000:												
Alyan	0-9	Cobbly loam	SC, CL	A-6	0-1	15-30	80-100	70-90	60-85	40-70	25-35	10-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CH, CL	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-7, A-2	0	0-5	40-55	40-50	35-45	20-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cotant	0-3	Cobbly loam	CL	A-6	0	15-30	80-90	70-80	60-70	50-60	25-35	10-15
	3-20	Clay	CL, CH	A-7	0	0-5	90-100	75-100	60-95	50-85	45-65	25-40
	20-24	Weathered bedrock			0	0	0	0	0	0	---	NP
Akler	0-4	Loam	CL, SC	A-6	0	0-10	80-90	75-85	65-80	45-65	30-35	10-15
	4-18	Clay	CH	A-7	0	0	80-100	75-100	65-90	50-70	55-70	30-45
	18-22	Weathered bedrock			0	0	0	0	0	0	---	NP
2001:												
Alyan	0-9	Gravelly loam	GM-GC, CL-ML, GC, CL	A-2, A-4, A-6	0	0-5	55-80	50-75	35-60	25-55	25-35	5-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	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	
Bregar----------	0-6	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	10-20	55-70	40-55	35-50	25-40	25-35	5-15
	6-11	Very gravelly sandy clay loam, extremely cobbly clay loam, very gravelly clay loam	GC	A-2	0	5-45	40-50	25-35	20-30	10-25	35-45	15-25
	11-15	Unweathered bedrock			0	0	0	0	0	0	---	NP
Alyan----------	0-9	Gravelly loam	GM-GC, CL-ML, GC, CL	A-2, A-4, A-6	0	0-5	55-80	50-75	35-60	25-55	25-35	5-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
2002:												
Alyan----------	0-9	Gravelly clay loam	GC, CL	A-2, A-7, A-6	0	0-5	55-80	50-75	40-65	30-60	35-45	15-20
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	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	
Alyan----------	0-9	Gravelly clay loam	GC, CL	A-2, A-7, A-6	0	0-5	55-80	50-75	40-65	30-60	35-45	15-20
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
Quarz----------	0-6	Very gravelly loam	GC	A-2	0	0-15	40-55	35-50	30-45	20-35	25-35	10-15
	6-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	30-55	25-50	20-45	15-40	45-60	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
2003:												
Alyan----------	0-9	Very gravelly loam	GC	A-2	0	0-5	30-55	25-50	20-40	15-35	25-35	10-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	20-40	45-60	20-35
	32-42	Unweathered bedrock			0	0	0	0	0	0	---	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	
Deepeek---------	0-5	Very cobbly loam	GM-GC	A-2, A-4	0-5	30-40	55-70	50-65	40-55	30-45	25-30	5-10
	5-18	Very cobbly loam, very cobbly silt loam, very cobbly silty clay loam	GC	A-6	0-5	30-40	55-70	50-65	45-55	40-50	30-40	10-20
	18-24	Indurated			0	0	0	0	0	0	---	NP
	24-42	Gravelly silt loam	GM-GC, CL-ML, GM, ML	A-4	0	0	55-80	50-75	45-70	45-60	20-30	NP-10
Susie Creek-----	0-10	Very fine sandy loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-95	50-65	20-30	NP-10
	10-30	Clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	70-100	70-95	40-60	20-30
	30-60	Loam, clay loam	CL-ML, CL	A-4, A-6	0	0-10	90-100	85-100	65-85	50-70	25-35	5-15
2004:												
Alyan-----------	0-9	Cobbly loam	SC, CL	A-6	0-1	15-30	80-100	70-90	60-85	40-70	25-35	10-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CH, CL	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-7, A-2	0	0-5	40-55	40-50	35-45	20-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-4	Gravelly loam	GC, CL	A-6	0	0-5	60-85	55-75	50-70	35-60	30-35	10-15
	4-19	Clay, gravelly clay	CH	A-7	0	0-15	70-100	65-100	60-90	50-80	50-65	25-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	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	
Alyan----------	0-9	Gravelly loam	GM-GC, CL-ML, GC, CL	A-2, A-4, A-6	0	0-5	55-80	50-75	35-60	25-55	25-35	5-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
2005: Rock Outcrop.												
Alyan----------	0-9	Gravelly loam	GM-GC, CL-ML, GC, CL	A-2, A-4, A-6	0	0-5	55-80	50-75	35-60	25-55	25-35	5-15
	9-16	Clay	CL, CH	A-7	0	0-5	80-90	75-85	65-80	50-65	45-60	20-35
	16-28	Gravelly clay	GC, CL, CH	A-7	0	0-5	55-80	50-75	40-65	35-55	45-60	20-35
	28-32	Very gravelly clay	GC	A-2, A-7	0	0-5	45-55	40-50	35-45	25-40	45-60	20-35
	32-36	Unweathered bedrock			0	0	0	0	0	0	---	NP
Graley----------	0-12	Very stony loam	GM	A-1, A-2	5-10	0-5	40-50	30-40	25-35	20-30	20-25	NP-5
	12-17	Very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	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	
2171:												
Deseed----------	0-4	Gravelly loam	CL-ML, CL	A-4, A-6	0	5-15	70-85	65-80	55-70	50-60	25-35	5-15
	4-26	Gravelly clay loam, gravelly clay	GC, CL	A-7	0	0-10	60-80	55-75	50-70	45-70	40-50	20-30
	26-30	Unweathered bedrock			0	0	0	0	0	0	---	NP
Reluctan--------	0-9	Gravelly loam	SC-SM, CL-ML	A-4	0	5-10	70-80	60-75	50-65	40-55	25-30	5-10
	9-27	Gravelly clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-15	65-85	60-75	55-75	40-60	35-45	15-20
	27-31	Unweathered bedrock			0	0	0	0	0	0	---	NP
Cleavage--------	0-4	Very gravelly loam	GM-GC, GC	A-2, A-4, A-6	0	0-10	50-70	30-50	25-45	20-40	25-35	5-15
	4-18	Very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
2173:												
Deseed----------	0-4	Gravelly loam	CL-ML, CL	A-4, A-6	0	5-15	70-85	65-80	55-70	50-60	25-35	5-15
	4-26	Gravelly clay loam, gravelly clay	GC, CL	A-7	0	0-10	60-80	55-75	50-70	45-70	40-50	20-30
	26-30	Unweathered bedrock			0	0	0	0	0	0	---	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	
Quarz----------	0-6	Very cobbly loam	GC, CL, SC	A-6	0-10	25-50	60-85	55-80	50-70	35-60	25-35	10-20
	6-15	Very cobbly clay loam, very gravelly clay loam	GC	A-6, A-7, A-2	0-10	10-40	35-60	30-55	25-50	20-40	35-45	15-25
	15-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0-5	5-25	30-55	25-50	20-45	15-40	45-55	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
2205:												
Coltroop--------	0-5	Very fine sandy loam	SC-SM	A-4	0	0	90-100	75-100	70-90	40-50	25-30	5-10
	5-17	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	65-95	60-85	30-40	10-15
	17-32	Indurated			0	0	0	0	0	0	---	NP
	32-42	Unweathered bedrock			0	0	0	0	0	0	---	NP
Snowmore--------	0-4	Very fine sandy loam	CL-ML	A-4	0	0-10	90-100	85-100	70-85	50-65	25-30	5-10
	4-13	Loam, clay loam, sandy clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-15
	13-22	Loam, clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-10	70-100	60-100	50-80	40-75	35-45	15-25
	22-29	Indurated			0	0	0	0	0	0	---	NP
	29-39	Unweathered bedrock			0	0	0	0	0	0	---	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	
2206:												
Coltroop--------	0-5	Cobbly very fine sandy loam	CL-ML	A-4	0	15-25	90-100	85-95	75-85	55-65	20-25	5-10
	5-17	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	65-95	60-85	30-40	10-15
	17-32	Indurated			0	0	0	0	0	0	---	NP
	32-42	Unweathered bedrock			0	0	0	0	0	0	---	NP
Vanwyper--------	0-10	Very stony loam	CL	A-6	5-25	0-15	70-95	65-85	60-80	50-65	25-35	10-15
	10-25	Very cobbly clay, very cobbly clay loam	GC, CL, CH	A-7	0-15	30-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
2310:												
Bulake----------	0-7	Gravelly loam	GC, CL	A-6	0	0-10	60-80	55-75	50-75	40-60	25-35	10-15
	7-19	Clay, gravelly clay	CH	A-7	0	0-10	60-95	55-90	55-85	50-80	50-60	30-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Deunah----------	0-9	Loam	CL-ML, CL	A-4, A-6	0	0-10	95-100	95-100	80-100	70-90	20-35	5-15
	9-26	Clay	CH	A-7	0	0-10	95-100	95-100	90-100	85-95	60-80	30-45
	26-33	Indurated			0	0	0	0	0	0	---	NP
Bulake----------	0-7	Very cobbly very fine sandy loam	SC-SM	A-4	0	30-40	70-85	65-80	55-75	40-50	25-30	5-10
	7-19	Clay, gravelly clay	CH	A-7	0	0-10	60-95	55-90	55-85	50-80	50-60	30-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	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	
2311:												
Bulake	0-7	Very cobbly very fine sandy loam	SC-SM	A-4	0	30-40	70-85	65-80	55-75	40-50	25-30	5-10
	7-19	Clay, gravelly clay	CH	A-7	0	0-10	60-95	55-90	55-85	50-80	50-60	30-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hatpeak	0-10	Loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	65-80	55-70	25-35	5-15
	10-30	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0-15	95-100	90-100	70-90	60-85	40-55	20-35
	30-60	Indurated			0	0	0	0	0	0	---	NP
Petan	0-6	Very stony loam	CL	A-6	5-25	10-30	70-90	65-85	60-70	50-60	25-35	10-15
	6-19	Very cobbly clay, very stony clay	CH	A-7	20-45	15-40	65-85	60-80	55-75	50-70	50-65	25-40
	19-20	Indurated			0	0	0	0	0	0	---	NP
	20-30	Unweathered bedrock			0	0	0	0	0	0	---	NP
2505:												
Buffaran	0-5	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	20-25	5-10
	5-18	Silty clay loam, clay, clay loam	CL, CH	A-7	0	0	80-95	75-90	70-90	65-85	40-55	15-30
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Cemented			0	0	0	0	0	0	---	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	
Zevadez---	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
2511:												
Bilbo---	0-5	Extremely stony sandy loam	GM	A-1	15-20	25-30	40-50	35-45	20-40	10-20	---	NP
	5-40	Very gravelly sandy clay, very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-5	0-25	45-65	35-50	30-45	20-40	40-55	20-35
	40-60	Extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, GM	A-1	0	0-10	30-60	15-50	10-40	5-20	15-25	NP-5
Alley---	0-7	Very stony loam	SM	A-4	15-25	10-15	80-90	65-80	50-60	35-45	25-30	NP-5
	7-20	Gravelly clay loam, gravelly sandy clay loam, gravelly loam	SC, GC	A-6	0	0-10	65-80	55-75	50-65	35-50	30-35	15-20
	20-40	Gravelly fine sandy loam, cobbly fine sandy loam, gravelly sandy loam	SM, GM	A-2, A-4	0-10	0-40	60-85	50-80	35-75	25-40	25-30	NP-5
	40-60	Very cobbly fine sandy loam	SM	A-2	0-15	30-45	70-75	60-70	45-55	25-35	25-30	NP-5

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	
Deepeak---------	0-5	Very cobbly loam	GM-GC	A-2, A-4	0-5	30-40	55-70	50-65	40-55	30-45	25-30	5-10
	5-18	Very cobbly loam, very cobbly silt loam, very cobbly silty clay loam	GC	A-6	0-5	30-40	55-70	50-65	45-55	40-50	30-40	10-20
	18-24	Indurated			0	0	0	0	0	0	---	NP
	24-42	Gravelly silt loam	GM-GC, CL-ML, GM, ML	A-4	0	0	55-80	50-75	45-70	45-60	20-30	NP-10
2514:												
Bilbo-----------	0-5	Very gravelly very fine sandy loam	GM-GC	A-2	0	0-10	40-65	30-50	25-50	10-35	20-30	5-10
	5-40	Very gravelly sandy clay, very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	45-65	35-50	30-45	20-40	40-55	20-35
	40-60	Extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, GM	A-1	0	0-10	30-60	15-50	10-40	5-20	15-25	NP-5
Susie Creek-----	0-10	Very fine sandy loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-95	50-65	20-30	NP-10
	10-30	Clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	70-100	70-95	40-60	20-30
	30-60	Loam, clay loam	CL-ML, CL	A-4, A-6	0	0-10	90-100	85-100	65-85	50-70	25-35	5-15

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	
Buffaran--------	0-5	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	20-25	5-10
	5-18	Silty clay loam, clay, clay loam	CL, CH	A-7	0	0	80-95	75-90	70-90	65-85	40-55	15-30
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Cemented			0	0	0	0	0	0	---	NP
2521:												
Dewar----------	0-4	Very cobbly very fine sandy loam	SC-SM, CL-ML	A-4	0-5	40-50	70-95	65-80	55-75	40-55	25-30	5-10
	4-14	Cobbly silty clay loam	CL	A-6, A-7	0-10	25-30	85-95	80-90	75-90	65-85	35-45	15-20
	14-19	Very cobbly silt loam	GC	A-6	0-10	30-40	50-60	45-55	40-50	35-45	30-35	10-15
	19-32	Indurated			0	0	0	0	0	0	---	NP
	32-60	Gravelly sandy loam	GM, SM	A-1	0	0	55-65	50-60	30-40	15-25	20-25	NP-5
Chiara----------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	NP
Chiara----------	0-6	Very cobbly very fine sandy loam	SC-SM, GM-GC, GM, SM	A-4	0	30-45	60-85	55-80	50-75	35-50	20-30	NP-10
	6-17	Silt loam, loam	CL-ML, ML	A-4	0	0-10	95-100	90-100	80-90	70-80	20-30	NP-10
	17-21	Indurated			0	0	0	0	0	0	---	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	
2522:												
Dewar----------	0-4	Very cobbly very fine sandy loam	SC-SM, CL-ML	A-4	0-5	40-50	70-95	65-80	55-75	40-55	25-30	5-10
	4-14	Cobbly silty clay loam	CL	A-6, A-7	0-10	25-30	85-95	80-90	75-90	65-85	35-45	15-20
	14-19	Very cobbly silt loam	GC	A-6	0-10	30-40	50-60	45-55	40-50	35-45	30-35	10-15
	19-32	Indurated			0	0	0	0	0	0	---	NP
	32-60	Gravelly sandy loam	GM, SM	A-1	0	0	55-65	50-60	30-40	15-25	20-25	NP-5
Sodhouse--------	0-6	Cobbly silt loam	ML	A-4	0	25-30	75-85	70-80	65-80	60-70	20-25	NP-5
	6-19	Very fine sandy loam, silt loam, loam	ML	A-4	0	0-5	85-100	80-100	60-90	50-60	20-25	NP-5
	19-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Gravelly sandy loam	SM	A-2, A-4	0	0-10	65-80	60-75	50-65	25-40	15-25	NP-5
2531:												
Rock Outcrop.												
Clurde Variant--	0-13	Loam	CL	A-6	0	0	80-100	75-100	65-95	50-75	25-35	10-15
	13-19	Gravelly sandy clay loam	GC, SC	A-2, A-6	0	0	60-80	50-75	45-65	30-40	25-35	10-15
	19-32	Very gravelly sandy loam	GM	A-1	0	0	30-55	25-50	15-35	10-20	15-25	NP-5
	32-42	Unweathered bedrock			0	0	0	0	0	0	---	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	
Clurde----------	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
2541:												
Kelk----------	0-13	Very fine sandy loam	CL-ML	A-4	0	0	100	100	90-95	65-75	25-30	5-10
	13-48	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	85-95	25-35	5-15
	48-60	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	90-100	90-100	80-95	25-35	5-15
2545:												
Kelk----------	0-13	Very fine sandy loam	CL-ML	A-4	0	0	100	100	95-100	65-75	25-30	5-10
	13-48	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	85-95	25-35	5-15
	48-60	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	90-100	85-100	75-95	25-35	5-15
Clurde----------	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	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	
2555:												
Piline----------	0-12	Silty clay loam	CL	A-7	0	0	100	100	95-100	90-95	45-50	25-30
	12-60	Clay loam, clay, silty clay	CL, CH	A-7	0	0	100	100	90-100	80-90	45-55	25-35
2560:												
McCleary--------	0-4	Silt loam	CL	A-6	0	0	80-100	75-100	70-100	65-90	30-35	10-15
	4-60	Clay, silty clay	CH	A-7	0	0	80-100	75-100	70-100	65-95	50-60	25-35
2561:												
McCleary--------	0-5	Cobbly silt loam	CL	A-6	0	15-30	80-95	75-90	70-90	65-80	30-35	10-15
	5-60	Clay	CH	A-7	0	0	80-100	75-100	70-100	55-80	50-60	25-35
2571:												
Chiara----------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	NP
Chiara----------	0-6	Cobbly silt loam	CL-ML, ML	A-4	0	15-30	85-95	80-90	70-90	55-80	20-30	NP-10
	6-17	Silt loam, loam	CL-ML, ML	A-4	0	0-10	95-100	90-100	80-90	70-80	20-30	NP-10
	17-21	Indurated			0	0	0	0	0	0	---	NP
Chiara----------	0-6	Very cobbly very fine sandy loam	SC-SM, GM-GC, GM, SM	A-4	0	30-45	60-85	55-80	50-75	35-50	20-30	NP-10
	6-17	Silt loam, loam	CL-ML, ML	A-4	0	0-10	95-100	90-100	80-90	70-80	20-30	NP-10
	17-21	Indurated			0	0	0	0	0	0	---	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	
2572:												
Chiara----------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	NP
Chiara----------	0-4	Silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	4-14	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	14-18	Indurated			0	0	0	0	0	0	---	NP
2573:												
Chiara----------	0-6	Very cobbly very fine sandy loam	SC-SM, GM-GC, GM, SM	A-4	0	30-45	60-85	55-80	50-75	35-50	20-30	NP-10
	6-17	Silt loam, loam	CL-ML, ML	A-4	0	0-10	95-100	90-100	80-90	70-80	20-30	NP-10
	17-21	Indurated			0	0	0	0	0	0	---	NP
Chiara----------	0-6	Cobbly silt loam	CL-ML, ML	A-4	0	15-30	85-95	80-90	70-90	55-80	20-30	NP-10
	6-17	Silt loam, loam	CL-ML, ML	A-4	0	0-10	95-100	90-100	80-90	70-80	20-30	NP-10
	17-21	Indurated			0	0	0	0	0	0	---	NP
2575:												
Chiara----------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	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	
Dacker----------	0-6	Very fine sandy loam	CL-ML, ML	A-4	0	0-5	90-100	85-100	70-90	50-70	20-30	NP-10
	6-25	Silty clay loam, gravelly silty clay loam	CL	A-6	0	0-5	75-100	70-90	65-90	60-85	35-40	15-20
	25-32	Silt loam, silty clay loam, gravelly silt loam	CL, GC	A-6	0	0-5	55-100	50-90	45-90	40-85	35-40	15-20
	32-60	Indurated			0	0	0	0	0	0	---	NP
Shalake----------	0-8	Very fine sandy loam	SM, ML	A-4	0	0	80-100	75-100	65-90	40-55	20-30	NP-5
	8-25	Gravelly loam, gravelly silt loam	GM, SM	A-4	0	0	55-80	50-75	40-60	35-50	20-30	NP-5
	25-60	Indurated			0	0	0	0	0	0	---	NP
2577:												
Chiara----------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	NP
Orovada----------	0-5	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	80-95	60-75	20-30	NP-5
	5-29	Fine sandy loam, loam	SM, ML	A-4	0	0	75-100	75-100	60-80	40-60	20-30	NP-5
	29-60	Stratified fine sandy loam to silt loam	SM, ML	A-4	0	0	75-100	75-100	60-85	35-55	20-30	NP-5

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	
2600:												
Shalake---	0-8	Very fine sandy loam	SM, ML	A-4	0	0	80-100	75-100	65-90	40-55	20-30	NP-5
	8-25	Gravelly loam, gravelly silt loam	GM, SM	A-4	0	0	55-80	50-75	40-60	35-50	20-30	NP-5
	25-60	Indurated			0	0	0	0	0	0	---	NP
Chiara---	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	NP
Shalake---	0-8	Very fine sandy loam	SM, ML	A-4	0	0	80-100	75-100	65-90	40-55	20-30	NP-5
	8-25	Gravelly loam, gravelly silt loam	GM, SM	A-4	0	0	55-80	50-75	40-60	35-50	20-30	NP-5
	25-60	Indurated			0	0	0	0	0	0	---	NP
2611:												
Dacker---	0-6	Silt loam	CL-ML, ML	A-4	0	0-5	90-100	85-100	75-100	60-90	25-35	5-10
	6-25	Silty clay loam, gravelly silty clay loam	CL	A-6	0	0-5	75-100	70-90	65-90	60-85	35-40	15-20
	25-32	Silt loam, silty clay loam, gravelly silt loam	CL, GC	A-6	0	0-5	55-100	50-90	45-90	40-85	35-40	15-20
	32-60	Indurated			0	0	0	0	0	0	---	NP
Hunnton---	0-3	Silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	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	
2612:												
Dacker	0-6	Very fine sandy loam	CL-ML, ML	A-4	0	0-5	90-100	85-100	70-90	50-70	20-30	NP-10
	6-25	Silty clay loam, gravelly silty clay loam	CL	A-6	0	0-5	75-100	70-90	65-90	60-85	35-40	15-20
	25-32	Silt loam, silty clay loam, gravelly silt loam	CL, GC	A-6	0	0-5	55-100	50-90	45-90	40-85	35-40	15-20
	32-60	Indurated			0	0	0	0	0	0	---	NP
Zevadez	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
2615:												
Dacker	0-6	Very fine sandy loam	CL-ML, ML	A-4	0	0-5	90-100	85-100	70-90	50-70	20-30	NP-10
	6-25	Silty clay loam, gravelly silty clay loam	CL	A-6	0	0-5	75-100	70-90	65-90	60-85	35-40	15-20
	25-32	Silt loam, silty clay loam, gravelly silt loam	CL, GC	A-6	0	0-5	55-100	50-90	45-90	40-85	35-40	15-20
	32-60	Indurated			0	0	0	0	0	0	---	NP
Chiara	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	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	
2621:												
Gochea	0-9	Gravelly loam	GM-GC, SC-SM, GM, SM	A-2, A-4	0	0	55-80	50-75	30-55	25-50	20-30	NP-10
	9-25	Gravelly clay loam, gravelly sandy clay loam, clay loam	GC, SC, CL	A-6, A-7	0	0	60-95	50-90	45-85	35-65	30-45	10-20
	25-30	Sandy loam, gravelly loam	ML, SM, GM	A-4, A-2	0	0	60-95	55-90	35-75	25-55	20-25	NP-5
	30-60	Very gravelly sand, extremely gravelly sand	GP	A-1	0	0	25-50	15-35	10-20	0-5	---	NP
Susie Creek	0-10	Loam	CL	A-6	0	0	90-100	75-100	70-95	55-75	30-35	10-15
	10-30	Clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	70-100	70-95	40-60	20-30
	30-60	Loam, clay loam	CL-ML, CL	A-4, A-6	0	0-10	90-100	85-100	65-85	50-70	25-35	5-15
Carstump	0-14	Very cobbly loam	GM, GM-GC	A-2, A-4	0	50-60	60-75	60-70	50-65	30-50	20-30	NP-10
	14-36	Very cobbly clay, very gravelly clay	SC, SM, GC, GM	A-2, A-7	0	30-65	45-90	35-80	35-60	30-50	45-60	15-30
	36-40	Unweathered bedrock			0	0	0	0	0	0	---	NP
2641:												
Olac	0-4	Very stony loam	GC	A-2	5-25	5-20	40-60	35-55	25-40	20-30	25-30	10-15
	4-14	Extremely gravelly clay loam, extremely gravelly loam	GC	A-2	5-10	10-20	30-45	20-35	15-30	10-25	30-40	15-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	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	
Snowmore--------	0-4	Very fine sandy loam	CL-ML	A-4	0	0-10	90-100	85-100	70-85	50-65	25-30	5-10
	4-13	Loam, clay loam, sandy clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-15
	13-22	Loam, clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-10	70-100	60-100	50-80	40-75	35-45	15-25
	22-29	Indurated			0	0	0	0	0	0	---	NP
	29-39	Unweathered bedrock			0	0	0	0	0	0	---	NP
2650:												
Wieland---------	0-4	Gravelly loam	GC, CL, SC	A-6	0	0-5	60-85	50-75	45-70	35-60	25-35	10-15
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	50-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
Bartome---------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Zevadez---------	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-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	
2651:												
Wieland---	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
Buffaran---	0-5	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	20-25	5-10
	5-18	Silty clay loam, clay, clay loam	CL, CH	A-7	0	0	80-95	75-90	70-90	65-85	40-55	15-30
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Cemented			0	0	0	0	0	0	---	NP
2652:												
Wieland---	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
Dacker---	0-6	Silt loam	CL-ML, ML	A-4	0	0-5	90-100	85-100	75-100	60-90	25-35	5-10
	6-25	Silty clay loam, gravelly silty clay loam	CL	A-6	0	0-5	75-100	70-90	65-90	60-85	35-40	15-20
	25-32	Silt loam, silty clay loam, gravelly silt loam	CL, GC	A-6	0	0-5	55-100	50-90	45-90	40-85	35-40	15-20
	32-60	Indurated			0	0	0	0	0	0	---	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	
Zevadez---------	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
2655:												
Wieland---------	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
Gumble----------	0-4	Gravelly sandy loam	SC-SM	A-1, A-2	0	0-10	60-70	50-60	30-40	15-25	25-30	5-10
	4-18	Clay, gravelly clay	CH, GC	A-7	0	0-15	65-100	60-90	55-85	45-70	50-65	25-40
	18-28	Weathered bedrock			0	0	0	0	0	0	---	NP
Bilbo----------	0-5	Gravelly loam	GM-GC, GC, CL-ML, CL	A-4, A-6	0	0-10	65-90	55-75	50-70	40-55	25-35	5-15
	5-40	Very gravelly sandy clay, very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	45-65	35-50	30-45	20-40	40-55	20-35
	40-60	Extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, GM	A-1	0	0-10	30-60	15-50	10-40	5-20	15-25	NP-5

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	
2656:												
Wieland---------	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
Hunnton---------	0-3	Silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	3-6	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	6-36	Clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	36-40	Indurated			0	0	0	0	0	0	---	NP
Thwoop----------	0-4	Gravelly silt loam	GM-GC, CL-ML	A-4	0	0-10	70-95	55-75	40-65	40-65	25-30	5-10
	4-10	Silt loam	CL	A-6	0	0-10	90-95	85-90	50-75	50-75	30-35	10-15
	10-25	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	10-25	45-60	40-55	30-45	30-45	40-55	20-30
	25-27	Indurated			0	0	0	0	0	0	---	NP
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
2658:												
Wieland---------	0-5	Very gravelly loam	GC, SC	A-2, A-6	0	0-5	40-80	25-50	20-45	15-40	25-35	10-15
	5-26	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	50-90	50-80	45-75	50-60	25-35
	26-52	Gravelly sandy clay loam, gravelly clay loam	GC, SC	A-6, A-2	0	0-5	60-85	50-70	40-70	25-50	35-40	15-20
	52-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	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	
2666:												
Puett	0-3	Fine sandy loam	SM	A-4	0	0	90-100	85-95	60-80	35-50	---	NP
	3-10	Coarse sandy loam, fine sandy loam, sandy loam	SM, ML	A-1, A-2, A-4	0	0	80-100	75-95	40-80	15-55	---	NP
	10-14	Weathered bedrock			0	0	0	0	0	0	---	NP
Orovada	0-5	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	80-95	60-75	20-30	NP-5
	5-29	Fine sandy loam, loam	SM, ML	A-4	0	0	75-100	75-100	60-80	40-60	20-30	NP-5
	29-60	Stratified fine sandy loam to silt loam	SM, ML	A-4	0	0	75-100	75-100	60-85	35-55	20-30	NP-5
2667:												
Rock Outcrop.												
Puett	0-3	Gravelly loam	GM-GC, SC-SM	A-4	0	0-5	65-85	55-75	50-70	35-50	20-30	5-10
	3-10	Coarse sandy loam, gravelly loam, sandy loam	SM, ML, GM	A-1, A-2, A-4	0	0	55-95	50-90	30-80	15-55	---	NP
	10-14	Weathered bedrock			0	0	0	0	0	0	---	NP
Clurde	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	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	
2668:												
Puett	0-3	Gravelly loam	GM-GC, SC-SM	A-4	0	0-5	65-85	55-75	50-70	35-50	20-30	5-10
	3-10	Coarse sandy loam, gravelly loam, sandy loam	SM, ML, GM	A-1, A-2, A-4	0	0	55-95	50-90	30-80	15-55	---	NP
	10-14	Weathered bedrock			0	0	0	0	0	0	---	NP
Yuko	0-4	Sandy loam	SC-SM, SM	A-2, A-4	0	0	80-100	75-100	55-70	30-40	20-30	NP-10
	4-14	Silt loam, clay loam	CL	A-6, A-7	0-5	0-5	90-100	80-100	75-95	70-85	35-45	15-25
	14-18	Weathered bedrock			0	0	0	0	0	0	---	NP
Zevadez	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
2710:												
Ramires	0-5	Silt loam	CL-ML	A-4	0	0	80-100	75-100	70-100	65-90	25-30	5-10
	5-24	Clay loam, gravelly clay loam	CL	A-7	0	0	65-90	60-85	55-80	50-75	40-45	15-20
	24-40	Very cobbly loam	CL-ML, GM-GC	A-4	0	40-50	65-75	60-70	50-65	45-60	25-30	5-10
	40-50	Unweathered bedrock			0	0	0	0	0	0	---	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	
Bartome---------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Bilbo-----------	0-5	Very gravelly very fine sandy loam	GM-GC	A-2	0	0-10	40-65	30-50	25-50	10-35	20-30	5-10
	5-40	Very gravelly sandy clay, very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	45-65	35-50	30-45	20-40	40-55	20-35
	40-60	Extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, GM	A-1	0	0-10	30-60	15-50	10-40	5-20	15-25	NP-5
2711:												
Ramires---------	0-5	Silt loam	CL-ML	A-4	0	0	80-100	75-100	70-100	65-90	25-30	5-10
	5-24	Clay loam, gravelly clay loam	CL	A-7	0	0	65-90	60-85	55-80	50-75	40-45	15-20
	24-40	Very cobbly loam	CL-ML, GM-GC	A-4	0	40-50	65-75	60-70	50-65	45-60	25-30	5-10
	40-50	Unweathered bedrock			0	0	0	0	0	0	---	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	
Bilbo----------	0-5	Very gravelly very fine sandy loam	GM-GC	A-2	0	0-10	40-65	30-50	25-50	10-35	20-30	5-10
	5-40	Very gravelly sandy clay, very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0	0-25	45-65	35-50	30-45	20-40	40-55	20-35
	40-60	Extremely gravelly loamy sand, very gravelly sandy loam	GP-GM, GM	A-1	0	0-10	30-60	15-50	10-40	5-20	15-25	NP-5
Buffaran--------	0-5	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	20-25	5-10
	5-18	Silty clay loam, clay, clay loam	CL, CH	A-7	0	0	80-95	75-90	70-90	65-85	40-55	15-30
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Cemented			0	0	0	0	0	0	---	NP
2741:												
Wilsor----------	0-7	Loam	CL-ML	A-4	0	0	80-100	75-100	60-90	50-80	25-30	5-10
	7-17	Loam, clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-80	35-45	15-25
	17-46	Gravelly loam, gravelly sandy loam, loam	GM-GC, GC, CL-ML, CL	A-4, A-2, A-6	0	0	60-90	55-85	45-70	25-55	25-35	5-15
	46-56	Weathered bedrock			0	0	0	0	0	0	---	NP
Wilsor----------	0-7	Loam	CL-ML	A-4	0	0	80-100	75-100	60-90	50-80	25-30	5-10
	7-17	Loam, clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-80	35-45	15-25
	17-46	Gravelly loam, gravelly sandy loam, loam	GM-GC, GC, CL-ML, CL	A-4, A-2, A-6	0	0	60-90	55-85	45-70	25-55	25-35	5-15
	46-56	Weathered bedrock			0	0	0	0	0	0	---	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	
2751:												
Yuko	0-4	Sandy loam	SC-SM, SM	A-2, A-4	0	0	80-100	75-100	55-70	30-40	20-30	NP-10
	4-14	Silt loam, clay loam	CL	A-6, A-7	0-5	0-5	90-100	80-100	75-95	70-85	35-45	15-25
	14-18	Weathered bedrock			0	0	0	0	0	0	---	NP
Chime	0-6	Gravelly loam	GC, CL	A-6	0	0	60-80	55-75	50-70	40-60	25-35	10-15
	6-15	Clay loam, gravelly clay loam	CL	A-6, A-7	0	0	75-90	70-85	65-80	55-70	35-45	15-20
	15-22	Loam, gravelly loam, clay loam	CL, SC	A-6	0	0	75-95	70-90	60-75	40-60	25-35	10-15
	22-32	Weathered bedrock			0	0	0	0	0	0	---	NP
Clurde	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
2775:												
Zevadez	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-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	
Bartome---------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Wieland---------	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
2776:												
Zevadez---------	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
Chiara----------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	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	
2777:												
Zevadez	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
Wieland	0-4	Loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-90	50-75	20-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
Clurde	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
2778:												
Zevadez	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-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	
Yuko----------	0-4	Sandy loam	SC-SM, SM	A-2, A-4	0	0	80-100	75-100	55-70	30-40	20-30	NP-10
	4-14	Silt loam, clay loam	CL	A-6, A-7	0-5	0-5	90-100	80-100	75-95	70-85	35-45	15-25
	14-18	Weathered bedrock			0	0	0	0	0	0	---	NP
Kelk----------	0-13	Very fine sandy loam	CL-ML	A-4	0	0	100	100	95-100	65-75	25-30	5-10
	13-48	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	85-95	25-35	5-15
	48-60	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	90-100	85-100	75-95	25-35	5-15
2780:												
Snowmore--------	0-4	Cobbly fine sandy loam	SC-SM	A-4	0-5	25-40	85-95	80-90	60-70	35-50	20-30	5-10
	4-13	Loam, clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-20
	13-22	Loam, clay loam, gravelly clay loam	GC, CL	A-6, A-7	0	0-10	70-100	65-100	55-80	45-75	35-45	15-25
	22-28	Indurated			0	0	0	0	0	0	---	NP
	28-38	Unweathered bedrock			0	0	0	0	0	0	---	NP
Snowmore--------	0-4	Very fine sandy loam	CL-ML	A-4	0	0-10	90-100	85-100	70-85	50-65	25-30	5-10
	4-13	Loam, clay loam, sandy clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-15
	13-22	Loam, clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-10	70-100	60-100	50-80	40-75	35-45	15-25
	22-29	Indurated			0	0	0	0	0	0	---	NP
	29-39	Unweathered bedrock			0	0	0	0	0	0	---	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	
2781:												
Snowmore--------	0-4	Cobbly fine sandy loam	SC-SM	A-4	0-5	25-40	85-95	80-90	60-70	35-50	20-30	5-10
	4-13	Loam, clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-20
	13-22	Loam, clay loam, gravelly clay loam	GC, CL	A-6, A-7	0	0-10	70-100	65-100	55-80	45-75	35-45	15-25
	22-28	Indurated			0	0	0	0	0	0	---	NP
	28-38	Unweathered bedrock			0	0	0	0	0	0	---	NP
Snowmore--------	0-4	Very cobbly loam	GM-GC, GC, CL-ML, CL	A-4, A-6	0-5	40-50	70-85	65-80	55-75	45-60	25-35	5-15
	4-13	Loam, clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-20
	13-22	Loam, clay loam, gravelly clay loam	GC, CL	A-6, A-7	0	0-10	70-100	65-100	55-80	45-75	35-45	15-25
	22-28	Indurated			0	0	0	0	0	0	---	NP
	28-38	Unweathered bedrock			0	0	0	0	0	0	---	NP
Snowmore--------	0-4	Very fine sandy loam	CL-ML	A-4	0	0-10	90-100	85-100	70-85	50-65	25-30	5-10
	4-13	Loam, clay loam, sandy clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-15
	13-22	Loam, clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-10	70-100	60-100	50-80	40-75	35-45	15-25
	22-29	Indurated			0	0	0	0	0	0	---	NP
	29-39	Unweathered bedrock			0	0	0	0	0	0	---	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	
2782:												
Snowmore--------	0-4	Very fine sandy loam	CL-ML	A-4	0	0-10	90-100	85-100	70-85	50-65	25-30	5-10
	4-13	Loam, clay loam, sandy clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-15
	13-22	Loam, clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-10	70-100	60-100	50-80	40-75	35-45	15-25
	22-29	Indurated			0	0	0	0	0	0	---	NP
	29-39	Unweathered bedrock			0	0	0	0	0	0	---	NP
Zevadez---------	0-10	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
Snowmore--------	0-4	Cobbly fine sandy loam	SC-SM	A-4	0-5	25-40	85-95	80-90	60-70	35-50	20-30	5-10
	4-13	Loam, clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-20
	13-22	Loam, clay loam, gravelly clay loam	GC, CL	A-6, A-7	0	0-10	70-100	65-100	55-80	45-75	35-45	15-25
	22-28	Indurated			0	0	0	0	0	0	---	NP
	28-38	Unweathered bedrock			0	0	0	0	0	0	---	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	
2783:												
Snowmore	0-4	Very fine sandy loam	CL-ML	A-4	0	0-10	90-100	85-100	70-85	50-65	25-30	5-10
	4-13	Loam, clay loam, sandy clay loam	CL	A-6	0	0-10	90-100	85-100	70-90	50-75	30-40	10-15
	13-22	Loam, clay loam, gravelly loam	GC, CL	A-6, A-7	0	0-10	70-100	60-100	50-80	40-75	35-45	15-25
	22-29	Indurated			0	0	0	0	0	0	---	NP
	29-39	Unweathered bedrock			0	0	0	0	0	0	---	NP
Willhill	0-6	Gravelly loam	GM, GM-GC	A-4	0	0-10	55-75	50-75	40-60	35-50	20-30	NP-10
	6-11	Very gravelly clay loam, gravelly clay loam, very cobbly clay loam	CL-ML, CL, GC, GM-GC	A-4, A-6	0-5	15-50	65-85	60-80	55-80	40-65	25-40	5-20
	11-23	Extremely gravelly loam, extremely cobbly loam	GC, GM-GC	A-2	0-5	30-50	25-45	20-40	20-35	15-30	20-30	5-15
	23-27	Weathered bedrock			0	0	0	0	0	0	---	NP
2790:												
Old Camp	0-6	Extremely stony loam	GM, GM-GC	A-2, A-4	25-50	10-20	60-70	55-65	50-60	30-40	15-25	NP-10
	6-16	Very cobbly clay loam, extremely stony sandy clay loam, very stony clay loam	GC	A-2, A-6	15-25	20-30	40-55	35-50	30-45	25-40	30-40	15-25
	16-20	Unweathered bedrock			0	0	0	0	0	0	---	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	
Troughs	0-2	Gravelly loam	CL, GC	A-6	0	0-5	55-80	50-75	40-70	35-60	30-35	10-15
	2-14	Cobbly clay loam, very cobbly clay loam, very gravelly clay loam	CL, SC, GC	A-2, A-6, A-7	0-5	15-50	45-85	40-80	35-75	30-60	35-45	15-20
	14-20	Indurated			0	0	0	0	0	0	---	NP
	20-24	Unweathered bedrock			0	0	0	0	0	0	---	NP
Olac	0-4	Very stony loam	GC	A-2	5-25	5-20	40-60	35-55	25-40	20-30	25-30	10-15
	4-14	Extremely gravelly clay loam, extremely gravelly loam	GC	A-2	5-10	10-20	30-45	20-35	15-30	10-25	30-40	15-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
2801:												
Bartome	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Alley	0-7	Gravelly loam	SC-SM, SM, GM-GC, GM	A-4	0	0-5	60-85	50-75	45-60	40-50	20-30	NP-10
	7-20	Gravelly clay loam, gravelly loam	SC, GC	A-6	0	0-10	65-80	55-75	50-65	35-50	30-40	10-15
	20-40	Gravelly loam, gravelly sandy loam	GM, GM-GC, SM, SC-SM	A-2	0	0-10	60-70	50-60	35-45	25-35	20-30	NP-10
	40-60	Very gravelly sandy loam	GM	A-1	0	0-10	30-55	25-50	15-40	10-25	---	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	
Clurde----------	0-6	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	6-29	Sandy clay loam, silt loam, loam	SC, CL	A-6	0	0	80-100	75-100	65-90	40-55	30-40	10-20
	29-43	Coarse sandy loam	SC-SM	A-2, A-4	0	0	80-100	75-100	50-70	30-40	20-25	5-10
	43-60	Loamy sand, gravelly loamy sand	SM	A-2, A-1	0	0	70-90	60-85	40-65	15-30	---	NP
2802:												
Bartome----------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Buffaran---------	0-5	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	20-25	5-10
	5-18	Silty clay loam, clay, clay loam	CL, CH	A-7	0	0	80-95	75-90	70-90	65-85	40-55	15-30
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Cemented			0	0	0	0	0	0	---	NP
2803:												
Bartome----------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	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	
Buffaran---------	0-5	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	20-25	5-10
	5-18	Silty clay loam, clay, clay loam	CL, CH	A-7	0	0	80-95	75-90	70-90	65-85	40-55	15-30
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Cemented			0	0	0	0	0	0	---	NP
Ramires---------	0-5	Silt loam	CL-ML	A-4	0	0	80-100	75-100	70-100	65-90	25-30	5-10
	5-24	Clay loam, gravelly clay loam	CL	A-7	0	0	65-90	60-85	55-80	50-75	40-45	15-20
	24-40	Very cobbly loam	CL-ML, GM-GC	A-4	0	40-50	65-75	60-70	50-65	45-60	25-30	5-10
	40-50	Unweathered bedrock			0	0	0	0	0	0	---	NP
2804:												
Bartome---------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Chiara----------	0-6	Very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	NP
2805:												
Bartome---------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	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	
2807:												
Bartome---------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Coltroop--------	0-5	Very fine sandy loam	SC-SM	A-4	0	0	90-100	75-100	70-90	40-50	25-30	5-10
	5-17	Silt loam, silty clay loam	CL	A-6	0	0	85-100	75-100	65-95	60-85	30-40	10-15
	17-32	Indurated			0	0	0	0	0	0	---	NP
	32-42	Unweathered bedrock			0	0	0	0	0	0	---	NP
Zevadez---------	0-10	Gravelly loam	SC-SM, SC	A-2, A-4, A-6	0	0	70-85	60-75	45-60	30-50	25-35	5-15
	10-19	Loam, clay loam, sandy clay loam	SC, CL	A-2, A-6	0	0	85-100	75-100	60-90	30-70	30-40	10-15
	19-60	Very fine sandy loam	SC-SM, CL-ML, ML, SM	A-4	0	0	85-100	75-100	65-95	40-65	20-30	NP-10
2808:												
Bartome---------	0-7	Very fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Susie Creek-----	0-10	Very fine sandy loam	CL-ML, ML	A-4	0	0	90-100	75-100	70-95	50-65	20-30	NP-10
	10-30	Clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	70-100	70-95	40-60	20-30
	30-60	Loam, clay loam	CL-ML, CL	A-4, A-6	0	0-10	90-100	85-100	65-85	50-70	25-35	5-15

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	
Wieland---------	0-4	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	90-100	80-95	75-90	45-60	15-30	NP-10
	4-30	Gravelly clay, clay	CH, SC	A-7	0	0-5	75-95	55-90	50-80	45-75	50-60	25-35
	30-60	Loam, gravelly loam, gravelly sandy loam	CL-ML, SC-SM	A-4, A-2	0	0-5	65-95	55-90	40-85	25-70	20-30	5-10
2809:												
Bartome---------	0-7	Silt loam	SM, SC-SM, CL-ML, ML	A-4	0	0	80-100	75-100	65-95	45-65	20-30	NP-10
	7-14	Silty clay loam	CL	A-6	0	0	80-100	75-100	70-90	65-85	35-40	15-20
	14-28	Indurated			0	0	0	0	0	0	---	NP
	28-42	Cemented			0	0	0	0	0	0	---	NP
Dacker----------	0-6	Silt loam	CL-ML, ML	A-4	0	0-5	90-100	85-100	75-100	60-90	25-35	5-10
	6-25	Silty clay loam, gravelly silty clay loam	CL	A-6	0	0-5	75-100	70-90	65-90	60-85	35-40	15-20
	25-32	Silt loam, silty clay loam, gravelly silt loam	CL, GC	A-6	0	0-5	55-100	50-90	45-90	40-85	35-40	15-20
	32-60	Indurated			0	0	0	0	0	0	---	NP
2820: 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	
Alley----------	0-7	Very stony loam	SM	A-4	15-25	10-15	80-90	65-80	50-60	35-45	25-30	NP-5
	7-20	Gravelly clay loam, gravelly sandy clay loam, gravelly loam	SC, GC	A-6	0	0-10	65-80	55-75	50-65	35-50	30-35	15-20
	20-40	Gravelly fine sandy loam, cobbly fine sandy loam, gravelly sandy loam	SM, GM	A-2, A-4	0-10	0-40	60-85	50-80	35-75	25-40	25-30	NP-5
	40-60	Very cobbly fine sandy loam	SM	A-2	0-15	30-45	70-75	60-70	45-55	25-35	25-30	NP-5
Vanwyper---------	0-10	Very stony loam	CL	A-6	5-25	0-15	70-95	65-85	60-80	50-65	25-35	10-15
	10-25	Very cobbly clay, very cobbly clay loam	GC, CL, CH	A-7	0-15	30-55	55-75	50-65	45-60	40-55	40-60	20-40
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
2822:												
Rock Outcrop.												
Rubble Land.												

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	
Alley----------	0-7	Very stony loam	SM	A-4	15-25	10-15	80-90	65-80	50-60	35-45	25-30	NP-5
	7-20	Gravelly clay loam, gravelly sandy clay loam, gravelly loam	SC, GC	A-6	0	0-10	65-80	55-75	50-65	35-50	30-35	15-20
	20-40	Gravelly fine sandy loam, cobbly fine sandy loam, gravelly sandy loam	SM, GM	A-2, A-4	0-10	0-40	60-85	50-80	35-75	25-40	25-30	NP-5
	40-60	Very cobbly fine sandy loam	SM	A-2	0-15	30-45	70-75	60-70	45-55	25-35	25-30	NP-5
3000:												
Handy----------	0-10	Loam	CL-ML, CL, ML	A-4, A-6	0	0-5	90-100	85-100	70-85	60-75	20-35	NP-15
	10-28	Gravelly clay, clay	CH, CL	A-7	0	0-5	70-100	60-100	60-75	50-70	45-55	30-35
	28-60	Stratified gravelly loam to very gravelly loamy sand	GM	A-1, A-2	0	0-5	35-65	30-60	20-55	10-35	15-25	NP-5
Wilsor----------	0-7	Loam	CL-ML	A-4	0	0	80-100	75-100	60-90	50-80	25-30	5-10
	7-17	Loam, clay loam	CL	A-6, A-7	0	0	80-100	75-100	60-90	50-80	35-45	15-25
	17-46	Gravelly loam, gravelly sandy loam, loam	GM-GC, GC, CL-ML, CL	A-4, A-2, A-6	0	0	60-90	55-85	45-70	25-55	25-35	5-15
	46-56	Weathered bedrock			0	0	0	0	0	0	---	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	
Deseed----------	0-4	Gravelly loam	CL-ML, CL	A-4, A-6	0	5-15	70-85	65-80	55-70	50-60	25-35	5-15
	4-26	Gravelly clay loam, gravelly clay	GC, CL	A-7	0	0-10	60-80	55-75	50-70	45-70	40-50	20-30
	26-30	Unweathered bedrock			0	0	0	0	0	0	---	NP
3010:												
Relley----------	0-6	Silt loam	CL-ML, ML	A-4	0	0	95-100	95-100	95-100	75-90	25-35	5-10
	6-14	Silt loam	CL-ML, ML	A-4	0	0	95-100	95-100	95-100	85-95	25-35	5-10
	14-25	Silt loam	CL-ML, ML	A-4	0	0	95-100	95-100	95-100	85-95	25-35	5-10
	25-60	Silt loam	CL-ML, ML	A-4	0	0	95-100	95-100	95-100	85-95	25-35	5-10
Kelk------------	0-13	Very fine sandy loam	CL-ML	A-4	0	0	100	100	95-100	65-75	25-30	5-10
	13-48	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	95-100	85-95	25-35	5-15
	48-60	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	90-100	85-100	75-95	25-35	5-15
3020:												
Sodhouse---------	0-6	Silt loam	ML	A-4	0	0	90-100	85-100	80-90	60-75	20-25	NP-5
	6-19	Very fine sandy loam, silt loam, loam	ML	A-4	0	0	80-100	75-100	60-90	50-60	20-25	NP-5
	19-25	Indurated			0	0	0	0	0	0	---	NP
	25-56	Gravelly sandy loam	SM	A-2, A-4	0	0-10	65-80	60-75	50-65	25-40	15-25	NP-5
Chiara----------	0-6	Silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	6-17	Very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	17-21	Indurated			0	0	0	0	0	0	---	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	
3030:												
Deepeek---------	0-5	Very cobbly loam	GM-GC	A-2, A-4	0-5	30-40	55-70	50-65	40-55	30-45	25-30	5-10
	5-18	Very cobbly loam, very cobbly silt loam, very cobbly silty clay loam	GC	A-6	0-5	30-40	55-70	50-65	45-55	40-50	30-40	10-20
	18-24	Indurated			0	0	0	0	0	0	---	NP
	24-42	Gravelly silt loam	GM-GC, CL-ML, GM, ML	A-4	0	0	55-80	50-75	45-70	45-60	20-30	NP-10
Alley-----------	0-7	Very cobbly very fine sandy loam	GM-GC, GM, SC-SM, SM	A-2	0-5	25-40	55-75	50-70	45-65	25-35	20-30	NP-10
	7-20	Gravelly clay loam, gravelly sandy clay loam, gravelly loam	SC, GC	A-6	0	0-10	65-80	55-75	50-65	35-50	30-35	15-20
	20-40	Gravelly fine sandy loam, cobbly fine sandy loam, gravelly sandy loam	SM, GM	A-2, A-4	0-10	0-40	60-85	50-80	35-75	25-40	25-30	NP-5
	40-60	Very cobbly fine sandy loam	SM	A-2	0-15	15-45	70-75	60-70	45-55	25-35	25-30	NP-5
3100:												
Ratsow----------	0-7	Loam	SC-SM, CL-ML	A-4	0	0	80-100	75-100	65-95	45-65	25-30	5-10
	7-29	Clay loam, clay	CL, CH	A-7	0	0	80-100	75-100	70-90	55-70	40-55	20-30
	29-30	Indurated			0	0	0	0	0	0	---	NP
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	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	
Quarz-----------	0-6	Very cobbly loam	GC, CL, SC	A-6	0-10	25-50	60-85	55-80	50-70	35-60	25-35	10-20
	6-15	Very cobbly clay loam, very gravelly clay loam	GC	A-6, A-7, A-2	0-10	10-40	35-60	30-55	25-50	20-40	35-45	15-25
	15-21	Very gravelly clay, very gravelly clay loam	GC	A-2, A-7	0-5	5-25	30-55	25-50	20-45	15-40	45-55	20-30
	21-25	Unweathered bedrock			0	0	0	0	0	0	---	NP
Susie Creek-----	0-10	Loam	CL	A-6	0	0	90-100	75-100	70-95	55-75	30-35	10-15
	10-30	Clay loam, clay	CL, CH	A-7	0	0-10	90-100	85-100	70-100	70-95	40-60	20-30
	30-60	Loam, clay loam	CL-ML, CL	A-4, A-6	0	0-10	90-100	85-100	65-85	50-70	25-35	5-15
3510:												
Midraw----------	0-2	Gravelly loam	GC, CL	A-6	0	0-10	65-80	60-75	55-65	45-55	25-35	10-15
	2-19	Gravelly clay loam, gravelly clay	GC, CL	A-7	0	0-10	60-80	55-75	50-70	40-60	40-50	20-25
	19-25	Indurated			0	0	0	0	0	0	---	NP
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	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	
Troughs	0-2	Gravelly loam	CL, GC	A-6	0	0-5	55-80	50-75	40-70	35-60	30-35	10-15
	2-14	Cobbly clay loam, very cobbly clay loam, very gravelly clay loam	CL, SC, GC	A-2, A-6, A-7	0-5	15-50	45-85	40-80	35-75	30-60	35-45	15-20
	14-19	Very cobbly loam, extremely cobbly loam, very cobbly clay loam	CL-ML, CL, GM-GC, GC	A-2, A-4, A-6	0-15	40-75	50-95	45-90	40-85	30-70	25-40	5-15
	19-20	Indurated			0	0	0	0	0	0	---	NP
	20-24	Unweathered bedrock			0	0	0	0	0	0	---	NP
Midraw	0-2	Gravelly loam	GC, CL	A-6	0	0-10	65-80	60-75	55-65	45-55	25-35	10-15
	2-19	Gravelly clay loam, gravelly clay	GC, CL	A-7	0	0-10	60-80	55-75	50-70	40-60	40-50	20-25
	19-25	Indurated			0	0	0	0	0	0	---	NP
	25-29	Unweathered bedrock			0	0	0	0	0	0	---	NP
3710: Rock Outcrop.												
Petan	0-6	Extremely stony loam	CL	A-6	25-55	10-30	70-90	65-85	60-70	50-60	25-35	10-15
	6-19	Very cobbly clay, very stony clay	CH	A-7	20-45	15-40	65-85	60-80	55-75	50-70	50-65	25-40
	19-20	Indurated			0	0	0	0	0	0	---	NP
	20-30	Unweathered bedrock			0	0	0	0	0	0	---	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	
Bulake----------	0-7	Gravelly loam	GC, CL	A-6	0	0-10	60-80	55-75	50-75	40-60	25-35	10-15
	7-19	Clay, gravelly clay	CH	A-7	0	0-10	60-95	55-90	55-85	50-80	50-60	30-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
3715:												
Petan----------	0-6	Very cobbly loam	CL	A-6	1-5	40-55	70-90	65-85	60-70	50-60	25-35	10-15
	6-19	Very cobbly clay, very stony clay	CH	A-7	20-45	15-40	65-85	60-80	55-75	50-70	50-65	25-40
	19-20	Indurated			0	0	0	0	0	0	---	NP
	20-30	Unweathered bedrock			0	0	0	0	0	0	---	NP
Deunah----------	0-9	Silt loam	CL-ML, CL	A-4, A-6	0	0-10	95-100	95-100	80-100	70-90	20-35	5-15
	9-26	Clay	CH	A-7	0	0-10	95-100	95-100	90-100	85-95	60-80	30-45
	26-33	Indurated			0	0	0	0	0	0	---	NP
Hatpeak----------	0-10	Loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	65-80	55-70	25-35	5-15
	10-30	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0-15	95-100	90-100	70-90	60-85	40-55	20-35
	30-60	Indurated			0	0	0	0	0	0	---	NP
3721:												
Hatpeak----------	0-10	Loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	65-80	55-70	25-35	5-15
	10-30	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0-15	95-100	90-100	70-90	60-85	40-55	20-35
	30-60	Indurated			0	0	0	0	0	0	---	NP
Deunah----------	0-9	Silt loam	CL-ML, CL	A-4, A-6	0	0-10	95-100	95-100	80-100	70-90	20-35	5-15
	9-26	Clay	CH	A-7	0	0-10	95-100	95-100	90-100	85-95	60-80	30-45
	26-33	Indurated			0	0	0	0	0	0	---	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	
3722:												
Hatpeak---------	0-10	Loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	65-80	55-70	25-35	5-15
	10-30	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0-15	95-100	90-100	70-90	60-85	40-55	20-35
	30-60	Indurated			0	0	0	0	0	0	---	NP
Hatpeak---------	0-10	Loam	CL-ML, CL	A-4, A-6	0	0	80-100	75-100	65-80	55-70	25-35	5-15
	10-30	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0-15	95-100	90-100	70-90	60-85	40-55	20-35
	30-60	Indurated			0	0	0	0	0	0	---	NP

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodability index" apply only to the surface layer)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1:												
Rubble Land	0-60	---	1.70-2.35	>20.00	0.00-0.10	Low	0.0-0.1	---	---	---	8	---
120:												
Cotant	0-3	27-40	1.10-1.30	0.20-0.60	0.13-0.16	Moderate	1.0-2.0	0.20	0.37	2	7	38
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Lerrow	0-9	20-25	1.05-1.20	0.60-2.00	0.12-0.15	Moderate	2.0-3.0	0.20	0.37	3	6	48
	9-14	30-40	1.20-1.40	0.20-0.60	0.16-0.19	Moderate	1.0-2.0	0.20	0.32			
	14-27	40-55	1.25-1.40	0.06-0.20	0.11-0.14	High	0.5-1.0	0.15	0.37			
	27-31	---	---	0.00-0.01	---		---	---	---			
Cotant	0-3	27-40	1.10-1.30	0.20-0.60	0.13-0.16	Moderate	1.0-2.0	0.20	0.37	2	7	38
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
126:												
Cotant	0-3	20-27	1.10-1.30	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	2	8	---
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Lerrow	0-9	20-25	1.05-1.20	0.60-2.00	0.14-0.16	Moderate	2.0-3.0	0.20	0.43	3	6	48
	9-14	30-40	1.20-1.40	0.20-0.60	0.16-0.19	Moderate	1.0-2.0	0.20	0.32			
	14-27	40-55	1.25-1.40	0.06-0.20	0.11-0.14	High	0.5-1.0	0.15	0.37			
	27-31	---	---	0.00-0.01	---		---	---	---			
Akler	0-4	18-25	1.20-1.40	0.60-2.00	0.14-0.16	Moderate	1.0-2.0	0.43	0.43	2	5	56
	4-18	50-60	1.20-1.35	0.06-0.20	0.07-0.11	High	0.5-1.0	0.28	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
127:												
Cotant	0-3	27-40	1.10-1.30	0.20-0.60	0.09-0.14	Low	1.0-2.0	0.10	0.49	2	8	---
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Ninemile--------	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Lerrow----------	0-9	20-25	1.05-1.20	0.60-2.00	0.12-0.15	Moderate	2.0-3.0	0.20	0.37	3	6	48
	9-14	30-40	1.20-1.40	0.20-0.60	0.16-0.19	Moderate	1.0-2.0	0.20	0.32			
	14-27	40-55	1.25-1.40	0.06-0.20	0.11-0.14	High	0.5-1.0	0.15	0.37			
	27-31	---	---	0.00-0.01	---		---	---	---			
128:												
Cotant----------	0-3	20-27	1.10-1.30	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	2	8	---
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Graley----------	0-12	10-18	1.30-1.50	0.60-2.00	0.08-0.12	Low	2.0-4.0	0.17	0.55	1	7	38
	12-17	35-45	1.25-1.40	0.06-0.20	0.08-0.10	Moderate	1.0-2.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
129:												
Cotant----------	0-3	27-40	1.10-1.30	0.20-0.60	0.09-0.14	Low	1.0-2.0	0.10	0.49	2	8	---
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Chen------------	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Crooked Creek---	0-4	27-30	1.20-1.30	0.60-2.00	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	7	38
	4-37	35-50	1.15-1.25	0.06-0.20	0.15-0.17	High	1.0-2.0	0.24	0.24			
	37-60	25-40	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.8-2.0	0.28	0.43			
130:												
Cotant----------	0-3	27-40	1.10-1.30	0.20-0.60	0.13-0.16	Moderate	1.0-2.0	0.20	0.37	2	7	38
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Booford---------	0-10	15-25	1.10-1.30	0.60-2.00	0.18-0.20	Moderate	2.0-4.0	0.43	0.43	3	6	48
	10-19	35-50	1.30-1.45	0.06-0.20	0.13-0.19	Moderate	1.0-3.0	0.24	0.43			
	19-36	40-60	1.25-1.45	0.06-0.20	0.13-0.19	High	0.5-2.0	0.17	0.37			
	36-46	---	---	0.00-0.01	---		---	---	---			
140:												
Upville---------	0-10	15-22	1.30-1.35	0.60-2.00	0.13-0.15	Moderate	2.0-4.0	0.20	0.32	3	6	48
	10-21	15-27	1.40-1.45	0.60-2.00	0.05-0.14	Low	0.5-2.0	0.15	0.37			
	21-60	0-5	1.45-1.50	6.00-20.00	0.03-0.05	Low	0.0-0.5	0.02	0.20			
Upville---------	0-10	15-22	1.30-1.35	0.60-2.00	0.13-0.15	Moderate	2.0-4.0	0.20	0.32	2	6	48
	10-21	15-27	1.40-1.45	0.60-2.00	0.06-0.14	Low	1.0-2.0	0.15	0.37			
	21-60	0-5	1.45-1.50	6.00-20.00	0.03-0.05	Low	0.5-1.0	0.02	0.20			
141:												
Upville---------	0-12	15-22	1.30-1.35	0.60-2.00	0.13-0.15	Moderate	2.0-4.0	0.20	0.32	2	6	48
	12-26	15-27	1.40-1.45	0.60-2.00	0.06-0.14	Low	1.0-2.0	0.15	0.37			
	26-60	0-5	1.45-1.50	6.00-20.00	0.03-0.05	Low	0.5-1.0	0.02	0.20			
Kleckner--------	0-8	15-25	1.10-1.30	0.60-2.00	0.11-0.17	Moderate	2.0-3.0	0.20	0.37	5	7	38
	8-20	35-50	1.25-1.45	0.06-0.20	0.08-0.12	Moderate	1.0-2.0	0.05	0.43			
	20-42	35-50	1.25-1.45	0.06-0.20	0.08-0.14	Moderate	0.5-1.0	0.05	0.37			
	42-60	15-20	1.35-1.55	2.00-6.00	0.04-0.06	Low	0.0-0.5	0.05	0.32			
150:												
Gochea----------	0-9	10-20	1.30-1.50	0.60-2.00	0.08-0.13	Low	1.0-2.0	0.17	0.32	4	6	48
	9-25	25-35	1.30-1.50	0.20-0.60	0.12-0.18	Moderate	0.5-1.0	0.17	0.28			
	25-30	10-15	1.50-1.70	2.00-6.00	0.09-0.13	Low	0.0-0.5	0.28	0.43			
	30-60	2-5	1.55-1.75	6.00-20.00	0.03-0.05	Low	0.0-0.5	0.10	0.20			
161:												
Sonoma----------	0-12	20-27	1.35-1.50	0.60-2.00	0.18-0.21	Moderate	0.6-2.0	0.43	0.43	5	4L	86
	12-60	25-35	1.35-1.50	0.20-0.60	0.19-0.21	Moderate	0.6-2.0	0.37	0.37			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
162:												
Sonoma----------	0-12	20-27	1.35-1.50	0.60-2.00	0.19-0.21	Moderate	1.0-2.0	0.43	0.43	5	4L	86
	12-60	25-35	1.35-1.50	0.20-0.60	0.19-0.21	Moderate	0.5-2.0	0.37	0.37			
184:												
Crooked Creek---	0-3	27-30	1.20-1.30	0.60-2.00	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	7	38
	3-37	35-50	1.15-1.25	0.06-0.20	0.15-0.17	High	1.0-2.0	0.24	0.24			
	37-60	25-40	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.8-2.0	0.28	0.43			
185:												
Crooked Creek---	0-4	27-30	1.20-1.30	0.60-2.00	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	7	38
	4-37	35-50	1.15-1.25	0.06-0.20	0.15-0.17	High	1.0-2.0	0.24	0.24			
	37-60	25-40	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.8-2.0	0.28	0.43			
Crooked Creek---	0-4	27-30	1.20-1.30	0.60-2.00	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	7	38
	4-37	35-50	1.15-1.25	0.06-0.20	0.15-0.17	High	1.0-2.0	0.24	0.24			
	37-60	25-40	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.8-2.0	0.28	0.43			
186:												
Crooked Creek---	0-4	27-30	1.20-1.30	0.60-2.00	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	7	38
	4-37	35-50	1.15-1.25	0.06-0.20	0.15-0.17	High	1.0-2.0	0.24	0.24			
	37-60	25-40	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.8-2.0	0.28	0.43			
Crooked Creek---	0-4	27-30	1.20-1.30	0.60-2.00	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	7	38
	4-37	35-50	1.15-1.25	0.06-0.20	0.15-0.17	High	1.0-2.0	0.24	0.24			
	37-60	25-40	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.8-2.0	0.28	0.43			
Crooked Creek---	0-4	30-40	1.20-1.40	0.06-0.20	0.19-0.21	Moderate	2.0-4.0	0.37	0.37	5	7	38
	4-37	35-50	1.25-1.45	0.06-0.20	0.15-0.16	High	2.0-4.0	0.28	0.24			
	37-60	30-40	1.30-1.50	0.06-0.20	0.19-0.21	Moderate	0.8-2.0	0.32	0.32			
188:												
Crooked Creek---	0-4	27-30	1.20-1.30	0.60-2.00	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	7	38
	4-37	35-50	1.15-1.25	0.06-0.20	0.15-0.17	High	1.0-2.0	0.24	0.24			
	37-60	25-40	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.8-2.0	0.28	0.43			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Welch----------	0-10	15-20	1.25-1.40	0.60-2.00	0.16-0.18	Low	2.0-4.0	0.32	0.32	5	5	56
	10-60	27-35	1.30-1.45	0.20-0.60	0.16-0.21	Moderate	0.5-4.0	0.28	0.32			
Crooked Creek---	0-4	30-40	1.20-1.40	0.06-0.20	0.19-0.21	Moderate	2.0-4.0	0.37	0.37	5	7	38
	4-37	35-50	1.25-1.45	0.06-0.20	0.15-0.16	High	2.0-4.0	0.28	0.24			
	37-60	30-40	1.30-1.50	0.06-0.20	0.19-0.21	Moderate	0.8-2.0	0.32	0.32			
190:												
Heechee---------	0-7	15-27	1.10-1.25	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.20	0.37	5	6	48
	7-27	25-35	1.30-1.45	0.20-0.60	0.06-0.14	Low	1.0-2.0	0.10	0.43			
	27-61	10-20	1.40-1.60	6.00-20.00	0.03-0.06	Low	0.5-1.0	0.05	0.28			
Heechee---------	0-7	15-27	1.15-1.25	0.60-2.00	0.12-0.15	Low	2.0-4.0	0.20	0.37	5	6	48
	7-27	25-35	1.30-1.45	0.20-0.60	0.06-0.14	Low	1.0-2.0	0.10	0.49			
	27-61	10-25	1.40-1.60	6.00-20.00	0.02-0.06	Low	0.0-1.0	0.05	0.49			
200:												
Lynnbow---------	0-4	18-25	1.05-1.20	0.60-2.00	0.19-0.21	Moderate	2.0-3.0	0.49	0.49	3	6	48
	4-26	50-60	1.20-1.40	0.00-0.06	0.14-0.16	High	1.0-3.0	0.20	0.37			
	26-40	40-55	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-1.0	0.20	0.37			
	40-58	15-25	1.35-1.55	0.20-0.60	0.16-0.19	Low	0.0-0.5	0.32	0.37			
	58-68	---	---	0.00-0.01	---		---	---	---			
Rugar----------	0-2	15-27	1.05-1.20	0.60-2.00	0.16-0.18	Moderate	2.0-5.0	0.32	0.37	4	5	56
	2-20	27-35	1.15-1.35	0.20-0.60	0.18-0.20	Moderate	1.0-2.0	0.28	0.32			
	20-43	40-55	1.20-1.40	0.06-0.20	0.12-0.15	High	0.0-0.8	0.20	0.32			
	43-47	---	---	0.00-0.01	---		---	---	---			
201:												
Lynnbow---------	0-4	18-25	1.05-1.20	0.60-2.00	0.19-0.21	Moderate	2.0-3.0	0.49	0.49	3	6	48
	4-26	50-60	1.20-1.40	0.00-0.06	0.14-0.16	High	1.0-3.0	0.20	0.37			
	26-40	40-55	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-1.0	0.20	0.37			
	40-58	15-25	1.35-1.55	0.20-0.60	0.16-0.19	Low	0.0-0.5	0.32	0.37			
	58-68	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Lerrow----------	0-9	20-25	1.05-1.20	0.60-2.00	0.12-0.15	Moderate	2.0-3.0	0.20	0.37	3	6	48
	9-14	30-40	1.20-1.40	0.20-0.60	0.16-0.19	Moderate	1.0-2.0	0.20	0.32			
	14-27	40-55	1.25-1.40	0.06-0.20	0.11-0.14	High	0.5-1.0	0.15	0.37			
	27-31	---	---	0.00-0.01	---		---	---	---			
Crooked Creek---	0-4	27-30	1.20-1.30	0.60-2.00	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	7	38
	4-37	35-50	1.15-1.25	0.06-0.20	0.15-0.17	High	1.0-2.0	0.24	0.24			
	37-60	25-40	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.8-2.0	0.28	0.43			
210:												
Soonaker--------	0-3	5-15	1.35-1.50	2.00-6.00	0.13-0.15	Low	1.0-2.0	0.43	0.43	3	3	86
	3-16	18-25	1.40-1.55	0.60-2.00	0.15-0.18	Moderate	0.5-1.0	0.37	0.43			
	16-24	10-25	1.30-1.50	0.60-6.00	0.06-0.10	Low	0.0-0.5	0.24	0.49			
	24-28	---	---	0.00-0.01	---		---	---	---			
Bulake----------	0-7	18-25	1.30-1.50	0.60-2.00	0.12-0.14	Moderate	1.0-2.0	0.24	0.43	1	6	48
	7-19	40-50	1.20-1.40	0.06-0.20	0.11-0.15	High	0.5-1.0	0.20	0.32			
	19-23	---	---	0.00-0.01	---		---	---	---			
220:												
Cavanaugh-------	0-5	20-25	1.40-1.50	0.60-2.00	0.14-0.17	Moderate	1.0-3.0	0.24	0.32	2	6	48
	5-9	35-50	1.20-1.40	0.06-0.20	0.12-0.16	High	0.6-2.0	0.15	0.28			
	9-21	35-50	1.20-1.40	0.06-0.20	0.08-0.12	Moderate	0.0-0.5	0.10	0.55			
	21-25	---	---	0.00-0.01	---		---	---	---			
Rugar-----------	0-2	27-35	1.05-1.20	0.20-0.60	0.18-0.20	Moderate	2.0-5.0	0.28	0.32	4	6	48
	2-20	27-35	1.15-1.35	0.20-0.60	0.18-0.20	Moderate	1.0-2.0	0.28	0.32			
	20-43	40-55	1.20-1.40	0.06-0.20	0.12-0.15	High	0.0-0.8	0.20	0.32			
	43-47	---	---	0.00-0.01	---		---	---	---			
McIvey----------	0-16	20-27	1.05-1.20	0.60-2.00	0.11-0.15	Low	2.0-5.0	0.17	0.32	5	7	38
	16-29	30-40	1.25-1.45	0.20-0.60	0.12-0.17	Moderate	1.0-2.0	0.10	0.43			
	29-65	40-50	1.25-1.40	0.00-0.06	0.07-0.10	Moderate	0.5-1.0	0.05	0.37			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
221:												
Cavanaugh-------	0-5	20-25	1.40-1.50	0.60-2.00	0.14-0.17	Moderate	1.0-3.0	0.24	0.32	2	6	48
	5-9	35-50	1.20-1.40	0.06-0.20	0.12-0.16	High	0.6-2.0	0.15	0.28			
	9-21	35-50	1.20-1.40	0.06-0.20	0.08-0.12	Moderate	0.0-0.5	0.10	0.55			
	21-25	---	---	0.00-0.01	---		---	---	---			
Quarz-----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Alyan-----------	0-9	27-35	1.10-1.25	0.60-2.00	0.15-0.17	Moderate	2.0-3.0	0.17	0.32	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
233:												
Bioya-----------	0-10	8-18	1.35-1.45	0.60-2.00	0.15-0.21	Low	1.0-2.0	0.55	0.55	2	5	56
	10-36	18-27	1.50-1.60	0.60-2.00	0.16-0.21	Moderate	0.5-1.0	0.37	0.37			
	36-60	---	---	0.00-0.01	---		---	---	---			
Bilbo-----------	0-5	15-25	1.25-1.40	0.60-2.00	0.11-0.13	Moderate	1.0-3.0	0.24	0.43	3	6	48
	5-40	35-50	1.25-1.45	0.06-0.20	0.07-0.09	Moderate	0.5-1.0	0.05	0.37			
	40-60	5-15	1.40-1.60	6.00-20.00	0.03-0.06	Low	0.5-1.0	0.05	0.20			
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.55	0.55	1	5	56
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-40	---	---	0.00-0.01	---		---	---	---			
234:												
Bioya-----------	0-10	8-18	1.35-1.45	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.55	0.55	2	3	86
	10-36	18-27	1.50-1.60	0.60-2.00	0.16-0.21	Moderate	0.5-1.0	0.37	0.37			
	36-60	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Shabliss--------	0-10	5-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.7-2.0	0.37	0.43	2	3	86
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			
Puett-----------	0-3	5-15	1.30-1.50	2.00-6.00	0.08-0.12	Low	0.5-1.0	0.15	0.17	2	4	86
	3-10	5-10	1.35-1.55	2.00-6.00	0.08-0.15	Low	0.0-0.5	0.15	0.24			
	10-14	---	---	0.00-0.01	---		---	---	---			
235:												
Bioya-----------	0-10	8-18	1.35-1.45	0.60-2.00	0.15-0.21	Low	1.0-2.0	0.55	0.55	2	5	56
	10-36	18-27	1.50-1.60	0.60-2.00	0.16-0.21	Moderate	0.5-1.0	0.37	0.37			
	36-60	---	---	0.00-0.01	---		---	---	---			
Trunk-----------	0-5	10-20	1.35-1.50	0.60-2.00	0.12-0.15	Low	1.0-2.0	0.24	0.43	2	6	48
	5-23	35-50	1.30-1.45	0.00-0.06	0.10-0.13	High	0.0-0.5	0.20	0.37			
	23-27	---	---	0.00-0.01	---		---	---	---			
Alley-----------	0-7	7-15	1.35-1.45	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	5	6	48
	7-20	20-30	1.40-1.50	0.20-0.60	0.14-0.18	Moderate	0.5-1.0	0.15	0.43			
	20-40	5-10	1.45-1.55	0.20-0.60	0.11-0.13	Low	0.0-0.5	0.15	0.37			
	40-60	5-10	1.45-1.55	2.00-6.00	0.06-0.08	Low	0.0-0.5	0.05	0.32			
236:												
Bioya-----------	0-10	8-18	1.35-1.45	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.55	0.55	2	3	86
	10-36	18-27	1.50-1.60	0.60-2.00	0.16-0.21	Moderate	0.5-1.0	0.37	0.37			
	36-60	---	---	0.00-0.01	---		---	---	---			
Wieland---------	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			
Kleckner--------	0-8	15-25	1.10-1.30	0.60-2.00	0.11-0.17	Moderate	2.0-3.0	0.20	0.37	5	7	38
	8-20	35-50	1.25-1.45	0.06-0.20	0.08-0.12	Moderate	1.0-2.0	0.05	0.43			
	20-42	35-50	1.25-1.45	0.06-0.20	0.08-0.14	Moderate	0.5-1.0	0.05	0.37			
	42-60	15-20	1.35-1.55	2.00-6.00	0.04-0.06	Low	0.0-0.5	0.05	0.32			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
241:												
Wickahoney------	0-2	20-25	1.40-1.50	0.60-2.00	0.08-0.13	Low	1.0-2.0	0.10	0.32	1	8	---
	2-6	25-35	1.45-1.55	0.20-0.60	0.12-0.14	Moderate	0.5-1.0	0.20	0.43			
	6-14	35-55	1.20-1.40	0.06-0.20	0.08-0.14	High	0.0-0.5	0.10	0.37			
	14-18	---	---	---	---		---	---	---			
Deunah----------	0-9	15-27	1.20-1.40	0.60-2.00	0.15-0.20	Moderate	1.0-2.0	0.43	0.49	2	6	48
	9-26	60-70	1.25-1.45	0.00-0.06	0.12-0.15	High	0.5-1.0	0.20	0.20			
	26-33	---	---	---	---		---	---	---			
Petan----------	0-6	18-27	1.40-1.50	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.10	0.49	1	8	---
	6-19	40-60	1.25-1.40	0.00-0.06	0.08-0.10	Moderate	1.0-2.0	0.10	0.32			
	19-20	---	---	0.00-0.01	---		---	---	---			
	20-30	---	---	0.00-0.01	---		---	---	---			
270:												
Pernty----------	0-5	18-25	1.10-1.25	0.60-2.00	0.09-0.12	Low	2.0-3.0	0.15	0.32	1	7	38
	5-14	25-35	1.15-1.30	0.20-0.60	0.08-0.10	Moderate	0.5-1.0	0.15	0.37			
	14-18	---	---	0.00-0.01	---		---	---	---			
Loncan----------	0-17	18-27	1.10-1.25	0.60-2.00	0.06-0.10	Low	1.0-2.0	0.10	0.37	2	7	38
	17-30	18-27	1.20-1.40	0.60-2.00	0.05-0.10	Low	0.5-1.0	0.10	0.37			
	30-34	---	---	0.00-0.01	---		---	---	---			
Pernty----------	0-5	18-25	1.10-1.25	0.60-2.00	0.09-0.12	Low	2.0-3.0	0.15	0.32	1	7	38
	5-14	25-35	1.15-1.30	0.20-0.60	0.08-0.10	Moderate	0.5-1.0	0.15	0.37			
	14-18	---	---	0.00-0.01	---		---	---	---			
280:												
Humboldt--------	0-12	30-40	1.15-1.25	0.20-2.00	0.19-0.21	Moderate	1.0-3.0	0.37	0.37	5	4L	86
	12-52	35-45	1.05-1.15	0.20-0.60	0.17-0.19	Moderate	0.0-0.5	0.32	0.32			
	52-60	20-35	1.10-1.20	0.20-2.00	0.17-0.19	Moderate	0.0-0.5	0.37	0.37			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
308:												
Akler	0-4	18-25	1.20-1.40	0.60-2.00	0.14-0.16	Moderate	1.0-2.0	0.43	0.43	2	5	56
	4-18	50-60	1.20-1.35	0.06-0.20	0.07-0.11	High	0.5-1.0	0.28	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
Pattani	0-14	40-50	1.25-1.40	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.28	3	4	86
	14-37	35-50	1.35-1.50	0.00-0.06	0.15-0.20	High	0.0-1.0	0.28	0.32			
	37-41	---	---	0.00-0.01	---		---	---	---			
Cotant	0-3	18-27	1.10-1.30	0.60-2.00	0.11-0.14	Moderate	1.0-2.0	0.24	0.49	2	6	48
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.0-0.5	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
309:												
Akler	0-4	18-25	1.20-1.40	0.60-2.00	0.14-0.16	Moderate	1.0-2.0	0.43	0.43	2	5	56
	4-18	50-60	1.20-1.35	0.06-0.20	0.07-0.11	High	0.5-1.0	0.28	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
Susie Creek	0-10	20-27	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	5	6	48
	10-30	35-55	1.25-1.45	0.06-0.20	0.15-0.19	High	0.0-0.8	0.28	0.32			
	30-60	18-30	1.30-1.50	0.20-0.60	0.14-0.16	Moderate	0.0-0.5	0.28	0.32			
457:												
Donna	0-10	15-25	1.25-1.35	0.60-2.00	0.18-0.20	Low	1.0-3.0	0.37	0.43	2	6	48
	10-30	60-70	1.15-1.35	0.00-0.06	0.14-0.16	High	0.5-2.0	0.20	0.24			
	30-48	---	---	0.00-0.01	---		---	---	---			
	48-60	15-25	1.45-1.65	2.00-6.00	0.04-0.06	Low	0.0-0.5	0.20	0.32			
Stampede	0-16	20-25	1.30-1.40	0.60-2.00	0.16-0.19	Moderate	1.0-3.0	0.43	0.49	2	6	48
	16-37	40-55	1.20-1.35	0.00-0.06	0.14-0.16	High	0.5-1.0	0.28	0.32			
	37-60	---	---	0.00-0.01	---		---	---	---			
Short Creek	0-8	30-35	1.30-1.45	0.20-0.60	0.18-0.20	Moderate	1.0-2.0	0.24	0.49	5	7	38
	8-23	40-50	1.25-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-1.0	0.15	0.43			
	23-60	30-40	1.30-1.50	0.20-0.60	0.05-0.07	Moderate	0.0-0.5	0.10	0.37			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
458:												
Donna----------	0-10	15-25	1.25-1.35	0.60-2.00	0.18-0.20	Low	1.0-3.0	0.37	0.43	2	6	48
	10-30	60-70	1.15-1.35	0.00-0.06	0.14-0.16	High	0.5-2.0	0.20	0.24			
	30-48	---	---	0.00-0.01	---		---	---	---			
	48-60	15-25	1.45-1.65	2.00-6.00	0.04-0.06	Low	0.0-0.5	0.20	0.32			
Stampede--------	0-16	20-25	1.30-1.40	0.60-2.00	0.16-0.19	Moderate	1.0-3.0	0.43	0.49	2	6	48
	16-37	40-55	1.20-1.35	0.00-0.06	0.14-0.16	High	0.5-1.0	0.28	0.32			
	37-60	---	---	0.00-0.01	---		---	---	---			
464:												
Stampede--------	0-16	18-27	1.25-1.40	0.60-2.00	0.17-0.20	Moderate	1.0-3.0	0.43	0.49	2	5	56
	16-37	40-55	1.20-1.35	0.00-0.06	0.14-0.16	High	0.5-1.0	0.28	0.32			
	37-60	---	---	0.00-0.01	---		---	---	---			
570:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Cleavage--------	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
571:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Tusel----------	0-17	10-20	1.20-1.40	0.60-2.00	0.09-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
Gando----------	0-9	10-18	1.25-1.40	0.60-2.00	0.09-0.11	Low	1.0-2.0	0.10	0.32	1	7	38
	9-17	10-18	1.30-1.50	0.60-2.00	0.05-0.09	Low	0.0-0.5	0.05	0.28			
	17-21	---	---	0.00-0.01	---		---	---	---			
572:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Reluctan--------	0-9	14-18	1.30-1.45	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.28	0.49	2	6	48
	9-27	25-35	1.40-1.60	0.20-0.60	0.12-0.17	Moderate	0.5-2.0	0.32	0.43			
	27-37	---	---	0.00-0.01	---		---	---	---			
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
576:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
577:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
Chen------------	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
578:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Tusel-----------	0-17	10-20	1.20-1.40	0.60-2.00	0.09-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
579:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Pernty----------	0-5	20-25	1.10-1.25	0.60-2.00	0.07-0.08	Low	2.0-3.0	0.15	0.55	1	8	---
	5-14	25-35	1.15-1.30	0.20-0.60	0.08-0.10	Moderate	1.0-2.0	0.15	0.49			
	14-18	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Tusel----------	0-17	10-20	1.20-1.40	0.60-2.00	0.13-0.15	Low	2.0-5.0	0.15	0.43	3	7	38
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
580:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Pie Creek--------	0-5	15-25	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.10	0.55	2	7	38
	5-23	60-70	1.15-1.30	0.00-0.06	0.14-0.16	High	1.0-2.0	0.20	0.20			
	23-27	---	---	0.00-0.01	---		---	---	---			
Reluctan---------	0-9	15-22	1.15-1.35	0.60-2.00	0.11-0.14	Low	2.0-4.0	0.24	0.43	2	6	48
	9-27	25-35	1.35-1.55	0.20-0.60	0.12-0.15	Moderate	0.5-2.0	0.24	0.43			
	27-31	---	---	0.00-0.01	---		---	---	---			
581:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
Cleavage---------	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
582:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Tusel----------	0-17	10-20	1.20-1.40	0.60-2.00	0.13-0.15	Low	2.0-5.0	0.15	0.43	3	7	38
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
583:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
Pernty----------	0-5	18-25	1.10-1.25	0.60-2.00	0.09-0.12	Low	2.0-3.0	0.15	0.32	1	7	38
	5-14	25-35	1.15-1.30	0.20-0.60	0.08-0.10	Moderate	0.5-1.0	0.15	0.37			
	14-18	---	---	0.00-0.01	---		---	---	---			
584:												
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Tusel----------	0-17	10-20	1.20-1.40	0.60-2.00	0.13-0.15	Low	2.0-5.0	0.15	0.43	3	7	38
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
585:												
Rock Outcrop.												
Sumine	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Rubble Land	0-60	---	1.70-2.35	>20.00	0.00-0.10	Low	0.0-0.1	---	---	---	8	---
586:												
Sumine	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Loncan	0-17	18-27	1.10-1.25	0.60-2.00	0.06-0.10	Low	1.0-2.0	0.10	0.37	2	7	38
	17-30	18-27	1.20-1.40	0.60-2.00	0.05-0.10	Low	0.5-1.0	0.10	0.37			
	30-34	---	---	0.00-0.01	---		---	---	---			
Cleavage	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
600:												
Hapgood	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
Bullump	0-12	15-25	1.10-1.20	0.60-2.00	0.08-0.12	Low	2.0-6.0	0.15	0.43	3	7	38
	12-46	25-35	1.35-1.45	0.20-0.60	0.09-0.14	Low	0.5-3.0	0.10	0.32			
	46-50	---	---	0.00-0.01	---		---	---	---			
Gando	0-9	10-18	1.25-1.40	0.60-2.00	0.09-0.11	Low	1.0-2.0	0.10	0.32	1	7	38
	9-17	10-18	1.30-1.50	0.60-2.00	0.05-0.09	Low	0.0-0.5	0.05	0.28			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
601:												
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
Blitzen---------	0-10	20-27	1.10-1.25	0.60-2.00	0.08-0.11	Low	1.0-3.0	0.15	0.49	3	8	---
	10-33	35-60	1.20-1.40	0.06-0.20	0.06-0.08	Moderate	1.0-2.0	0.10	0.32			
	33-37	---	---	0.00-0.01	---		---	---	---			
Tusel-----------	0-17	10-20	1.20-1.40	0.60-2.00	0.09-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
602:												
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
Hackwood--------	0-26	10-27	1.10-1.25	0.60-2.00	0.16-0.21	Moderate	2.0-4.0	0.37	0.43	5	6	48
	26-34	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	34-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
Tusel-----------	0-17	10-20	1.20-1.40	0.60-2.00	0.09-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
623:												
Rock Outcrop.												
Soughe----------	0-10	10-20	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	10-19	25-35	1.30-1.50	0.20-0.60	0.08-0.11	Moderate	0.5-1.0	0.15	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
624:												
Rock Outcrop.												
Soughe----------	0-13	10-20	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	13-20	25-35	1.30-1.50	0.20-0.60	0.08-0.11	Moderate	0.5-1.0	0.15	0.37			
	20-24	---	---	0.00-0.01	---		---	---	---			
Soughe----------	0-13	10-20	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	13-20	25-35	1.30-1.50	0.20-0.60	0.08-0.11	Moderate	0.5-1.0	0.15	0.37			
	20-24	---	---	0.00-0.01	---		---	---	---			
625:												
Soughe----------	0-13	10-20	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	13-20	25-35	1.30-1.50	0.20-0.60	0.08-0.11	Moderate	0.5-1.0	0.15	0.37			
	20-24	---	---	0.00-0.01	---		---	---	---			
Alyan----------	0-9	18-27	1.10-1.25	0.60-2.00	0.07-0.10	Low	2.0-3.0	0.10	0.32	2	8	---
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-42	---	---	0.00-0.01	---		---	---	---			
Shalper---------	0-2	18-26	1.25-1.45	0.60-2.00	0.10-0.12	Low	2.0-4.0	0.10	0.32	1	7	38
	2-11	24-35	1.30-1.50	0.20-0.60	0.06-0.15	Low	1.0-2.0	0.10	0.37			
	11-15	---	---	0.00-0.01	---		---	---	---			
626:												
Soughe----------	0-13	10-20	1.35-1.50	0.60-2.00	0.11-0.13	Low	1.0-2.0	0.24	0.49	1	6	48
	13-20	25-35	1.30-1.50	0.20-0.60	0.08-0.11	Moderate	0.5-1.0	0.15	0.37			
	20-24	---	---	0.00-0.01	---		---	---	---			
Vanwyper--------	0-10	18-25	1.10-1.25	0.60-2.00	0.12-0.14	Moderate	1.0-2.0	0.20	0.32	2	6	48
	10-25	35-55	1.30-1.50	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.10	0.43			
	25-29	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Soughe	0-13	10-20	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	13-20	25-35	1.30-1.50	0.20-0.60	0.08-0.11	Moderate	0.5-1.0	0.15	0.37			
	20-24	---	---	0.00-0.01	---		---	---	---			
690:												
Welch	0-10	15-20	1.25-1.40	0.60-2.00	0.16-0.18	Low	2.0-4.0	0.32	0.32	5	5	56
	10-60	27-35	1.30-1.45	0.20-0.60	0.16-0.21	Moderate	0.5-4.0	0.28	0.32			
Welch	0-10	15-20	1.25-1.40	0.60-2.00	0.16-0.18	Low	2.0-4.0	0.32	0.32	5	8	---
	10-60	27-35	1.30-1.45	0.20-0.60	0.16-0.21	Moderate	0.5-3.0	0.28	0.55			
920:												
Bullump	0-12	15-25	1.10-1.20	0.60-2.00	0.08-0.12	Low	2.0-6.0	0.15	0.43	3	7	38
	12-46	25-35	1.35-1.45	0.20-0.60	0.09-0.14	Low	0.5-3.0	0.10	0.32			
	46-50	---	---	0.00-0.01	---		---	---	---			
Gando	0-9	10-18	1.25-1.40	0.60-2.00	0.09-0.11	Low	1.0-2.0	0.10	0.32	1	7	38
	9-17	10-18	1.30-1.50	0.60-2.00	0.05-0.09	Low	0.0-0.5	0.05	0.28			
	17-21	---	---	0.00-0.01	---		---	---	---			
Tusel	0-17	10-20	1.20-1.40	0.60-2.00	0.09-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
921:												
Bullump	0-12	15-25	1.10-1.20	0.60-2.00	0.08-0.12	Low	2.0-6.0	0.15	0.43	3	7	38
	12-46	25-35	1.35-1.45	0.20-0.60	0.09-0.14	Low	0.5-3.0	0.10	0.32			
	46-50	---	---	0.00-0.01	---		---	---	---			
Hackwood	0-26	10-27	1.10-1.25	0.60-2.00	0.16-0.21	Moderate	2.0-4.0	0.37	0.43	5	6	48
	26-34	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	34-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
Cleavage	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
922:												
Bullump	0-12	15-25	1.10-1.20	0.60-2.00	0.08-0.12	Low	2.0-6.0	0.15	0.43	3	7	38
	12-46	25-35	1.35-1.45	0.20-0.60	0.09-0.14	Low	0.5-3.0	0.10	0.32			
	46-50	---	---	0.00-0.01	---		---	---	---			
Cleavage	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Hapgood	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
1130:												
Clementine	0-3	15-25	1.00-1.15	0.60-2.00	0.19-0.21	Moderate	3.0-5.0	0.49	0.49	5	5	56
	3-44	25-35	1.15-1.35	0.20-0.60	0.19-0.21	Moderate	1.0-4.0	0.43	0.43			
	44-60	25-33	1.25-1.45	0.20-0.60	0.19-0.21	Moderate	0.0-0.6	0.32	0.32			
1131:												
Clementine	0-3	15-25	1.00-1.15	0.60-2.00	0.19-0.21	Moderate	3.0-5.0	0.49	0.49	5	5	56
	3-44	25-35	1.15-1.35	0.20-0.60	0.19-0.21	Moderate	1.0-4.0	0.43	0.43			
	44-60	25-33	1.25-1.45	0.20-0.60	0.19-0.21	Moderate	0.0-0.6	0.32	0.32			
Clementine	0-3	15-25	1.00-1.15	0.60-2.00	0.19-0.21	Moderate	3.0-5.0	0.49	0.49	5	5	56
	3-44	25-35	1.15-1.35	0.20-0.60	0.19-0.21	Moderate	1.0-4.0	0.43	0.43			
	44-60	25-33	1.25-1.45	0.20-0.60	0.19-0.21	Moderate	0.0-0.6	0.32	0.32			
Clementine	0-3	15-25	1.00-1.15	0.60-2.00	0.19-0.21	Moderate	3.0-5.0	0.49	0.49	5	5	56
	3-44	25-35	1.15-1.35	0.20-0.60	0.19-0.21	Moderate	1.0-4.0	0.43	0.43			
	44-60	25-33	1.25-1.45	0.20-0.60	0.19-0.21	Moderate	0.0-0.6	0.32	0.32			
1135:												
Clementine	0-3	15-25	1.00-1.15	0.60-2.00	0.19-0.21	Moderate	3.0-5.0	0.49	0.49	5	5	56
	3-44	25-35	1.15-1.35	0.20-0.60	0.19-0.21	Moderate	1.0-4.0	0.43	0.43			
	44-60	25-33	1.25-1.45	0.20-0.60	0.19-0.21	Moderate	0.0-0.6	0.32	0.32			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
1150:												
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
Wieland---------	0-4	18-27	1.15-1.30	0.60-2.00	0.10-0.15	Low	1.0-2.0	0.32	0.43	5	6	48
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.32	0.32			
1155:												
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
1156:												
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
Kortty----------	0-6	8-15	1.30-1.50	0.60-2.00	0.16-0.21	Low	0.0-0.5	0.43	0.49	4	5	56
	6-12	25-35	1.35-1.55	0.20-0.60	0.15-0.20	Moderate	0.0-0.5	0.32	0.37			
	12-42	15-25	1.55-1.75	0.60-2.00	0.15-0.20	Moderate	0.0-0.5	0.24	0.49			
	42-55	10-20	1.55-1.75	2.00-6.00	0.06-0.08	Low	0.0-0.5	0.10	0.32			
	55-60	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1157:												
Clurde	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
Zevadez	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-26	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	26-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
Chiara	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-40	---	---	0.00-0.01	---		---	---	---			
1190:												
Cherry Spring	0-8	10-15	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.55	0.55	2	3	86
	8-23	20-35	1.35-1.55	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.49	0.55			
	23-45	---	---	0.00-0.01	---		---	---	---			
Enko	0-8	10-18	1.35-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	8-15	10-18	1.40-1.50	2.00-6.00	0.12-0.17	Low	0.8-2.0	0.43	0.49			
	15-38	10-18	1.65-1.70	0.06-0.20	0.10-0.13	Low	0.0-0.5	0.37	0.43			
	38-60	10-18	1.40-1.50	0.60-2.00	0.12-0.17	Low	0.0-0.5	0.43	0.49			
1191:												
Cherry Spring	0-8	10-20	1.40-1.55	0.60-2.00	0.10-0.15	Low	1.0-2.0	0.24	0.43	2	6	48
	8-23	20-35	1.35-1.55	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.49	0.55			
	23-45	---	---	0.00-0.01	---		---	---	---			
Wieland	0-4	18-27	1.15-1.30	0.60-2.00	0.10-0.15	Low	1.0-2.0	0.32	0.43	5	6	48
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.32	0.32			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1193:												
Cherry Spring---	0-8	10-15	1.35-1.50	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.55	0.55	2	5	56
	8-23	20-35	1.35-1.55	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.49	0.55			
	23-45	---	---	0.00-0.01	---		---	---	---			
Hunnton---	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Chiara---	0-6	10-18	1.25-1.40	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.55	0.55	1	5	56
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-40	---	---	0.00-0.01	---		---	---	---			
1210:												
Skull Creek---	0-6	8-18	1.30-1.50	0.60-2.00	0.14-0.17	Low	0.8-2.0	0.37	0.43	2	3	86
	6-34	8-18	1.35-1.55	0.60-2.00	0.10-0.16	Low	0.0-0.5	0.28	0.43			
	34-38	---	---	0.00-0.01	---		---	---	---			
Shabliss---	0-10	5-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.7-2.0	0.37	0.43	2	3	86
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			
Puett---	0-3	5-10	1.30-1.50	2.00-6.00	0.13-0.15	Low	0.5-1.0	0.28	0.32	2	3	86
	3-10	5-10	1.35-1.55	2.00-6.00	0.13-0.15	Low	0.0-0.5	0.28	0.32			
	10-14	---	---	0.00-0.01	---		---	---	---			
1220:												
Hunnton---	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Hunnton---------	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Fulstone--------	0-5	10-20	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.28	0.43	1	7	38
	5-17	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.5-1.0	0.17	0.37			
	17-40	---	---	0.00-0.02	---		---	---	---			
1221:												
Hunnton---------	0-3	20-27	1.10-1.25	0.60-2.00	0.09-0.12	Moderate	1.0-2.0	0.43	0.43	2	7	38
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Hunnton---------	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Fulstone--------	0-5	18-25	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.20	0.32	1	6	48
	5-17	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.5-1.0	0.17	0.37			
	17-40	---	---	0.00-0.02	---		---	---	---			
1223:												
Hunnton---------	0-3	20-27	1.10-1.25	0.60-2.00	0.09-0.12	Moderate	1.0-2.0	0.43	0.43	2	7	38
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Shabliss--------	0-10	5-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.7-2.0	0.37	0.43	2	3	86
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Puett----------	0-3	4-10	1.40-1.60	6.00-20.00	0.04-0.07	Low	0.5-1.0	0.10	0.24	2	4	86
	3-10	8-15	1.35-1.55	2.00-6.00	0.10-0.13	Low	0.0-1.0	0.28	0.32			
	10-20	---	---	0.00-0.01	---		---	---	---			
1224:												
Hunnton---------	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Trunk----------	0-5	15-27	1.30-1.45	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.10	0.37	2	8	---
	5-23	35-50	1.30-1.45	0.00-0.06	0.10-0.13	High	0.5-2.0	0.20	0.37			
	23-27	---	---	0.00-0.01	---		---	---	---			
Shabliss--------	0-10	7-15	1.35-1.50	0.60-2.00	0.10-0.14	Low	0.8-2.0	0.17	0.32	2	5	56
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			
1226:												
Hunnton---------	0-3	20-27	1.10-1.25	0.60-2.00	0.09-0.12	Moderate	1.0-2.0	0.43	0.43	2	7	38
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Wieland----------	0-4	18-27	1.15-1.30	0.60-2.00	0.10-0.15	Low	1.0-2.0	0.32	0.43	5	6	48
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.32	0.32			
Clementine------	0-3	15-25	1.00-1.15	0.60-2.00	0.19-0.21	Moderate	3.0-5.0	0.49	0.49	5	5	56
	3-44	25-35	1.15-1.35	0.20-0.60	0.19-0.21	Moderate	1.0-4.0	0.43	0.43			
	44-60	25-33	1.25-1.45	0.20-0.60	0.19-0.21	Moderate	0.0-0.6	0.32	0.32			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1227:												
Hunnton---	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Chiara---	0-6	10-18	1.25-1.40	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.55	0.55	1	5	56
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-40	---	---	0.00-0.01	---		---	---	---			
Bilbo---	0-5	15-25	1.25-1.40	0.60-2.00	0.11-0.13	Moderate	1.0-3.0	0.24	0.43	3	6	48
	5-40	35-50	1.25-1.45	0.06-0.20	0.07-0.09	Moderate	0.0-1.0	0.05	0.37			
	40-60	5-15	1.40-1.60	6.00-20.00	0.03-0.06	Low	0.0-0.5	0.05	0.20			
1228:												
Hunnton---	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Hunnton---	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
1229:												
Hunnton---	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-44	---	---	0.00-0.01	---		---	---	---			
Chiara---	0-6	10-18	1.25-1.40	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.55	0.55	1	5	56
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-40	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Wieland---------	0-4	8-18	1.20-1.40	0.60-2.00	0.16-0.20	Low	1.0-2.0	0.55	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			
1230:												
Fulstone--------	0-5	18-25	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.20	0.32	1	6	48
	5-17	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.5-1.0	0.17	0.37			
	17-40	---	---	0.00-0.02	---		---	---	---			
Hunnton---------	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
1231:												
Fulstone--------	0-5	18-25	1.15-1.35	0.60-2.00	0.10-0.12	Moderate	1.0-2.0	0.15	0.64	1	7	38
	5-17	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.5-1.0	0.17	0.37			
	17-40	---	---	0.00-0.02	---		---	---	---			
Fulstone--------	0-5	18-25	1.15-1.35	0.60-2.00	0.10-0.12	Moderate	1.0-2.0	0.15	0.64	1	7	38
	5-17	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.5-1.0	0.17	0.37			
	17-40	---	---	0.00-0.02	---		---	---	---			
Hunnton---------	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
1232:												
Fulstone--------	0-5	18-25	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.20	0.32	1	6	48
	5-17	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.5-1.0	0.17	0.37			
	17-40	---	---	0.00-0.02	---		---	---	---			
Fulstone--------	0-5	10-20	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.28	0.43	1	7	38
	5-17	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.5-1.0	0.17	0.37			
	17-40	---	---	0.00-0.02	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Wieland---------	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			
1241:												
Enko------------	0-8	10-18	1.35-1.45	2.00-6.00	0.11-0.15	Low	1.0-2.0	0.43	0.49	5	3	86
	8-15	10-18	1.40-1.50	2.00-6.00	0.12-0.17	Low	0.5-1.0	0.43	0.49			
	15-38	10-18	1.65-1.70	0.06-0.20	0.10-0.13	Low	0.0-0.5	0.37	0.43			
	38-60	10-18	1.40-1.50	0.60-2.00	0.12-0.17	Low	0.0-0.5	0.43	0.49			
Shabliss---------	0-10	5-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.7-2.0	0.37	0.43	2	3	86
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			
Orovada----------	0-5	10-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.9-2.0	0.49	0.49	5	3	86
	5-29	5-18	1.40-1.55	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.43	0.49			
	29-60	5-18	1.40-1.60	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.43	0.49			
1242:												
Enko------------	0-8	10-18	1.35-1.45	2.00-6.00	0.11-0.15	Low	1.0-2.0	0.43	0.49	5	3	86
	8-15	10-18	1.40-1.50	2.00-6.00	0.12-0.17	Low	0.5-1.0	0.43	0.49			
	15-38	10-18	1.65-1.70	0.06-0.20	0.10-0.13	Low	0.0-0.5	0.37	0.43			
	38-60	10-18	1.40-1.50	0.60-2.00	0.12-0.17	Low	0.0-0.5	0.43	0.49			
Enko------------	0-8	10-18	1.35-1.45	2.00-6.00	0.11-0.15	Low	1.0-2.0	0.43	0.49	5	3	86
	8-15	10-18	1.40-1.50	2.00-6.00	0.12-0.17	Low	0.5-1.0	0.43	0.49			
	15-38	10-18	1.65-1.70	0.06-0.20	0.10-0.13	Low	0.0-0.5	0.37	0.43			
	38-60	10-18	1.40-1.50	0.60-2.00	0.12-0.17	Low	0.0-0.5	0.43	0.49			
1260:												
Kleckner---------	0-8	15-25	1.10-1.30	0.60-2.00	0.11-0.17	Moderate	2.0-3.0	0.20	0.37	5	7	38
	8-20	35-50	1.25-1.45	0.06-0.20	0.08-0.12	Moderate	1.0-2.0	0.05	0.43			
	20-42	35-50	1.25-1.45	0.06-0.20	0.08-0.14	Moderate	0.5-1.0	0.05	0.37			
	42-60	15-20	1.35-1.55	2.00-6.00	0.04-0.06	Low	0.0-0.5	0.05	0.32			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Upville---	0-10	15-22	1.30-1.35	0.60-2.00	0.13-0.15	Moderate	2.0-4.0	0.20	0.32	2	6	48
	10-19	15-27	1.40-1.45	0.60-2.00	0.06-0.14	Low	1.0-2.0	0.15	0.37			
	19-61	0-5	1.45-1.50	6.00-20.00	0.03-0.05	Low	0.5-1.0	0.02	0.20			
Fulstone---	0-5	18-25	1.15-1.35	0.60-2.00	0.10-0.12	Moderate	1.0-2.0	0.15	0.64	1	7	38
	5-17	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.5-1.0	0.17	0.37			
	17-40	---	---	0.00-0.02	---		---	---	---			
1261:												
Kleckner---	0-8	15-25	1.10-1.30	0.60-2.00	0.11-0.17	Moderate	2.0-3.0	0.20	0.37	5	7	38
	8-20	35-50	1.25-1.45	0.06-0.20	0.08-0.12	Moderate	1.0-2.0	0.05	0.43			
	20-42	35-50	1.25-1.45	0.06-0.20	0.08-0.14	Moderate	0.5-1.0	0.05	0.37			
	42-60	15-20	1.35-1.55	2.00-6.00	0.04-0.06	Low	0.0-0.5	0.05	0.32			
Heechee---	0-7	15-27	1.15-1.25	0.60-2.00	0.12-0.15	Low	2.0-4.0	0.20	0.37	5	6	48
	7-27	25-35	1.30-1.45	0.20-0.60	0.06-0.14	Low	1.0-2.0	0.10	0.49			
	27-61	10-25	1.40-1.60	6.00-20.00	0.02-0.06	Low	0.0-1.0	0.05	0.49			
1290:												
Tweba---	0-15	10-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	2.0-4.0	0.49	0.49	5	3	86
	15-27	10-15	1.30-1.50	0.60-2.00	0.10-0.15	Low	0.5-2.0	0.43	0.43			
	27-60	5-10	1.45-1.65	0.60-2.00	0.08-0.12	Low	0.0-1.0	0.37	0.37			
1350:												
Shabliss---	0-10	7-15	1.35-1.50	0.60-2.00	0.10-0.14	Low	0.8-2.0	0.17	0.32	2	5	56
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			
Hunnton---	0-3	20-27	1.10-1.25	0.60-2.00	0.09-0.12	Moderate	1.0-2.0	0.43	0.43	2	7	38
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Bioya	0-10	8-18	1.35-1.45	0.60-2.00	0.15-0.21	Low	1.0-2.0	0.55	0.55	2	5	56
	10-36	18-27	1.50-1.60	0.60-2.00	0.16-0.21	Moderate	0.5-1.0	0.37	0.37			
	36-60	---	---	0.00-0.01	---		---	---	---			
1351:												
Shabliss	0-10	5-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.7-2.0	0.37	0.43	2	3	86
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			
Bartome	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
1352:												
Shabliss	0-10	5-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.7-2.0	0.37	0.43	2	3	86
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			
Skull Creek	0-6	8-18	1.30-1.50	0.60-2.00	0.14-0.17	Low	0.8-2.0	0.37	0.43	2	3	86
	6-34	8-18	1.35-1.55	0.60-2.00	0.10-0.16	Low	0.0-0.5	0.28	0.43			
	34-38	---	---	0.00-0.01	---		---	---	---			
Puett	0-3	8-15	1.30-1.50	2.00-6.00	0.08-0.10	Low	0.5-1.0	0.20	0.32	2	5	56
	3-10	8-15	1.35-1.55	2.00-6.00	0.10-0.13	Low	0.0-1.0	0.28	0.32			
	10-20	---	---	0.00-0.01	---		---	---	---			
1360:												
Orovada	0-5	10-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.9-2.0	0.49	0.49	5	3	86
	5-29	5-18	1.40-1.55	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.43	0.43			
	29-60	5-18	1.40-1.60	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.43	0.49			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1362:												
Orovada	0-5	10-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.9-2.0	0.49	0.49	5	3	86
	5-29	5-18	1.40-1.55	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.43	0.49			
	29-60	5-18	1.40-1.60	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.43	0.49			
Clurde	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
Wieland	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			
1363:												
Orovada	0-5	10-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.9-2.0	0.49	0.49	5	3	86
	5-29	5-18	1.40-1.55	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.43	0.43			
	29-60	5-18	1.40-1.60	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.43	0.49			
Tweba	0-5	10-20	1.35-1.55	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.24	0.24	5	3	86
	5-35	10-15	1.30-1.50	0.60-2.00	0.10-0.15	Low	0.5-2.0	0.43	0.43			
	35-60	5-10	1.45-1.65	0.60-2.00	0.08-0.12	Low	0.0-0.5	0.37	0.37			
Weso	0-6	5-18	1.40-1.55	0.60-2.00	0.13-0.15	Low	0.0-0.5	0.49	0.49	4	3	86
	6-12	5-20	1.40-1.55	0.60-2.00	0.13-0.18	Low	0.0-0.5	0.49	0.55			
	12-25	4-15	1.55-1.70	0.60-2.00	0.13-0.17	Low	0.0-0.5	0.49	0.55			
	25-60	4-12	1.45-1.65	2.00-6.00	0.11-0.13	Low	0.0-0.5	0.28	0.43			
1530:												
Creemon	0-8	5-10	1.35-1.45	0.60-2.00	0.19-0.21	Low	0.0-0.5	0.55	0.55	5	5	56
	8-14	8-18	1.35-1.45	0.60-2.00	0.15-0.21	Low	0.0-0.5	0.55	0.55			
	14-47	8-18	1.35-1.45	0.60-2.00	0.17-0.20	Low	0.0-0.5	0.55	0.55			
	47-60	5-10	1.30-1.40	2.00-6.00	0.13-0.16	Low	0.0-0.5	0.28	0.37			
Placeritos	0-13	18-27	1.25-1.40	0.60-2.00	0.18-0.20	Moderate	1.0-2.0	0.37	0.37	5	4L	86
	13-60	18-27	1.25-1.45	0.60-2.00	0.18-0.20	Moderate	0.5-2.0	0.43	0.43			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1572:												
Weso	0-6	5-18	1.40-1.55	0.60-2.00	0.13-0.15	Low	0.0-0.5	0.49	0.49	4	3	86
	6-12	5-20	1.40-1.55	0.60-2.00	0.13-0.18	Low	0.0-0.5	0.49	0.55			
	12-25	4-15	1.55-1.70	0.60-2.00	0.13-0.17	Low	0.0-0.5	0.49	0.55			
	25-60	4-12	1.45-1.65	2.00-6.00	0.11-0.13	Low	0.0-0.5	0.28	0.43			
Orovada	0-5	10-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.9-2.0	0.49	0.49	5	3	86
	5-29	5-18	1.40-1.55	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.43	0.49			
	29-60	5-18	1.40-1.60	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.43	0.49			
Shabliss	0-10	5-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.7-2.0	0.37	0.43	2	3	86
	10-16	---	---	0.00-0.01	---		---	---	---			
	16-35	5-18	1.50-1.70	0.60-2.00	0.14-0.17	Low	0.0-0.5	0.37	0.43			
	35-60	5-15	1.55-1.75	6.00-20.00	0.03-0.07	Low	0.0-0.5	0.05	0.17			
1573:												
Weso	0-6	5-18	1.40-1.55	0.60-2.00	0.13-0.15	Low	0.0-0.5	0.49	0.49	4	3	86
	6-12	5-20	1.40-1.55	0.60-2.00	0.13-0.18	Low	0.0-0.5	0.49	0.55			
	12-25	4-15	1.55-1.70	0.60-2.00	0.13-0.17	Low	0.0-0.5	0.49	0.55			
	25-60	4-12	1.45-1.65	2.00-6.00	0.11-0.13	Low	0.0-0.5	0.28	0.43			
Orovada	0-5	10-15	1.35-1.50	0.60-2.00	0.18-0.20	Low	0.9-2.0	0.49	0.49	5	5	56
	5-29	5-18	1.40-1.55	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.43	0.49			
	29-60	5-18	1.40-1.60	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.43	0.49			
Tweba	0-5	10-20	1.35-1.55	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.24	0.24	5	3	86
	5-35	10-15	1.30-1.50	0.60-2.00	0.10-0.15	Low	0.5-2.0	0.43	0.43			
	35-60	5-10	1.45-1.65	0.60-2.00	0.08-0.12	Low	0.0-0.5	0.37	0.37			
1617:												
Cleavage	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Hapgood---------	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
Tweener---------	0-5	15-20	1.25-1.45	2.00-6.00	0.05-0.09	Low	1.0-2.0	0.05	0.24	1	5	56
	5-8	25-40	1.30-1.50	0.20-0.60	0.07-0.12	Low	1.0-2.0	0.10	0.49			
	8-18	---	---	0.00-0.01	---		---	---	---			
1618:												
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Pequop----------	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
1619:												
Cleavage--------	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Tusk--------	0-14	10-27	1.15-1.30	0.60-2.00	0.14-0.16	Low	2.0-4.0	0.32	0.37	4	5	56
	14-38	27-35	1.20-1.40	0.20-0.60	0.15-0.17	Moderate	1.0-3.0	0.32	0.55			
	38-60	20-35	1.30-1.50	0.60-2.00	0.05-0.06	Low	0.5-1.0	0.10	0.49			
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1621:												
Cleavage	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Graley	0-12	10-20	1.30-1.50	0.60-2.00	0.11-0.15	Low	1.0-2.0	0.28	0.49	1	6	48
	12-17	35-45	1.25-1.40	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Cleavage	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
1622:												
Cleavage	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Sumine	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Hapgood	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			
1623:												
Cleavage	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Hapgood	0-13	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-3.0	0.17	0.49	3	7	38
	13-41	18-27	1.15-1.35	0.60-2.00	0.08-0.10	Low	0.5-2.0	0.10	0.24			
	41-55	10-15	1.35-1.55	0.60-2.00	0.07-0.09	Low	0.0-0.5	0.10	0.32			
	55-59	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
1625:												
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
1626:												
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Carstump--------	0-14	12-20	1.25-1.45	0.60-2.00	0.14-0.17	Low	1.0-3.0	0.28	0.49	2	6	48
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.0-0.5	0.20	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Chen----------	0-7	15-25	1.10-1.25	0.60-2.00	0.07-0.08	Low	2.0-3.0	0.15	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.06	Moderate	0.5-2.0	0.10	0.24			
	15-19	---	---	0.00-0.01	---		---	---	---			
1628:												
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Chen	0-7	15-25	1.10-1.25	0.60-2.00	0.07-0.08	Low	2.0-3.0	0.15	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.06	Moderate	0.5-2.0	0.10	0.24			
	15-19	---	---	0.00-0.01	---		---	---	---			
Reluctan	0-9	15-22	1.15-1.35	0.60-2.00	0.11-0.14	Low	2.0-4.0	0.24	0.43	2	6	48
	9-27	25-35	1.35-1.55	0.20-0.60	0.12-0.15	Moderate	0.5-2.0	0.24	0.43			
	27-31	---	---	0.00-0.01	---		---	---	---			
1640:												
Tusk	0-14	10-27	1.15-1.30	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.24	0.43	4	6	48
	14-38	27-35	1.20-1.40	0.20-0.60	0.15-0.17	Moderate	1.0-3.0	0.32	0.55			
	38-60	20-35	1.30-1.50	0.60-2.00	0.05-0.06	Low	0.5-1.0	0.10	0.49			
Cleavage	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.43	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	1.0-2.0	0.10	0.55			
	18-28	---	---	0.00-0.01	---		---	---	---			
Hackwood	0-26	10-27	1.10-1.25	0.60-2.00	0.16-0.21	Moderate	2.0-4.0	0.37	0.43	5	6	48
	26-34	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	34-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
1650:												
Ninemile	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Tusk	0-14	10-27	1.15-1.30	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.24	0.43	4	6	48
	14-38	27-35	1.20-1.40	0.20-0.60	0.15-0.17	Moderate	1.0-3.0	0.32	0.55			
	38-60	20-35	1.30-1.50	0.60-2.00	0.05-0.06	Low	0.5-1.0	0.10	0.49			
Ninemile	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1651:												
Ninemile	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Reluctan	0-9	14-18	1.30-1.45	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.28	0.49	2	6	48
	9-27	25-35	1.40-1.60	0.20-0.60	0.12-0.17	Moderate	0.5-2.0	0.32	0.43			
	27-37	---	---	0.00-0.01	---		---	---	---			
Ninemile	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1652:												
Ninemile	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Graley	0-12	10-20	1.30-1.50	0.60-2.00	0.08-0.14	Low	1.0-2.0	0.17	0.43	1	8	---
	12-17	35-45	1.25-1.40	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Ninemile	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1653:												
Ninemile	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Reluctan	0-9	15-22	1.15-1.35	0.60-2.00	0.09-0.11	Low	2.0-4.0	0.15	0.55	2	7	38
	9-27	25-35	1.35-1.55	0.20-0.60	0.12-0.15	Moderate	0.5-2.0	0.24	0.43			
	27-31	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Graley----------	0-7	10-20	1.30-1.50	0.60-2.00	0.11-0.15	Low	1.0-2.0	0.28	0.49	1	6	48
	7-17	35-45	1.25-1.40	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
1655:												
Ninemile---------	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Thwoop----------	0-4	14-22	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-2.0	0.20	0.55	2	6	48
	4-10	20-27	1.15-1.35	0.60-2.00	0.17-0.19	Moderate	1.0-2.0	0.37	0.43			
	10-25	35-45	1.30-1.45	0.06-0.20	0.08-0.10	Moderate	0.5-1.0	0.05	0.37			
	25-27	---	---	0.00-0.01	---		---	---	---			
	27-37	---	---	0.00-0.01	---		---	---	---			
Pequop----------	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
1656:												
Ninemile---------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Pequop----------	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
Gumble----------	0-4	15-20	1.30-1.50	2.00-6.00	0.06-0.08	Low	1.0-2.0	0.10	0.32	2	5	56
	4-18	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.5-1.0	0.20	0.28			
	18-22	---	---	0.00-0.01	---		---	---	---			
1657:												
Ninemile---------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Alyan----------	0-9	18-27	1.10-1.25	0.60-2.00	0.13-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
1658:												
Ninemile--------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Vanwyper--------	0-10	18-25	1.10-1.25	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.17	0.43	2	7	38
	10-25	35-55	1.30-1.50	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.10	0.43			
	25-29	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1659:												
Ninemile--------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Carstump--------	0-14	12-20	1.25-1.45	0.60-2.00	0.14-0.17	Low	1.0-3.0	0.28	0.49	2	6	48
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.0-0.5	0.20	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
1660:												
Susie Creek-----	0-10	20-27	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	5	6	48
	10-30	35-55	1.25-1.45	0.06-0.20	0.15-0.19	High	0.0-0.8	0.28	0.32			
	30-60	18-30	1.30-1.50	0.20-0.60	0.14-0.16	Moderate	0.0-0.5	0.28	0.32			
Pie Creek-------	0-5	10-20	1.25-1.40	0.60-2.00	0.16-0.18	Low	2.0-3.0	0.37	0.43	2	5	56
	5-23	60-70	1.15-1.30	0.00-0.06	0.14-0.16	High	1.0-2.0	0.20	0.20			
	23-27	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Pattani---------	0-14	40-50	1.25-1.40	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.28	3	4	86
	14-37	35-50	1.35-1.50	0.00-0.06	0.15-0.20	High	0.0-1.0	0.28	0.32			
	37-41	---	---	0.00-0.01	---		---	---	---			
1671:												
Linkup----------	0-3	10-24	1.35-1.50	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.24	0.43	1	6	48
	3-5	27-45	1.30-1.45	0.20-0.60	0.09-0.17	Moderate	0.5-1.0	0.10	0.37			
	5-17	40-55	1.25-1.40	0.06-0.20	0.09-0.12	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Carstump--------	0-14	15-25	1.15-1.35	0.60-2.00	0.12-0.15	Low	1.0-3.0	0.10	0.43	2	7	38
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.0-0.5	0.20	0.37			
	36-60	---	---	0.00-0.01	---		---	---	---			
Linkup----------	0-3	10-20	1.35-1.50	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	3-5	27-45	1.30-1.45	0.20-0.60	0.09-0.17	Moderate	0.5-1.0	0.10	0.37			
	5-17	40-55	1.25-1.40	0.06-0.20	0.09-0.12	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
1672:												
Linkup----------	0-3	10-20	1.35-1.50	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	3-5	27-45	1.30-1.45	0.20-0.60	0.09-0.17	Moderate	0.5-1.0	0.10	0.37			
	5-17	40-55	1.25-1.40	0.06-0.20	0.09-0.12	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Carstump--------	0-14	12-20	1.25-1.45	0.60-2.00	0.14-0.17	Low	1.0-3.0	0.28	0.49	2	6	48
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.0-0.5	0.20	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Linkup----------	0-3	10-20	1.35-1.50	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	3-5	27-45	1.30-1.45	0.20-0.60	0.09-0.17	Moderate	0.5-1.0	0.10	0.37			
	5-17	40-55	1.25-1.40	0.06-0.20	0.09-0.12	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1673:												
Linkup----------	0-3	14-20	1.35-1.50	0.60-2.00	0.08-0.12	Low	1.0-2.0	0.15	0.49	1	7	38
	3-5	27-45	1.30-1.45	0.20-0.60	0.14-0.21	Moderate	0.5-1.0	0.17	0.28			
	5-17	40-55	1.25-1.40	0.06-0.20	0.11-0.16	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Quarz----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Alyan----------	0-9	18-27	1.10-1.25	0.60-2.00	0.10-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.12-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.09-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.06-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
1675:												
Linkup----------	0-3	27-33	1.25-1.40	0.20-0.60	0.15-0.17	Moderate	1.0-2.0	0.17	0.43	1	7	38
	3-5	27-45	1.30-1.45	0.20-0.60	0.14-0.21	Moderate	0.5-1.0	0.17	0.28			
	5-17	40-55	1.25-1.40	0.06-0.20	0.11-0.16	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Snowmore--------	0-4	15-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.32	0.37	2	3	86
	4-13	20-30	1.25-1.45	0.20-0.60	0.17-0.19	Moderate	0.5-2.0	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.24	0.32			
	22-28	---	---	0.00-0.01	---		---	---	---			
	28-32	---	---	0.00-0.01	---		---	---	---			
Ratsow----------	0-7	15-20	1.15-1.30	0.60-2.00	0.13-0.18	Moderate	1.0-2.0	0.28	0.43	2	5	56
	7-29	35-50	1.30-1.50	0.06-0.20	0.14-0.20	High	0.0-0.8	0.28	0.32			
	29-30	---	---	0.00-0.01	---		---	---	---			
	30-34	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1676:												
Linkup----------	0-3	10-24	1.35-1.50	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.24	0.43	1	6	48
	3-5	27-45	1.30-1.45	0.20-0.60	0.09-0.17	Moderate	0.5-1.0	0.10	0.37			
	5-17	40-55	1.25-1.40	0.06-0.20	0.09-0.12	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Quarz----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
1680:												
Carstump--------	0-14	15-25	1.15-1.35	0.60-2.00	0.12-0.15	Low	1.0-3.0	0.10	0.43	2	7	38
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.0-0.5	0.20	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Reluctan--------	0-9	14-18	1.30-1.45	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.28	0.49	2	6	48
	9-27	25-35	1.40-1.60	0.20-0.60	0.12-0.17	Moderate	0.5-2.0	0.32	0.43			
	27-37	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1685:												
Carstump--------	0-14	15-25	1.15-1.35	0.60-2.00	0.12-0.15	Low	1.0-3.0	0.10	0.43	2	7	38
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.0-0.5	0.20	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Graley----------	0-12	10-20	1.30-1.50	0.60-2.00	0.08-0.14	Low	1.0-2.0	0.17	0.43	1	8	---
	12-17	35-45	1.25-1.40	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1686:												
Carstump--------	0-14	12-20	1.25-1.45	0.60-2.00	0.14-0.17	Low	1.0-3.0	0.28	0.49	2	6	48
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.0-0.5	0.20	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Reluctan--------	0-9	14-18	1.30-1.45	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.28	0.49	2	6	48
	9-27	25-35	1.40-1.60	0.20-0.60	0.12-0.17	Moderate	0.5-2.0	0.32	0.43			
	27-37	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1687:												
Carstump--------	0-14	12-20	1.25-1.45	0.60-2.00	0.14-0.17	Low	1.0-3.0	0.20	0.32	2	6	48
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.5-1.0	0.10	0.43			
	36-40	---	---	0.00-0.01	---		---	---	---			
Linkup----------	0-3	10-24	1.35-1.50	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.24	0.43	1	6	48
	3-5	27-45	1.30-1.45	0.20-0.60	0.09-0.17	Moderate	0.5-1.0	0.10	0.37			
	5-17	40-55	1.25-1.40	0.06-0.20	0.09-0.12	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Carstump--------	0-14	12-20	1.25-1.45	0.60-2.00	0.14-0.17	Low	1.0-3.0	0.28	0.49	2	6	48
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.0-0.5	0.20	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
1691:												
Rock Outcrop.												
Pequop----------	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
Rubble Land-----	0-60	---	1.70-2.35	>20.00	0.00-0.10	Low	0.0-0.1	---	---	---	8	---

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1700:												
Cotant	0-3	27-40	1.10-1.30	0.20-0.60	0.13-0.16	Moderate	1.0-2.0	0.20	0.37	2	7	38
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Quarz	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Ninemile	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1702:												
Cotant	0-3	27-40	1.10-1.30	0.20-0.60	0.13-0.16	Moderate	1.0-2.0	0.20	0.37	2	7	38
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
McIvey	0-16	20-27	1.05-1.20	0.60-2.00	0.11-0.15	Low	2.0-5.0	0.17	0.32	5	7	38
	16-29	30-40	1.25-1.45	0.20-0.60	0.12-0.17	Moderate	1.0-2.0	0.10	0.43			
	29-65	40-50	1.25-1.40	0.00-0.06	0.07-0.10	Moderate	0.5-1.0	0.05	0.37			
Blitzen	0-10	27-35	1.10-1.25	0.60-2.00	0.10-0.14	Low	1.0-3.0	0.10	0.32	3	8	---
	10-33	35-60	1.20-1.40	0.06-0.20	0.06-0.08	Moderate	1.0-2.0	0.10	0.32			
	33-37	---	---	0.00-0.01	---		---	---	---			
1703:												
Cotant	0-3	27-40	1.10-1.30	0.20-0.60	0.13-0.16	Moderate	1.0-2.0	0.20	0.37	2	7	38
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Lerrow	0-9	20-25	1.05-1.20	0.60-2.00	0.14-0.16	Moderate	2.0-3.0	0.20	0.43	3	6	48
	9-14	30-40	1.20-1.40	0.20-0.60	0.16-0.19	Moderate	1.0-2.0	0.20	0.32			
	14-27	40-55	1.25-1.40	0.06-0.20	0.11-0.14	High	0.5-1.0	0.15	0.37			
	27-31	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Bullump---------	0-12	15-25	1.10-1.20	0.60-2.00	0.08-0.12	Low	2.0-6.0	0.15	0.43	3	7	38
	12-46	25-35	1.35-1.45	0.20-0.60	0.09-0.14	Low	0.5-3.0	0.10	0.32			
	46-50	---	---	0.00-0.01	---		---	---	---			
1711:												
Reluctan---------	0-9	14-18	1.30-1.45	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.28	0.49	2	6	48
	9-27	25-35	1.40-1.60	0.20-0.60	0.12-0.17	Moderate	0.5-2.0	0.32	0.43			
	27-37	---	---	0.00-0.01	---		---	---	---			
Ninemile---------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Cleavage---------	0-4	15-25	1.15-1.25	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.20	0.37	1	6	48
	4-18	20-35	1.40-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-28	---	---	0.00-0.01	---		---	---	---			
1712:												
Reluctan---------	0-9	14-18	1.30-1.45	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.28	0.49	2	6	48
	9-27	25-35	1.40-1.60	0.20-0.60	0.12-0.17	Moderate	0.5-2.0	0.32	0.43			
	27-37	---	---	0.00-0.01	---		---	---	---			
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Cleavage---------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
1713:												
Reluctan---------	0-9	15-22	1.15-1.35	0.60-2.00	0.11-0.14	Low	2.0-4.0	0.24	0.43	2	6	48
	9-27	25-35	1.35-1.55	0.20-0.60	0.12-0.15	Moderate	0.5-2.0	0.24	0.43			
	27-31	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Erakatak--------	0-4	15-27	1.05-1.20	0.60-2.00	0.11-0.14	Moderate	2.0-5.0	0.17	0.32	2	6	48
	4-19	35-50	1.10-1.30	0.20-0.60	0.08-0.11	Moderate	1.0-2.0	0.05	0.37			
	19-32	40-60	1.20-1.40	0.06-0.20	0.06-0.09	Moderate	0.5-2.0	0.05	0.37			
	32-35	---	---	0.00-0.06	---		---	---	---			
	35-45	---	---	0.00-0.01	---		---	---	---			
Rugar-----------	0-2	15-27	1.05-1.20	0.60-2.00	0.16-0.18	Moderate	2.0-5.0	0.32	0.37	4	5	56
	2-20	27-35	1.15-1.35	0.20-0.60	0.18-0.20	Moderate	1.0-2.0	0.28	0.32			
	20-43	40-55	1.20-1.40	0.06-0.20	0.12-0.15	High	0.0-0.8	0.20	0.32			
	43-47	---	---	0.00-0.01	---		---	---	---			
1720:												
Quarz-----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Alyan-----------	0-9	18-27	1.10-1.25	0.60-2.00	0.10-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.12-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.09-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.06-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1725:												
Quarz-----------	0-6	15-27	1.10-1.25	0.60-2.00	0.07-0.12	Low	2.0-3.0	0.10	0.32	2	3	86
	6-9	30-40	1.25-1.40	0.20-0.60	0.08-0.14	Low	1.0-2.0	0.10	0.24			
	9-21	35-55	1.20-1.40	0.06-0.20	0.06-0.10	Moderate	0.5-1.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Cleavage--------	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Loncan----------	0-17	18-27	1.10-1.25	0.60-2.00	0.06-0.10	Low	1.0-2.0	0.10	0.37	2	7	38
	17-30	18-27	1.20-1.40	0.60-2.00	0.05-0.10	Low	0.5-1.0	0.10	0.37			
	30-34	---	---	0.00-0.01	---		---	---	---			
1726:												
Quarz----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Pequop----------	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
1730:												
Graley----------	0-12	10-18	1.30-1.50	0.60-2.00	0.08-0.12	Low	2.0-4.0	0.17	0.55	1	7	38
	12-17	35-45	1.25-1.40	0.06-0.20	0.08-0.10	Moderate	1.0-2.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Erakatak--------	0-4	15-27	1.05-1.20	0.60-2.00	0.05-0.08	Low	2.0-5.0	0.10	0.32	2	7	38
	4-19	35-50	1.10-1.30	0.20-0.60	0.08-0.11	Moderate	1.0-2.0	0.05	0.37			
	19-32	40-60	1.20-1.40	0.06-0.20	0.06-0.09	Moderate	0.5-1.0	0.05	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Chen----------	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
1732:												
Graley----------	0-12	10-15	1.30-1.50	0.60-2.00	0.12-0.16	Low	1.0-2.0	0.17	0.43	1	7	38
	12-17	35-45	1.25-1.40	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Quarz----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1733:												
Graley----------	0-12	10-15	1.30-1.50	0.60-2.00	0.12-0.16	Low	1.0-2.0	0.17	0.43	1	7	38
	12-17	35-45	1.25-1.40	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Loncan----------	0-17	18-27	1.10-1.25	0.60-2.00	0.06-0.10	Low	1.0-2.0	0.10	0.37	2	7	38
	17-30	18-27	1.20-1.40	0.60-2.00	0.05-0.10	Low	0.5-1.0	0.10	0.37			
	30-34	---	---	0.00-0.01	---		---	---	---			
1740:												
Erakatak--------	0-4	15-27	1.05-1.20	0.60-2.00	0.05-0.08	Low	2.0-5.0	0.10	0.32	2	7	38
	4-19	35-50	1.10-1.30	0.20-0.60	0.08-0.11	Moderate	1.0-2.0	0.05	0.37			
	19-32	40-60	1.20-1.40	0.06-0.20	0.06-0.09	Moderate	0.5-1.0	0.05	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Cleavage--------	0-4	15-20	1.15-1.35	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.05	0.43	1	8	---
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Hackwood--------	0-26	10-27	1.10-1.25	0.60-2.00	0.16-0.21	Moderate	2.0-4.0	0.37	0.43	5	6	48
	26-34	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	34-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
1741:												
Erakatak--------	0-4	27-35	1.05-1.20	0.60-2.00	0.06-0.09	Low	2.0-5.0	0.10	0.32	2	8	---
	4-19	35-50	1.10-1.30	0.20-0.60	0.08-0.11	Moderate	1.0-2.0	0.05	0.37			
	19-32	40-60	1.20-1.40	0.06-0.20	0.06-0.09	Moderate	0.5-1.0	0.05	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Chen----------	0-7	20-25	1.10-1.25	0.60-2.00	0.07-0.10	Low	2.0-3.0	0.05	0.37	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Tusk----------	0-14	10-27	1.15-1.30	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.24	0.43	4	6	48
	14-38	27-35	1.20-1.40	0.20-0.60	0.15-0.17	Moderate	1.0-3.0	0.32	0.55			
	38-60	20-35	1.30-1.50	0.60-2.00	0.05-0.06	Low	0.5-1.0	0.10	0.49			
1742:												
Erakatak--------	0-4	15-27	1.05-1.20	0.60-2.00	0.11-0.14	Moderate	2.0-5.0	0.17	0.32	2	6	48
	4-19	35-50	1.10-1.30	0.20-0.60	0.08-0.11	Moderate	1.0-2.0	0.05	0.37			
	19-32	40-60	1.20-1.40	0.06-0.20	0.06-0.09	Moderate	0.5-2.0	0.05	0.37			
	32-35	---	---	0.00-0.06	---		---	---	---			
	35-45	---	---	0.00-0.01	---		---	---	---			
Rugar----------	0-2	27-35	1.05-1.20	0.20-0.60	0.18-0.20	Moderate	2.0-5.0	0.28	0.32	4	6	48
	2-20	27-35	1.15-1.35	0.20-0.60	0.18-0.20	Moderate	1.0-2.0	0.28	0.32			
	20-43	40-55	1.20-1.40	0.06-0.20	0.12-0.15	High	0.0-0.8	0.20	0.32			
	43-47	---	---	0.00-0.01	---		---	---	---			
Tusel----------	0-17	10-20	1.20-1.40	0.60-2.00	0.13-0.15	Low	2.0-5.0	0.15	0.43	3	7	38
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
1744:												
Erakatak--------	0-4	27-35	1.05-1.20	0.60-2.00	0.06-0.09	Low	2.0-5.0	0.10	0.32	2	8	---
	4-19	35-50	1.10-1.30	0.20-0.60	0.08-0.11	Moderate	1.0-2.0	0.05	0.37			
	19-32	40-60	1.20-1.40	0.06-0.20	0.06-0.09	Moderate	0.5-1.0	0.05	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Graley----------	0-12	10-18	1.30-1.50	0.60-2.00	0.08-0.12	Low	2.0-4.0	0.17	0.55	1	7	38
	12-17	35-45	1.25-1.40	0.06-0.20	0.08-0.10	Moderate	1.0-2.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Tusel----------	0-17	10-20	1.20-1.40	0.60-2.00	0.13-0.15	Low	2.0-5.0	0.15	0.43	3	7	38
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
1746:												
Booford---------	0-10	15-25	1.10-1.30	0.60-2.00	0.18-0.20	Moderate	2.0-4.0	0.43	0.43	3	6	48
	10-19	35-50	1.30-1.45	0.06-0.20	0.13-0.19	Moderate	1.0-3.0	0.24	0.43			
	19-36	40-60	1.25-1.45	0.06-0.20	0.13-0.19	High	0.5-2.0	0.17	0.37			
	36-46	---	---	0.00-0.01	---		---	---	---			
Cotant----------	0-3	27-40	1.10-1.30	0.20-0.60	0.13-0.16	Moderate	1.0-2.0	0.20	0.37	2	7	38
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Blitzen---------	0-10	27-35	1.10-1.25	0.60-2.00	0.14-0.16	Moderate	1.0-3.0	0.20	0.37	3	7	38
	10-33	35-60	1.20-1.40	0.06-0.20	0.06-0.08	Moderate	1.0-2.0	0.10	0.32			
	33-37	---	---	0.00-0.01	---		---	---	---			
1800:												
Bregar----------	0-6	15-25	1.15-1.25	0.60-2.00	0.07-0.10	Low	1.0-2.0	0.17	0.55	1	7	38
	6-11	25-35	1.40-1.45	0.20-0.60	0.07-0.10	Low	0.5-1.0	0.05	0.43			
	11-15	---	---	0.00-0.01	---		---	---	---			
Bregar----------	0-6	15-25	1.15-1.25	0.60-2.00	0.07-0.10	Low	1.0-2.0	0.17	0.55	1	7	38
	6-11	25-35	1.40-1.45	0.20-0.60	0.07-0.10	Low	0.5-1.0	0.05	0.43			
	11-15	---	---	0.00-0.01	---		---	---	---			
Carstump--------	0-14	12-20	1.25-1.45	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.17	0.43	2	7	38
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.5-1.0	0.10	0.43			
	36-40	---	---	0.00-0.01	---		---	---	---			
1802:												
Bregar----------	0-2	15-25	1.15-1.25	0.60-2.00	0.07-0.10	Low	1.0-2.0	0.17	0.55	1	7	38
	2-7	25-35	1.40-1.45	0.20-0.60	0.07-0.10	Low	0.5-1.0	0.05	0.43			
	7-11	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Ninemile	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Pequop	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
1803:												
Rock Outcrop.												
Bregar	0-2	8-15	1.15-1.25	6.00-20.00	0.05-0.07	Low	1.0-2.0	0.05	0.24	1	5	56
	2-7	25-35	1.40-1.45	0.20-0.60	0.07-0.10	Low	0.5-1.0	0.05	0.43			
	7-11	---	---	0.00-0.01	---		---	---	---			
Sumine	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
1805:												
Bregar	0-2	15-25	1.15-1.25	0.60-2.00	0.11-0.13	Low	1.0-3.0	0.02	0.43	1	8	---
	2-11	25-35	1.40-1.45	0.20-0.60	0.09-0.14	Low	0.5-1.0	0.10	0.55			
	11-15	---	---	0.00-0.01	---		---	---	---			
Deseed	0-4	15-25	1.15-1.30	0.60-2.00	0.13-0.15	Moderate	1.0-3.0	0.24	0.43	2	7	38
	4-26	35-45	1.35-1.50	0.06-0.20	0.10-0.13	High	0.5-2.0	0.17	0.32			
	26-30	---	---	0.00-0.01	---		---	---	---			
Linkup	0-3	10-20	1.35-1.50	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.15	0.55	1	7	38
	3-5	27-45	1.30-1.45	0.20-0.60	0.09-0.17	Moderate	0.5-1.0	0.10	0.37			
	5-17	40-55	1.25-1.40	0.06-0.20	0.09-0.12	High	0.0-0.5	0.10	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1810:												
Shively---------	0-9	10-18	1.30-1.45	0.60-2.00	0.14-0.17	Low	1.0-3.0	0.37	0.43	4	5	56
	9-21	10-18	1.30-1.45	0.60-2.00	0.11-0.17	Low	1.0-2.0	0.32	0.37			
	21-41	10-22	1.40-1.55	0.60-2.00	0.09-0.15	Low	0.5-1.0	0.32	0.37			
	41-60	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	8	---
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-3.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Hackwood--------	0-26	10-27	1.10-1.25	0.60-2.00	0.16-0.21	Moderate	2.0-4.0	0.37	0.43	5	6	48
	26-34	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	34-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
1830:												
Vanwyper--------	0-10	18-25	1.10-1.25	0.60-2.00	0.11-0.15	Moderate	1.0-2.0	0.20	0.43	2	6	48
	10-25	35-55	1.30-1.50	0.06-0.20	0.06-0.10	Moderate	0.5-1.0	0.10	0.37			
	25-29	---	---	0.00-0.01	---		---	---	---			
Alyan-----------	0-9	18-27	1.10-1.25	0.60-2.00	0.13-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Vanwyper--------	0-10	18-25	1.10-1.25	0.60-2.00	0.11-0.15	Moderate	1.0-2.0	0.20	0.43	2	6	48
	10-25	35-55	1.30-1.50	0.06-0.20	0.06-0.10	Moderate	0.5-1.0	0.10	0.37			
	25-29	---	---	0.00-0.01	---		---	---	---			
1831:												
Vanwyper--------	0-10	18-25	1.10-1.25	0.60-2.00	0.12-0.14	Moderate	1.0-2.0	0.20	0.32	2	6	48
	10-25	35-55	1.30-1.50	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.10	0.43			
	25-29	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Trunk	0-5	10-20	1.35-1.50	0.60-2.00	0.12-0.15	Low	1.0-2.0	0.24	0.43	2	6	48
	5-23	35-50	1.30-1.45	0.00-0.06	0.10-0.13	High	0.0-0.5	0.20	0.37			
	23-27	---	---	0.00-0.01	---		---	---	---			
Vanwyper	0-10	18-25	1.10-1.25	0.60-2.00	0.12-0.14	Moderate	1.0-2.0	0.20	0.32	2	6	48
	10-25	35-55	1.30-1.50	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.10	0.43			
	25-29	---	---	0.00-0.01	---		---	---	---			
1832:												
Vanwyper	0-10	18-25	1.10-1.25	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.17	0.43	2	7	38
	10-25	35-55	1.30-1.50	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.10	0.43			
	25-29	---	---	0.00-0.01	---		---	---	---			
Trunk	0-5	27-35	1.25-1.40	0.20-0.60	0.15-0.18	Moderate	1.0-2.0	0.20	0.37	2	7	38
	5-23	35-50	1.30-1.45	0.00-0.06	0.10-0.13	High	0.0-0.5	0.20	0.37			
	23-27	---	---	0.00-0.01	---		---	---	---			
Trunk	0-5	27-35	1.25-1.40	0.20-0.60	0.15-0.18	Moderate	1.0-2.0	0.20	0.37	2	7	38
	5-23	35-50	1.30-1.45	0.00-0.06	0.10-0.13	High	0.0-0.5	0.20	0.37			
	23-27	---	---	0.00-0.01	---		---	---	---			
1833:												
Rock Outcrop.												
Vanwyper	0-10	18-25	1.10-1.25	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.17	0.43	2	7	38
	10-25	35-55	1.30-1.50	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.10	0.43			
	25-29	---	---	0.00-0.01	---		---	---	---			
Trunk	0-5	10-20	1.35-1.50	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.24	0.43	2	6	48
	5-23	35-50	1.30-1.45	0.00-0.06	0.10-0.13	High	0.0-0.5	0.20	0.37			
	23-27	---	---	0.00-0.01	---		---	---	---			
1852:												
Gumble	0-4	15-20	1.30-1.50	2.00-6.00	0.13-0.15	Low	1.0-2.0	0.24	0.32	2	3	86
	4-18	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.5-1.0	0.20	0.37			
	18-22	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Tuffo----------	0-6	5-15	1.40-1.55	2.00-6.00	0.12-0.15	Low	1.0-3.0	0.24	0.32	1	3	86
	6-13	5-15	1.35-1.55	2.00-6.00	0.13-0.16	Low	0.5-1.0	0.24	0.37			
	13-17	---	---	0.00-0.01	---		---	---	---			
Hunnton---------	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
1853: Rock Outcrop.												
Gumble----------	0-4	15-20	1.30-1.50	2.00-6.00	0.06-0.08	Low	1.0-2.0	0.10	0.32	2	5	56
	4-18	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.5-1.0	0.20	0.28			
	18-28	---	---	0.00-0.01	---		---	---	---			
Tuffo----------	0-6	5-15	1.40-1.55	2.00-6.00	0.07-0.09	Low	1.0-3.0	0.17	0.28	1	4	86
	6-13	5-15	1.35-1.55	2.00-6.00	0.13-0.16	Low	0.5-1.0	0.24	0.37			
	13-17	---	---	0.00-0.01	---		---	---	---			
1854:												
Gumble----------	0-4	15-20	1.30-1.50	2.00-6.00	0.06-0.08	Low	1.0-2.0	0.10	0.32	2	5	56
	4-18	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.5-1.0	0.20	0.28			
	18-28	---	---	0.00-0.01	---		---	---	---			
Chen----------	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
1855:												
Gumble----------	0-4	15-20	1.30-1.50	2.00-6.00	0.07-0.10	Low	1.0-2.0	0.15	0.37	2	4	86
	4-18	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.5-1.0	0.20	0.28			
	18-28	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Puett Variant---	0-2	10-15	1.30-1.50	0.60-2.00	0.11-0.15	Low	0.5-1.0	0.24	0.43	1	5	56
	2-17	10-15	1.35-1.55	0.60-2.00	0.11-0.15	Low	0.0-0.5	0.28	0.55			
	17-27	---	---	0.00-0.01	---		---	---	---			
Xeric Torriorthents--	0-3	8-15	1.40-1.60	2.00-20.00	0.09-0.12	Low	1.0-2.0	0.37	0.43	1	3	86
	3-7	---	---	0.00-0.01	---		---	---	---			
1870:												
Chen----------	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Graley----------	0-12	10-18	1.30-1.50	0.60-2.00	0.08-0.12	Low	2.0-4.0	0.17	0.55	1	7	38
	12-17	35-45	1.25-1.40	0.06-0.20	0.08-0.10	Moderate	1.0-2.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Quarz----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
1871:												
Chen----------	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Cotant----------	0-3	20-27	1.10-1.30	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	2	8	---
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Graley----------	0-12	10-18	1.30-1.50	0.60-2.00	0.08-0.12	Low	2.0-4.0	0.17	0.55	1	7	38
	12-17	35-45	1.25-1.40	0.06-0.20	0.08-0.10	Moderate	1.0-2.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1872:												
Chen	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Sumine	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
Tusel	0-17	10-20	1.20-1.40	0.60-2.00	0.13-0.15	Low	2.0-5.0	0.15	0.43	3	7	38
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
1874:												
Chen	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Quarz	0-6	27-35	1.10-1.25	0.60-2.00	0.14-0.17	Low	2.0-3.0	0.15	0.43	2	7	38
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Arcia	0-15	18-27	1.05-1.20	0.60-2.00	0.18-0.21	Moderate	3.0-5.0	0.24	0.24	2	6	48
	15-21	30-40	1.15-1.30	0.20-0.60	0.18-0.21	High	2.0-3.0	0.24	0.32			
	21-39	40-60	1.20-1.40	0.06-0.20	0.09-0.14	High	1.0-2.0	0.15	0.24			
	39-43	---	---	0.00-0.01	---		---	---	---			
1875:												
Chen	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Bregar	0-6	15-25	1.15-1.25	0.60-2.00	0.05-0.08	Low	1.0-2.0	0.10	0.55	1	8	---
	6-11	25-35	1.40-1.45	0.20-0.60	0.07-0.10	Low	0.5-1.0	0.05	0.43			
	11-15	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Ramires---	0-5	27-35	1.20-1.40	0.20-0.60	0.16-0.20	Moderate	2.0-3.0	0.24	0.32	2	6	48
	5-40	35-50	1.25-1.45	0.06-0.20	0.09-0.16	High	1.0-2.0	0.28	0.43			
	40-44	---	---	0.00-0.01	---		---	---	---			
1876:												
Chen---	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Chen---	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Arcia---	0-15	18-27	1.05-1.20	0.60-2.00	0.18-0.21	Moderate	3.0-5.0	0.24	0.24	2	6	48
	15-21	30-40	1.15-1.30	0.20-0.60	0.18-0.21	High	2.0-3.0	0.24	0.32			
	21-39	40-60	1.20-1.40	0.06-0.20	0.09-0.14	High	1.0-2.0	0.15	0.24			
	39-43	---	---	0.00-0.01	---		---	---	---			
1877:												
Chen---	0-7	15-25	1.10-1.25	0.60-2.00	0.07-0.08	Low	2.0-3.0	0.15	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.06	Moderate	0.5-2.0	0.10	0.24			
	15-19	---	---	0.00-0.01	---		---	---	---			
Bregar---	0-2	8-15	1.15-1.25	6.00-20.00	0.05-0.07	Low	1.0-2.0	0.05	0.24	1	5	56
	2-7	25-35	1.40-1.45	0.20-0.60	0.07-0.10	Low	0.5-1.0	0.05	0.43			
	7-11	---	---	0.00-0.01	---		---	---	---			
Loncan---	0-17	18-27	1.10-1.25	0.60-2.00	0.06-0.10	Low	1.0-2.0	0.10	0.37	2	7	38
	17-30	18-27	1.20-1.40	0.60-2.00	0.05-0.10	Low	0.5-1.0	0.10	0.37			
	30-34	---	---	0.00-0.01	---		---	---	---			
1880:												
Chen---	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Blitzen---------	0-9	20-27	1.10-1.25	0.60-2.00	0.08-0.11	Low	1.0-3.0	0.15	0.49	3	8	---
	9-33	35-60	1.20-1.40	0.06-0.20	0.06-0.08	Moderate	1.0-2.0	0.10	0.32			
	33-43	---	---	0.00-0.01	---		---	---	---			
Pequop----------	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
1881:												
Chen------------	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Blitzen---------	0-10	27-35	1.10-1.25	0.60-2.00	0.14-0.16	Moderate	1.0-3.0	0.20	0.37	3	7	38
	10-33	35-60	1.20-1.40	0.06-0.20	0.06-0.08	Moderate	1.0-2.0	0.10	0.32			
	33-37	---	---	0.00-0.01	---		---	---	---			
Loncan----------	0-17	18-27	1.10-1.25	0.60-2.00	0.06-0.10	Low	1.0-2.0	0.10	0.37	2	7	38
	17-30	18-27	1.20-1.40	0.60-2.00	0.05-0.10	Low	0.5-1.0	0.10	0.37			
	30-34	---	---	0.00-0.01	---		---	---	---			
1888:												
Chen------------	0-7	15-25	1.10-1.25	0.60-2.00	0.13-0.15	Low	2.0-3.0	0.17	0.37	1	6	48
	7-15	40-55	1.25-1.40	0.00-0.06	0.07-0.09	Moderate	0.5-1.0	0.10	0.43			
	15-19	---	---	0.00-0.01	---		---	---	---			
Pie Creek--------	0-5	10-20	1.25-1.40	0.60-2.00	0.07-0.10	Low	2.0-3.0	0.15	0.49	2	7	38
	5-16	60-70	1.15-1.30	0.00-0.06	0.14-0.16	High	1.0-2.0	0.20	0.20			
	16-23	35-45	1.30-1.45	0.06-0.20	0.16-0.19	High	0.5-1.0	0.28	0.28			
	23-27	---	---	0.00-0.01	---		---	---	---			
Alyan------------	0-9	18-27	1.10-1.25	0.60-2.00	0.13-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1889:												
Chen----------	0-7	20-27	1.10-1.25	0.60-2.00	0.08-0.12	Low	2.0-3.0	0.10	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.09	Moderate	0.5-2.0	0.10	0.49			
	15-19	---	---	0.00-0.01	---		---	---	---			
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			
1910:												
Mahala----------	0-5	20-25	1.20-1.40	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.49	0.49	3	6	48
	5-14	45-60	1.20-1.35	0.00-0.06	0.14-0.16	High	0.5-1.0	0.20	0.37			
	14-26	35-60	1.20-1.40	0.00-0.06	0.14-0.18	High	0.0-0.5	0.24	0.28			
	26-30	---	---	0.00-0.01	---		---	---	---			
Ramires---------	0-5	27-35	1.20-1.40	0.20-0.60	0.16-0.20	Moderate	2.0-3.0	0.24	0.32	2	6	48
	5-40	35-50	1.25-1.45	0.06-0.20	0.09-0.16	High	1.0-2.0	0.28	0.43			
	40-44	---	---	0.00-0.01	---		---	---	---			
1920:												
Lerrow----------	0-9	20-25	1.05-1.20	0.60-2.00	0.14-0.16	Moderate	2.0-3.0	0.20	0.43	3	6	48
	9-14	30-40	1.20-1.40	0.20-0.60	0.16-0.19	Moderate	1.0-2.0	0.20	0.32			
	14-27	40-55	1.25-1.40	0.06-0.20	0.11-0.14	High	0.5-1.0	0.15	0.37			
	27-31	---	---	0.00-0.01	---		---	---	---			
Chen----------	0-7	15-25	1.10-1.25	0.60-2.00	0.07-0.08	Low	2.0-3.0	0.15	0.32	1	8	---
	7-15	40-55	1.25-1.40	0.00-0.06	0.05-0.06	Moderate	0.5-2.0	0.10	0.24			
	15-19	---	---	0.00-0.01	---		---	---	---			
Cotant----------	0-3	18-27	1.10-1.30	0.60-2.00	0.11-0.14	Moderate	1.0-2.0	0.24	0.49	2	6	48
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.0-0.5	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
1921:												
Lerrow----------	0-9	20-25	1.05-1.20	0.60-2.00	0.12-0.15	Moderate	2.0-3.0	0.20	0.37	3	6	48
	9-14	30-40	1.20-1.40	0.20-0.60	0.16-0.19	Moderate	1.0-2.0	0.20	0.32			
	14-27	40-55	1.25-1.40	0.06-0.20	0.11-0.14	High	0.5-1.0	0.15	0.37			
	27-31	---	---	0.00-0.01	---		---	---	---			
Quarz----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Rugar----------	0-2	15-27	1.05-1.20	0.60-2.00	0.16-0.18	Moderate	2.0-5.0	0.32	0.37	4	5	56
	2-20	27-35	1.15-1.35	0.20-0.60	0.18-0.20	Moderate	1.0-2.0	0.28	0.32			
	20-43	40-55	1.20-1.40	0.06-0.20	0.12-0.15	High	0.0-0.8	0.20	0.32			
	43-47	---	---	0.00-0.01	---		---	---	---			
1931:												
Tweener---------	0-5	15-20	1.25-1.45	2.00-6.00	0.05-0.09	Low	1.0-2.0	0.05	0.24	1	5	56
	5-8	25-40	1.30-1.50	0.20-0.60	0.07-0.12	Low	1.0-2.0	0.10	0.49			
	8-18	---	---	0.00-0.01	---		---	---	---			
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
Reluctan--------	0-9	14-18	1.30-1.45	0.60-2.00	0.12-0.14	Low	2.0-4.0	0.28	0.49	2	6	48
	9-27	25-35	1.40-1.60	0.20-0.60	0.12-0.17	Moderate	0.5-2.0	0.32	0.43			
	27-37	---	---	0.00-0.01	---		---	---	---			
1932:												
Tweener---------	0-5	15-20	1.25-1.45	2.00-6.00	0.05-0.09	Low	1.0-2.0	0.05	0.32	1	5	56
	5-8	25-40	1.30-1.50	0.20-0.60	0.07-0.12	Low	1.0-2.0	0.10	0.49			
	8-12	---	---	0.00-0.01	---		---	---	---			
Sumine----------	0-10	10-20	1.20-1.40	0.60-2.00	0.09-0.12	Low	2.0-4.0	0.17	0.43	2	7	38
	10-29	25-35	1.40-1.60	0.60-2.00	0.08-0.12	Low	0.5-2.0	0.15	0.55			
	29-33	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
1933:												
Tweener---------	0-5	15-20	1.25-1.45	2.00-6.00	0.05-0.09	Low	1.0-2.0	0.05	0.24	1	5	56
	5-8	25-40	1.30-1.50	0.20-0.60	0.07-0.12	Low	1.0-2.0	0.10	0.49			
	8-18	---	---	0.00-0.01	---		---	---	---			
Pequop----------	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
1950:												
McIvey----------	0-16	20-27	1.05-1.20	0.60-2.00	0.12-0.15	Moderate	2.0-5.0	0.20	0.55	5	7	38
	16-29	30-40	1.25-1.45	0.20-0.60	0.12-0.17	Moderate	0.5-1.0	0.10	0.43			
	29-65	40-50	1.25-1.40	0.00-0.06	0.07-0.10	Moderate	0.5-1.0	0.05	0.37			
McIvey----------	0-16	20-27	1.05-1.20	0.60-2.00	0.08-0.17	Low	2.0-5.0	0.17	0.64	5	8	---
	16-29	30-40	1.25-1.45	0.20-0.60	0.12-0.17	Moderate	1.0-2.0	0.10	0.43			
	29-65	40-50	1.25-1.40	0.00-0.06	0.07-0.10	Moderate	0.5-1.0	0.05	0.37			
Tusel-----------	0-17	10-20	1.20-1.40	0.60-2.00	0.13-0.15	Low	2.0-5.0	0.15	0.43	3	7	38
	17-58	25-35	1.25-1.45	0.20-0.60	0.08-0.11	Moderate	0.5-2.0	0.20	0.43			
	58-62	---	---	0.00-0.01	---		---	---	---			
1980:												
Thwoop----------	0-4	14-22	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-2.0	0.20	0.55	2	6	48
	4-10	20-27	1.15-1.35	0.60-2.00	0.17-0.19	Moderate	1.0-2.0	0.37	0.43			
	10-25	35-45	1.30-1.45	0.06-0.20	0.08-0.10	Moderate	0.5-1.0	0.05	0.37			
	25-27	---	---	0.00-0.01	---		---	---	---			
	27-37	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Trunk	0-5	10-20	1.35-1.50	0.60-2.00	0.12-0.15	Low	1.0-2.0	0.24	0.43	2	6	48
	5-23	35-50	1.30-1.45	0.00-0.06	0.10-0.13	High	0.0-0.5	0.20	0.37			
	23-27	---	---	0.00-0.01	---		---	---	---			
Pequop	0-12	12-23	1.25-1.45	0.60-2.00	0.10-0.15	Low	2.0-5.0	0.20	0.37	3	6	48
	12-50	20-35	1.40-1.60	0.60-2.00	0.07-0.08	Low	1.0-3.0	0.05	0.37			
	50-60	15-25	1.35-1.55	0.60-2.00	0.06-0.07	Low	0.5-1.0	0.05	0.43			
2000:												
Alyan	0-9	18-27	1.10-1.25	0.60-2.00	0.10-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.12-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.09-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.06-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Cotant	0-3	18-27	1.10-1.30	0.60-2.00	0.11-0.14	Moderate	1.0-2.0	0.24	0.49	2	6	48
	3-20	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.0-0.5	0.24	0.28			
	20-24	---	---	0.00-0.01	---		---	---	---			
Akler	0-4	18-25	1.20-1.40	0.60-2.00	0.14-0.16	Moderate	1.0-2.0	0.43	0.43	2	5	56
	4-18	50-60	1.20-1.35	0.06-0.20	0.07-0.11	High	0.5-1.0	0.28	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
2001:												
Alyan	0-9	18-27	1.10-1.25	0.60-2.00	0.13-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Bregar	0-6	15-25	1.15-1.25	0.60-2.00	0.07-0.10	Low	1.0-2.0	0.17	0.55	1	7	38
	6-11	25-35	1.40-1.45	0.20-0.60	0.07-0.10	Low	0.5-1.0	0.05	0.43			
	11-15	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Alyan----------	0-9	18-27	1.10-1.25	0.60-2.00	0.13-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
2002:												
Alyan----------	0-9	27-35	1.10-1.25	0.60-2.00	0.15-0.17	Moderate	2.0-3.0	0.17	0.32	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Alyan----------	0-9	27-35	1.10-1.25	0.60-2.00	0.15-0.17	Moderate	2.0-3.0	0.17	0.32	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Quarz----------	0-6	20-27	1.10-1.25	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.15	0.49	2	8	---
	6-21	35-55	1.20-1.40	0.06-0.20	0.08-0.10	Moderate	0.5-2.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
2003:												
Alyan----------	0-9	18-27	1.10-1.25	0.60-2.00	0.07-0.10	Low	2.0-3.0	0.10	0.32	2	8	---
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-42	---	---	0.00-0.01	---		---	---	---			
Deepeek----------	0-5	15-20	1.35-1.50	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.17	0.43	1	7	38
	5-18	25-35	1.40-1.60	0.20-0.60	0.10-0.13	Low	0.5-1.0	0.17	0.64			
	18-24	---	---	0.00-0.01	---		---	---	---			
	24-42	10-20	1.50-1.65	0.20-0.60	0.14-0.16	Low	0.0-0.5	0.24	0.43			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Susie Creek-----	0-10	10-20	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-3.0	0.37	0.49	5	3	86
	10-30	35-55	1.25-1.45	0.06-0.20	0.15-0.19	High	0.0-0.8	0.28	0.32			
	30-60	18-30	1.30-1.50	0.20-0.60	0.14-0.16	Moderate	0.0-0.5	0.28	0.32			
2004:												
Alyan-----------	0-9	18-27	1.10-1.25	0.60-2.00	0.10-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.12-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.09-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.06-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-4	20-27	1.35-1.50	0.60-2.00	0.13-0.15	Moderate	1.0-2.0	0.28	0.49	1	7	38
	4-19	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	1.0-2.0	0.28	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Alyan-----------	0-9	18-27	1.10-1.25	0.60-2.00	0.13-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
2005:												
Rock Outcrop.												
Alyan-----------	0-9	18-27	1.10-1.25	0.60-2.00	0.13-0.15	Moderate	2.0-3.0	0.20	0.37	2	7	38
	9-16	40-55	1.15-1.35	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.32			
	16-28	40-55	1.15-1.35	0.06-0.20	0.12-0.14	High	0.5-1.0	0.15	0.28			
	28-32	40-55	1.15-1.35	0.06-0.20	0.08-0.10	Moderate	0.0-0.5	0.10	0.37			
	32-36	---	---	0.00-0.01	---		---	---	---			
Graley----------	0-12	10-15	1.30-1.50	0.60-2.00	0.12-0.16	Low	1.0-2.0	0.17	0.43	1	7	38
	12-17	35-45	1.25-1.40	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.15	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
2171:												
Deseed----------	0-4	15-25	1.15-1.30	0.60-2.00	0.13-0.15	Moderate	1.0-3.0	0.24	0.43	2	7	38
	4-26	35-45	1.35-1.50	0.06-0.20	0.10-0.13	High	0.5-2.0	0.17	0.32			
	26-30	---	---	0.00-0.01	---		---	---	---			
Reluctan--------	0-9	15-22	1.15-1.35	0.60-2.00	0.11-0.14	Low	2.0-4.0	0.24	0.43	2	6	48
	9-27	25-35	1.35-1.55	0.20-0.60	0.12-0.15	Moderate	0.5-2.0	0.24	0.43			
	27-31	---	---	0.00-0.01	---		---	---	---			
Cleavage--------	0-4	15-25	1.15-1.35	0.60-2.00	0.12-0.14	Low	1.0-3.0	0.10	0.32	1	7	38
	4-18	20-35	1.25-1.45	0.20-0.60	0.10-0.12	Low	0.5-1.0	0.10	0.49			
	18-22	---	---	0.00-0.01	---		---	---	---			
2173:												
Deseed----------	0-4	15-25	1.15-1.30	0.60-2.00	0.13-0.15	Moderate	1.0-3.0	0.24	0.43	2	7	38
	4-26	35-45	1.35-1.50	0.06-0.20	0.10-0.13	High	0.5-2.0	0.17	0.32			
	26-30	---	---	0.00-0.01	---		---	---	---			
Quarz-----------	0-6	15-27	1.10-1.25	0.60-2.00	0.07-0.12	Low	2.0-3.0	0.10	0.32	2	3	86
	6-15	30-40	1.25-1.40	0.20-0.60	0.08-0.14	Low	1.0-2.0	0.10	0.24			
	15-21	35-55	1.20-1.40	0.06-0.20	0.06-0.10	Moderate	0.5-1.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
2205:												
Coltroop--------	0-5	15-20	1.30-1.45	2.00-6.00	0.13-0.15	Low	1.0-2.0	0.37	0.43	1	3	86
	5-17	20-30	1.35-1.55	0.20-0.60	0.15-0.17	Moderate	0.5-1.0	0.43	0.49			
	17-32	---	---	0.00-0.01	---		---	---	---			
	32-42	---	---	0.00-0.01	---		---	---	---			
Snowmore--------	0-4	15-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.32	0.37	2	3	86
	4-13	20-30	1.25-1.45	0.20-0.60	0.17-0.19	Moderate	0.5-2.0	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.24	0.32			
	22-29	---	---	0.00-0.01	---		---	---	---			
	29-39	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
2206:												
Coltroop--------	0-5	12-18	1.30-1.45	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.24	0.37	1	4	86
	5-17	20-30	1.35-1.55	0.20-0.60	0.15-0.17	Moderate	0.5-1.0	0.43	0.49			
	17-32	---	---	0.00-0.01	---		---	---	---			
	32-42	---	---	0.00-0.01	---		---	---	---			
Vanwyper--------	0-10	18-25	1.15-1.30	0.60-2.00	0.10-0.13	Moderate	1.0-2.0	0.20	0.37	2	6	48
	10-25	35-55	1.25-1.45	0.06-0.20	0.06-0.10	Moderate	0.0-0.5	0.10	0.43			
	25-29	---	---	0.00-0.01	---		---	---	---			
2310:												
Bulake----------	0-7	18-25	1.30-1.50	0.60-2.00	0.12-0.14	Moderate	1.0-2.0	0.24	0.43	1	6	48
	7-19	40-50	1.20-1.40	0.06-0.20	0.11-0.15	High	0.5-1.0	0.20	0.32			
	19-23	---	---	0.00-0.01	---		---	---	---			
Deunah----------	0-9	15-27	1.20-1.40	0.60-2.00	0.15-0.20	Moderate	1.0-2.0	0.43	0.49	2	6	48
	9-26	60-70	1.25-1.45	0.00-0.06	0.12-0.15	High	0.5-1.0	0.20	0.20			
	26-33	---	---	---	---		---	---	---			
Bulake----------	0-7	15-20	1.35-1.50	0.60-2.00	0.11-0.13	Low	1.0-2.0	0.15	0.43	1	5	56
	7-19	40-50	1.20-1.40	0.06-0.20	0.11-0.15	High	0.5-1.0	0.20	0.32			
	19-23	---	---	0.00-0.01	---		---	---	---			
2311:												
Bulake----------	0-7	15-20	1.35-1.50	0.60-2.00	0.11-0.13	Low	1.0-2.0	0.15	0.43	1	5	56
	7-19	40-50	1.20-1.40	0.06-0.20	0.11-0.15	High	0.5-1.0	0.20	0.32			
	19-23	---	---	0.00-0.01	---		---	---	---			
Hatpeak---------	0-10	15-25	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	2	5	56
	10-30	35-50	1.25-1.45	0.06-0.20	0.14-0.18	High	0.5-1.0	0.24	0.28			
	30-60	---	---	0.00-0.01	---		---	---	---			
Petan-----------	0-6	18-27	1.40-1.50	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.10	0.49	1	8	---
	6-19	40-60	1.25-1.40	0.00-0.06	0.08-0.10	Moderate	1.0-2.0	0.10	0.32			
	19-20	---	---	0.00-0.01	---		---	---	---			
	20-30	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
2505:												
Buffaran--------	0-5	10-18	1.20-1.35	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.32	0.37	1	3	86
	5-18	35-50	1.15-1.30	0.06-0.20	0.14-0.19	High	0.5-1.0	0.28	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	---	---	0.00-0.01	---		---	---	---			
Zevadez---------	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
2511:												
Bilbo-----------	0-5	5-10	1.30-1.45	2.00-6.00	0.05-0.07	Low	1.0-3.0	0.05	0.37	3	8	---
	5-40	35-50	1.25-1.45	0.06-0.20	0.07-0.09	Moderate	0.0-1.0	0.05	0.37			
	40-60	5-15	1.40-1.60	6.00-20.00	0.03-0.06	Low	0.0-0.5	0.05	0.20			
Alley-----------	0-7	7-15	1.35-1.45	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	5	6	48
	7-20	20-30	1.40-1.50	0.20-0.60	0.14-0.18	Moderate	0.5-1.0	0.15	0.43			
	20-40	5-10	1.45-1.55	0.20-0.60	0.11-0.13	Low	0.0-0.5	0.15	0.37			
	40-60	5-10	1.45-1.55	2.00-6.00	0.06-0.08	Low	0.0-0.5	0.05	0.32			
Deepeek---------	0-5	15-20	1.35-1.50	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.17	0.43	1	7	38
	5-18	25-35	1.40-1.60	0.20-0.60	0.10-0.13	Low	0.5-1.0	0.17	0.64			
	18-24	---	---	0.00-0.01	---		---	---	---			
	24-42	10-20	1.50-1.65	0.20-0.60	0.14-0.16	Low	0.0-0.5	0.24	0.43			
2514:												
Bilbo-----------	0-5	10-20	1.30-1.45	0.60-2.00	0.07-0.09	Low	1.0-3.0	0.05	0.49	3	5	56
	5-40	35-50	1.25-1.45	0.06-0.20	0.07-0.09	Moderate	0.5-1.0	0.05	0.37			
	40-60	5-15	1.40-1.60	6.00-20.00	0.03-0.06	Low	0.5-1.0	0.05	0.20			
Susie Creek-----	0-10	10-20	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-3.0	0.37	0.49	5	3	86
	10-30	35-55	1.25-1.45	0.06-0.20	0.15-0.19	High	0.0-0.8	0.28	0.32			
	30-60	18-30	1.30-1.50	0.20-0.60	0.14-0.16	Moderate	0.0-0.5	0.28	0.32			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Buffaran	0-5	10-18	1.20-1.35	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.32	0.37	1	3	86
	5-18	35-50	1.15-1.30	0.06-0.20	0.14-0.19	High	0.5-1.0	0.28	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	---	---	0.00-0.01	---		---	---	---			
2521:												
Dewar	0-4	15-20	1.15-1.25	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.15	0.49	1	5	56
	4-14	27-35	1.20-1.35	0.20-0.60	0.15-0.17	Moderate	0.0-1.0	0.24	0.43			
	14-19	20-27	1.15-1.35	0.60-2.00	0.11-0.13	Low	0.0-0.5	0.20	0.64			
	19-32	---	---	0.00-0.01	---		---	---	---			
	32-60	10-15	1.50-1.70	2.00-6.00	0.10-0.12	Low	0.0-0.5	0.17	0.37			
Chiara	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Chiara	0-6	10-18	1.25-1.40	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.17	0.55	1	5	56
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.5-1.0	0.49	0.55			
	17-21	---	---	0.00-0.01	---		---	---	---			
2522:												
Dewar	0-4	15-20	1.15-1.25	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.15	0.49	1	5	56
	4-14	27-35	1.20-1.35	0.20-0.60	0.15-0.17	Moderate	0.0-1.0	0.24	0.43			
	14-19	20-27	1.15-1.35	0.60-2.00	0.11-0.13	Low	0.0-0.5	0.20	0.64			
	19-32	---	---	0.00-0.01	---		---	---	---			
	32-60	10-15	1.50-1.70	2.00-6.00	0.10-0.12	Low	0.0-0.5	0.17	0.37			
Sodhouse	0-6	10-18	1.40-1.55	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.37	0.64	1	6	48
	6-19	10-18	1.40-1.55	0.60-2.00	0.15-0.20	Low	0.0-0.5	0.43	0.49			
	19-25	---	---	0.00-0.01	---		---	---	---			
	25-60	5-15	1.40-1.65	2.00-6.00	0.07-0.09	Low	0.0-0.5	0.15	0.28			
2531:												
Rock Outcrop.												

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Clurde Variant--	0-13	18-27	1.25-1.40	0.60-2.00	0.15-0.18	Moderate	1.0-2.0	0.32	0.37	2	5	56
	13-19	20-25	1.30-1.50	0.20-0.60	0.12-0.16	Moderate	0.5-1.0	0.15	0.28			
	19-32	5-15	1.40-1.60	2.00-6.00	0.07-0.09	Low	0.0-0.5	0.10	0.37			
	32-42	---	---	0.00-0.01	---		---	---	---			
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
2541:												
Kelk----------	0-13	15-20	1.15-1.30	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.49	0.49	5	3	86
	13-48	18-27	1.40-1.60	0.06-0.20	0.19-0.21	Moderate	0.5-1.0	0.49	0.49			
	48-60	18-27	1.40-1.60	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.49	0.49			
2545:												
Kelk----------	0-13	15-20	1.15-1.30	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.49	0.49	5	3	86
	13-48	18-27	1.40-1.60	0.06-0.20	0.19-0.21	Moderate	0.0-0.5	0.49	0.49			
	48-60	18-27	1.40-1.60	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.49	0.49			
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
2555:												
Piline----------	0-12	35-40	1.35-1.50	0.06-0.20	0.15-0.17	High	0.0-0.5	0.32	0.32	5	4	86
	12-60	35-50	1.30-1.50	0.00-0.06	0.14-0.17	High	0.0-0.5	0.28	0.28			
2560:												
McCleary--------	0-4	20-27	1.25-1.45	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.49	0.55	5	6	48
	4-60	40-50	1.30-1.45	0.00-0.06	0.14-0.16	High	0.0-0.5	0.32	0.37			
2561:												
McCleary--------	0-5	20-27	1.25-1.45	0.60-2.00	0.15-0.17	Moderate	0.0-0.5	0.28	0.49	5	8	---
	5-60	40-50	1.30-1.45	0.00-0.06	0.15-0.17	High	0.0-0.5	0.32	0.37			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
2571:												
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.17-0.19	Low	1.0-2.0	0.28	0.49	1	6	48
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.5-1.0	0.49	0.55			
	17-21	---	---	0.00-0.01	---		---	---	---			
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.17	0.55	1	5	56
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.5-1.0	0.49	0.55			
	17-21	---	---	0.00-0.01	---		---	---	---			
2572:												
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Chiara----------	0-4	10-18	1.25-1.40	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.55	0.55	1	5	56
	4-14	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	14-18	---	---	0.00-0.01	---		---	---	---			
2573:												
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.17	0.55	1	5	56
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.5-1.0	0.49	0.55			
	17-21	---	---	0.00-0.01	---		---	---	---			
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.17-0.19	Low	1.0-2.0	0.28	0.49	1	6	48
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.18	Low	0.5-1.0	0.49	0.55			
	17-21	---	---	0.00-0.01	---		---	---	---			
2575:												
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Dacker----------	0-6	10-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.43	0.49	2	3	86
	6-25	27-35	1.25-1.45	0.20-0.60	0.16-0.19	Moderate	0.5-1.0	0.37	0.49			
	25-32	25-33	1.25-1.45	0.20-0.60	0.11-0.15	Moderate	0.0-0.5	0.49	0.64			
	32-60	---	---	0.00-0.01	---		---	---	---			
Shalake---------	0-8	12-18	1.35-1.50	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.28	0.32	2	3	86
	8-25	12-18	1.55-1.75	0.20-0.60	0.11-0.13	Low	0.0-1.0	0.20	0.37			
	25-60	---	---	0.00-0.01	---		---	---	---			
2577:												
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Orovada---------	0-5	10-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.9-2.0	0.49	0.49	5	3	86
	5-29	5-18	1.40-1.55	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.43	0.49			
	29-60	5-18	1.40-1.60	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.43	0.49			
2600:												
Shalake---------	0-8	12-18	1.35-1.50	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.28	0.32	2	3	86
	8-25	12-18	1.55-1.75	0.20-0.60	0.11-0.13	Low	0.0-1.0	0.20	0.37			
	25-60	---	---	0.00-0.01	---		---	---	---			
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
Shalake---------	0-8	12-18	1.35-1.50	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.28	0.32	2	3	86
	8-25	12-18	1.55-1.75	0.20-0.60	0.11-0.13	Low	0.0-1.0	0.20	0.37			
	25-60	---	---	0.00-0.01	---		---	---	---			
2611:												
Dacker----------	0-6	15-25	1.30-1.50	0.60-2.00	0.18-0.20	Low	1.0-2.0	0.43	0.49	2	6	48
	6-25	27-35	1.25-1.45	0.20-0.60	0.16-0.19	Moderate	0.5-1.0	0.37	0.49			
	25-32	25-33	1.25-1.45	0.20-0.60	0.11-0.15	Moderate	0.0-0.5	0.49	0.64			
	32-60	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Hunnton---------	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
2612:												
Dacker----------	0-6	10-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.43	0.49	2	3	86
	6-25	27-35	1.25-1.45	0.20-0.60	0.16-0.19	Moderate	0.5-1.0	0.37	0.49			
	25-32	25-33	1.25-1.45	0.20-0.60	0.11-0.15	Moderate	0.0-0.5	0.49	0.64			
	32-60	---	---	0.00-0.01	---		---	---	---			
Zevadez---------	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
2615:												
Dacker----------	0-6	10-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.43	0.49	2	3	86
	6-25	27-35	1.25-1.45	0.20-0.60	0.16-0.19	Moderate	0.5-1.0	0.37	0.49			
	25-32	25-33	1.25-1.45	0.20-0.60	0.11-0.15	Moderate	0.0-0.5	0.49	0.64			
	32-60	---	---	0.00-0.01	---		---	---	---			
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
2621:												
Gochea----------	0-9	10-20	1.30-1.50	0.60-2.00	0.08-0.13	Low	1.0-2.0	0.17	0.32	4	6	48
	9-25	25-35	1.30-1.50	0.20-0.60	0.12-0.18	Moderate	0.5-1.0	0.17	0.28			
	25-30	10-15	1.50-1.70	2.00-6.00	0.09-0.13	Low	0.0-0.5	0.28	0.43			
	30-60	2-5	1.55-1.75	6.00-20.00	0.03-0.05	Low	0.0-0.5	0.10	0.20			
Susie Creek-----	0-10	20-27	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	5	6	48
	10-30	35-55	1.25-1.45	0.06-0.20	0.15-0.19	High	0.0-0.8	0.28	0.32			
	30-60	18-30	1.30-1.50	0.20-0.60	0.14-0.16	Moderate	0.0-0.5	0.28	0.32			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Carstump	0-14	12-20	1.25-1.45	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.17	0.43	2	7	38
	14-36	40-55	1.20-1.40	0.06-0.20	0.13-0.15	Moderate	0.5-1.0	0.10	0.43			
	36-40	---	---	0.00-0.01	---		---	---	---			
2641:												
Olac	0-4	15-22	1.35-1.50	0.60-2.00	0.07-0.09	Low	1.0-2.0	0.10	0.55	1	8	---
	4-14	23-30	1.25-1.45	0.60-2.00	0.05-0.07	Low	0.5-1.0	0.05	0.43			
	14-18	---	---	0.00-0.01	---		---	---	---			
Snowmore	0-4	15-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.32	0.37	2	3	86
	4-13	20-30	1.25-1.45	0.20-0.60	0.17-0.19	Moderate	0.5-2.0	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.24	0.32			
	22-29	---	---	0.00-0.01	---		---	---	---			
	29-39	---	---	0.00-0.01	---		---	---	---			
2650:												
Wieland	0-4	18-27	1.15-1.30	0.60-2.00	0.10-0.15	Low	1.0-2.0	0.32	0.43	5	6	48
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.32	0.32			
Bartome	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Zevadez	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
2651:												
Wieland	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Buffaran--------	0-5	10-18	1.20-1.35	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.32	0.37	1	3	86
	5-18	35-50	1.15-1.30	0.06-0.20	0.14-0.19	High	0.5-1.0	0.28	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	---	---	0.00-0.01	---		---	---	---			
2652:												
Wieland---------	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			
Dacker----------	0-6	15-25	1.30-1.50	0.60-2.00	0.18-0.20	Low	1.0-2.0	0.43	0.49	2	6	48
	6-25	27-35	1.25-1.45	0.20-0.60	0.16-0.19	Moderate	0.5-1.0	0.37	0.49			
	25-32	25-33	1.25-1.45	0.20-0.60	0.11-0.15	Moderate	0.0-0.5	0.49	0.64			
	32-60	---	---	0.00-0.01	---		---	---	---			
Zevadez---------	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
2655:												
Wieland---------	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			
Gumble----------	0-4	15-20	1.30-1.50	2.00-6.00	0.07-0.10	Low	1.0-2.0	0.15	0.37	2	4	86
	4-18	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.5-1.0	0.20	0.28			
	18-28	---	---	0.00-0.01	---		---	---	---			
Bilbo-----------	0-5	15-25	1.25-1.40	0.60-2.00	0.11-0.13	Moderate	1.0-3.0	0.24	0.43	3	6	48
	5-40	35-50	1.25-1.45	0.06-0.20	0.07-0.09	Moderate	0.5-1.0	0.05	0.37			
	40-60	5-15	1.40-1.60	6.00-20.00	0.03-0.06	Low	0.5-1.0	0.05	0.20			
2656:												
Wieland---------	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Hunnton---------	0-3	10-25	1.20-1.25	0.60-2.00	0.14-0.18	Low	1.0-2.0	0.49	0.55	2	5	56
	3-6	20-30	1.50-1.55	0.20-0.60	0.15-0.21	Moderate	0.5-2.0	0.49	0.49			
	6-36	45-55	1.20-1.25	0.06-0.20	0.10-0.16	High	0.5-1.0	0.28	0.37			
	36-40	---	---	0.00-0.01	---		---	---	---			
Thwoop----------	0-4	14-22	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-2.0	0.20	0.55	2	6	48
	4-10	20-27	1.15-1.35	0.60-2.00	0.17-0.19	Moderate	1.0-2.0	0.37	0.43			
	10-25	35-45	1.30-1.45	0.06-0.20	0.08-0.10	Moderate	0.5-1.0	0.05	0.37			
	25-27	---	---	0.00-0.01	---		---	---	---			
	27-37	---	---	0.00-0.01	---		---	---	---			
2658:												
Wieland---------	0-5	18-27	1.15-1.30	0.60-2.00	0.06-0.12	Low	1.0-2.0	0.20	0.64	5	8	---
	5-26	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	26-52	27-35	1.45-1.60	0.06-0.20	0.10-0.17	Moderate	0.0-0.5	0.28	0.55			
	52-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.32	0.32			
2666:												
Puett-----------	0-3	5-10	1.30-1.50	2.00-6.00	0.13-0.15	Low	0.5-1.0	0.28	0.32	2	3	86
	3-10	5-10	1.35-1.55	2.00-6.00	0.13-0.15	Low	0.0-0.5	0.28	0.32			
	10-14	---	---	0.00-0.01	---		---	---	---			
Orovada---------	0-5	10-15	1.35-1.50	0.60-2.00	0.15-0.17	Low	0.9-2.0	0.49	0.49	5	3	86
	5-29	5-18	1.40-1.55	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.43	0.49			
	29-60	5-18	1.40-1.60	0.60-2.00	0.14-0.16	Low	0.0-0.5	0.43	0.49			
2667:												
Rock Outcrop.												
Puett-----------	0-3	10-20	1.30-1.50	2.00-6.00	0.12-0.14	Low	0.5-1.0	0.24	0.43	2	6	48
	3-10	5-10	1.35-1.55	2.00-6.00	0.08-0.15	Low	0.0-0.5	0.15	0.24			
	10-14	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
2668:												
Puett----------	0-3	10-20	1.30-1.50	2.00-6.00	0.12-0.14	Low	0.5-1.0	0.24	0.43	2	6	48
	3-10	5-10	1.35-1.55	2.00-6.00	0.08-0.15	Low	0.0-0.5	0.15	0.24			
	10-14	---	---	0.00-0.01	---		---	---	---			
Yuko----------	0-4	10-18	1.35-1.50	2.00-6.00	0.11-0.13	Low	0.8-2.0	0.28	0.32	2	3	86
	4-14	30-40	1.35-1.50	2.00-6.00	0.15-0.17	Moderate	0.0-0.8	0.37	0.43			
	14-18	---	---	0.00-0.01	---		---	---	---			
Zevadez----------	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
2710:												
Ramires----------	0-5	15-20	1.30-1.45	0.60-2.00	0.17-0.19	Low	1.0-2.0	0.37	0.43	2	5	56
	5-24	35-40	1.25-1.45	0.06-0.20	0.16-0.19	High	0.5-2.0	0.32	0.49			
	24-40	15-20	1.30-1.50	0.60-2.00	0.09-0.11	Low	0.5-1.0	0.15	0.43			
	40-50	---	---	0.00-0.01	---		---	---	---			
Bartome----------	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Bilbo----------	0-5	10-20	1.30-1.45	0.60-2.00	0.07-0.09	Low	1.0-3.0	0.05	0.49	3	5	56
	5-40	35-50	1.25-1.45	0.06-0.20	0.07-0.09	Moderate	0.5-1.0	0.05	0.37			
	40-60	5-15	1.40-1.60	6.00-20.00	0.03-0.06	Low	0.5-1.0	0.05	0.20			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
2711:												
Ramires	0-5	15-20	1.30-1.45	0.60-2.00	0.17-0.19	Low	1.0-2.0	0.37	0.43	2	5	56
	5-24	35-40	1.25-1.45	0.06-0.20	0.16-0.19	High	0.5-2.0	0.32	0.49			
	24-40	15-20	1.30-1.50	0.60-2.00	0.09-0.11	Low	0.5-1.0	0.15	0.43			
	40-50	---	---	0.00-0.01	---		---	---	---			
Bilbo	0-5	10-20	1.30-1.45	0.60-2.00	0.07-0.09	Low	1.0-3.0	0.05	0.49	3	5	56
	5-40	35-50	1.25-1.45	0.06-0.20	0.07-0.09	Moderate	0.5-1.0	0.05	0.37			
	40-60	5-15	1.40-1.60	6.00-20.00	0.03-0.06	Low	0.5-1.0	0.05	0.20			
Buffaran	0-5	10-18	1.20-1.35	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.32	0.37	1	3	86
	5-18	35-50	1.15-1.30	0.06-0.20	0.14-0.19	High	0.5-1.0	0.28	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	---	---	0.00-0.01	---		---	---	---			
2741:												
Wilsor	0-7	15-20	1.30-1.50	0.60-2.00	0.15-0.18	Low	1.0-2.0	0.32	0.37	4	5	56
	7-17	25-35	1.20-1.40	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.32	0.37			
	17-46	15-25	1.45-1.65	0.60-2.00	0.10-0.12	Moderate	0.0-0.5	0.15	0.37			
	46-56	---	---	0.00-0.01	---		---	---	---			
Wilsor	0-7	15-20	1.30-1.50	0.60-2.00	0.15-0.18	Low	1.0-2.0	0.32	0.37	4	5	56
	7-17	25-35	1.20-1.40	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.32	0.37			
	17-46	15-25	1.45-1.65	0.60-2.00	0.10-0.12	Moderate	0.0-0.5	0.15	0.37			
	46-56	---	---	0.00-0.01	---		---	---	---			
2751:												
Yuko	0-4	10-18	1.35-1.50	2.00-6.00	0.11-0.13	Low	0.8-2.0	0.28	0.32	2	3	86
	4-14	30-40	1.35-1.50	2.00-6.00	0.15-0.17	Moderate	0.0-0.8	0.37	0.43			
	14-18	---	---	0.00-0.01	---		---	---	---			
Chime	0-6	18-25	1.15-1.30	0.60-2.00	0.11-0.16	Moderate	1.0-2.0	0.24	0.43	3	6	48
	6-15	27-35	1.40-1.60	0.20-0.60	0.16-0.18	Moderate	0.5-1.0	0.24	0.32			
	15-22	20-35	1.40-1.60	0.20-0.60	0.13-0.16	Moderate	0.0-0.5	0.24	0.32			
	22-32	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
2775:												
Zevadez----------	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
Bartome----------	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Wieland----------	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			
2776:												
Zevadez----------	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
2777:												
Zevadez----------	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
Wieland----------	0-4	8-22	1.25-1.45	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.49	0.55	5	5	56
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
2778:												
Zevadez----------	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
Yuko------------	0-4	10-18	1.35-1.50	2.00-6.00	0.11-0.13	Low	0.8-2.0	0.28	0.32	2	3	86
	4-14	30-40	1.35-1.50	2.00-6.00	0.15-0.17	Moderate	0.0-0.8	0.37	0.43			
	14-18	---	---	0.00-0.01	---		---	---	---			
Kelk------------	0-13	15-20	1.15-1.30	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.49	0.49	5	3	86
	13-48	18-27	1.40-1.60	0.06-0.20	0.19-0.21	Moderate	0.0-0.5	0.49	0.49			
	48-60	18-27	1.40-1.60	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.49	0.49			
2780:												
Snowmore--------	0-4	10-20	1.35-1.50	2.00-6.00	0.10-0.12	Low	1.0-2.0	0.17	0.37	2	4	86
	4-13	20-30	1.30-1.50	0.20-0.60	0.17-0.19	Moderate	0.0-0.6	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.0-0.6	0.28	0.37			
	22-28	---	---	0.00-0.01	---		---	---	---			
	28-38	---	---	0.00-0.01	---		---	---	---			
Snowmore--------	0-4	15-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.32	0.37	2	3	86
	4-13	20-30	1.25-1.45	0.20-0.60	0.17-0.19	Moderate	0.5-2.0	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.24	0.32			
	22-29	---	---	0.00-0.01	---		---	---	---			
	29-39	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
2781:												
Snowmore	0-4	10-20	1.35-1.50	2.00-6.00	0.10-0.12	Low	1.0-2.0	0.17	0.37	2	4	86
	4-13	20-30	1.30-1.50	0.20-0.60	0.17-0.19	Moderate	0.0-0.6	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.0-0.6	0.28	0.37			
	22-28	---	---	0.00-0.01	---		---	---	---			
	28-38	---	---	0.00-0.01	---		---	---	---			
Snowmore	0-4	15-25	1.20-1.35	0.60-2.00	0.10-0.12	Moderate	1.0-2.0	0.10	0.37	2	8	---
	4-13	20-30	1.30-1.50	0.20-0.60	0.17-0.19	Moderate	0.0-0.6	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.0-0.6	0.28	0.37			
	22-28	---	---	0.00-0.01	---		---	---	---			
	28-38	---	---	0.00-0.01	---		---	---	---			
Snowmore	0-4	15-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.32	0.37	2	3	86
	4-13	20-30	1.25-1.45	0.20-0.60	0.17-0.19	Moderate	0.5-2.0	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.24	0.32			
	22-29	---	---	0.00-0.01	---		---	---	---			
	29-39	---	---	0.00-0.01	---		---	---	---			
2782:												
Snowmore	0-4	15-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.32	0.37	2	3	86
	4-13	20-30	1.25-1.45	0.20-0.60	0.17-0.19	Moderate	0.5-2.0	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.24	0.32			
	22-29	---	---	0.00-0.01	---		---	---	---			
	29-39	---	---	0.00-0.01	---		---	---	---			
Zevadez	0-10	10-20	1.30-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.49	5	3	86
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
Snowmore	0-4	10-20	1.35-1.50	2.00-6.00	0.10-0.12	Low	1.0-2.0	0.17	0.37	2	4	86
	4-13	20-30	1.30-1.50	0.20-0.60	0.17-0.19	Moderate	0.0-0.6	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.0-0.6	0.28	0.37			
	22-28	---	---	0.00-0.01	---		---	---	---			
	28-38	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
2783:												
Snowmore	0-4	15-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.32	0.37	2	3	86
	4-13	20-30	1.25-1.45	0.20-0.60	0.17-0.19	Moderate	0.5-2.0	0.32	0.37			
	13-22	25-35	1.40-1.60	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.24	0.32			
	22-29	---	---	0.00-0.01	---		---	---	---			
	29-39	---	---	0.00-0.01	---		---	---	---			
Willhill	0-6	18-25	1.25-1.45	0.60-2.00	0.12-0.15	Low	1.0-2.0	0.20	0.28	2	6	48
	6-11	27-35	1.30-1.50	0.20-0.60	0.09-0.15	Moderate	0.5-1.0	0.15	0.32			
	11-23	16-25	1.40-1.60	0.60-2.00	0.08-0.10	Low	0.0-0.5	0.10	0.32			
	23-27	---	---	---	---		---	---	---			
2790:												
Old Camp	0-6	10-20	1.30-1.45	0.60-2.00	0.08-0.12	Low	1.0-2.0	0.17	0.43	1	8	---
	6-16	27-35	1.30-1.50	0.20-0.60	0.08-0.11	Low	0.5-1.0	0.10	0.37			
	16-20	---	---	0.00-0.01	---		---	---	---			
Troughs	0-2	20-27	1.25-1.40	0.20-0.60	0.12-0.14	Low	1.0-3.0	0.20	0.37	1	6	48
	2-14	27-35	1.30-1.50	0.20-0.60	0.10-0.18	Moderate	0.5-1.0	0.17	0.37			
	14-20	---	---	---	---		---	---	---			
	20-24	---	---	---	---		---	---	---			
Olac	0-4	15-22	1.35-1.50	0.60-2.00	0.07-0.09	Low	1.0-2.0	0.10	0.55	1	8	---
	4-14	23-30	1.25-1.45	0.60-2.00	0.05-0.07	Low	0.5-1.0	0.05	0.43			
	14-18	---	---	0.00-0.01	---		---	---	---			
2801:												
Bartome	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Alley	0-7	10-20	1.30-1.40	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.20	0.37	5	6	48
	7-20	20-30	1.40-1.50	0.20-0.60	0.14-0.17	Moderate	0.0-0.5	0.20	0.37			
	20-40	10-20	1.45-1.55	0.20-0.60	0.11-0.13	Low	0.0-0.5	0.20	0.49			
	40-60	5-10	1.45-1.55	2.00-6.00	0.07-0.09	Low	0.0-0.5	0.05	0.32			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Clurde----------	0-6	15-20	1.35-1.50	0.60-2.00	0.14-0.17	Low	1.0-2.0	0.28	0.49	4	3	86
	6-29	18-23	1.30-1.50	0.20-0.60	0.13-0.16	Moderate	0.0-1.0	0.24	0.43			
	29-43	15-20	1.40-1.60	2.00-6.00	0.10-0.13	Low	0.0-0.5	0.15	0.17			
	43-60	5-10	1.50-1.70	6.00-20.00	0.06-0.08	Low	0.0-0.5	0.15	0.24			
2802:												
Bartome---------	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Buffaran--------	0-5	10-18	1.20-1.35	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.32	0.37	1	3	86
	5-18	35-50	1.15-1.30	0.06-0.20	0.14-0.19	High	0.5-1.0	0.28	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	---	---	0.00-0.01	---		---	---	---			
2803:												
Bartome---------	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Buffaran--------	0-5	10-18	1.20-1.35	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.32	0.37	1	3	86
	5-18	35-50	1.15-1.30	0.06-0.20	0.14-0.19	High	0.5-1.0	0.28	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	---	---	0.00-0.01	---		---	---	---			
Ramires---------	0-5	15-20	1.30-1.45	0.60-2.00	0.17-0.19	Low	1.0-2.0	0.37	0.43	2	5	56
	5-24	35-40	1.25-1.45	0.06-0.20	0.16-0.19	High	0.5-2.0	0.32	0.49			
	24-40	15-20	1.30-1.50	0.60-2.00	0.09-0.11	Low	0.5-1.0	0.15	0.43			
	40-50	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
2804:												
Bartome	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Chiara	0-6	10-18	1.25-1.40	0.60-2.00	0.16-0.18	Low	1.0-2.0	0.55	0.55	1	3	86
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
2805:												
Bartome	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
2807:												
Bartome	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Coltroop	0-5	15-20	1.30-1.45	2.00-6.00	0.13-0.15	Low	1.0-2.0	0.37	0.43	1	3	86
	5-17	20-30	1.35-1.55	0.20-0.60	0.15-0.17	Moderate	0.5-1.0	0.43	0.49			
	17-32	---	---	0.00-0.01	---		---	---	---			
	32-42	---	---	0.00-0.01	---		---	---	---			
Zevadez	0-10	15-25	1.20-1.40	0.60-2.00	0.14-0.16	Low	1.0-2.0	0.32	0.55	5	6	48
	10-19	20-35	1.30-1.50	0.20-0.60	0.16-0.20	Moderate	0.0-0.6	0.24	0.43			
	19-60	10-20	1.65-1.80	0.06-0.20	0.13-0.17	Low	0.0-0.6	0.43	0.49			
2808:												
Bartome	0-7	12-20	1.20-1.40	0.60-2.00	0.13-0.17	Moderate	1.0-2.0	0.28	0.28	1	3	86
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Susie Creek-----	0-10	10-20	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-3.0	0.37	0.49	5	3	86
	10-30	35-55	1.25-1.45	0.06-0.20	0.15-0.19	High	0.0-0.8	0.28	0.32			
	30-60	18-30	1.30-1.50	0.20-0.60	0.14-0.16	Moderate	0.0-0.5	0.28	0.32			
Wieland---------	0-4	5-20	1.25-1.45	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.55	0.64	5	3	86
	4-30	40-55	1.25-1.40	0.06-0.20	0.09-0.13	High	0.5-1.0	0.28	0.43			
	30-60	10-20	1.45-1.65	0.60-2.00	0.09-0.16	Low	0.0-0.5	0.49	0.64			
2809:												
Bartome---------	0-7	12-20	1.20-1.40	0.60-2.00	0.18-0.20	Moderate	1.0-2.0	0.28	0.28	1	5	56
	7-14	27-35	1.40-1.60	0.20-0.60	0.16-0.21	Moderate	0.0-0.6	0.32	0.32			
	14-28	---	---	0.00-0.01	---		---	---	---			
	28-42	---	---	0.00-0.01	---		---	---	---			
Dacker----------	0-6	15-25	1.30-1.50	0.60-2.00	0.18-0.20	Low	1.0-2.0	0.43	0.49	2	6	48
	6-25	27-35	1.25-1.45	0.20-0.60	0.16-0.19	Moderate	0.5-1.0	0.37	0.49			
	25-32	25-33	1.25-1.45	0.20-0.60	0.11-0.15	Moderate	0.0-0.5	0.49	0.64			
	32-60	---	---	0.00-0.01	---		---	---	---			
2820:												
Rock Outcrop.												
Alley-----------	0-7	7-15	1.35-1.45	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	5	6	48
	7-20	20-30	1.40-1.50	0.20-0.60	0.14-0.18	Moderate	0.5-1.0	0.15	0.43			
	20-40	5-10	1.45-1.55	0.20-0.60	0.11-0.13	Low	0.0-0.5	0.15	0.37			
	40-60	5-10	1.45-1.55	2.00-6.00	0.06-0.08	Low	0.0-0.5	0.05	0.32			
Vanwyper--------	0-10	18-25	1.15-1.30	0.60-2.00	0.10-0.13	Moderate	1.0-2.0	0.20	0.37	2	6	48
	10-25	35-55	1.25-1.45	0.06-0.20	0.06-0.10	Moderate	0.0-0.5	0.10	0.43			
	25-29	---	---	0.00-0.01	---		---	---	---			
2822:												
Rock Outcrop.												
Rubble Land.												

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Alley----------	0-7	7-15	1.35-1.45	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	5	6	48
	7-20	20-30	1.40-1.50	0.20-0.60	0.14-0.18	Moderate	0.5-1.0	0.15	0.43			
	20-40	5-10	1.45-1.55	0.20-0.60	0.11-0.13	Low	0.0-0.5	0.15	0.37			
	40-60	5-10	1.45-1.55	2.00-6.00	0.06-0.08	Low	0.0-0.5	0.05	0.32			
3000:												
Handy----------	0-10	10-25	1.30-1.50	0.60-2.00	0.14-0.16	Low	1.0-2.0	0.32	0.37	5	5	56
	10-28	40-50	1.25-1.40	0.06-0.20	0.10-0.14	High	0.5-1.0	0.20	0.37			
	28-60	5-15	1.35-1.55	2.00-6.00	0.09-0.11	Low	0.0-0.5	0.15	0.32			
Wilsor----------	0-7	15-20	1.30-1.50	0.60-2.00	0.15-0.18	Low	1.0-2.0	0.32	0.37	4	5	56
	7-17	25-35	1.20-1.40	0.20-0.60	0.17-0.19	Moderate	0.5-1.0	0.32	0.37			
	17-46	15-25	1.45-1.65	0.60-2.00	0.10-0.12	Moderate	0.0-0.5	0.15	0.37			
	46-56	---	---	0.00-0.01	---		---	---	---			
Deseed----------	0-4	15-25	1.15-1.30	0.60-2.00	0.13-0.15	Moderate	1.0-3.0	0.24	0.43	2	7	38
	4-26	35-45	1.35-1.50	0.06-0.20	0.10-0.13	High	0.5-2.0	0.17	0.32			
	26-30	---	---	0.00-0.01	---		---	---	---			
3010:												
Relley----------	0-6	18-27	1.25-1.45	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.55	0.55	5	4L	86
	6-14	18-27	1.25-1.45	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.55	0.55			
	14-25	18-27	1.25-1.45	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.55	0.55			
	25-60	18-27	1.25-1.45	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.55	0.55			
Kelk----------	0-13	15-20	1.15-1.30	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.49	0.49	5	3	86
	13-48	18-27	1.40-1.60	0.06-0.20	0.19-0.21	Moderate	0.0-0.5	0.49	0.49			
	48-60	18-27	1.40-1.60	0.60-2.00	0.18-0.20	Moderate	0.0-0.5	0.49	0.49			
3020:												
Sodhouse--------	0-6	10-18	1.40-1.55	0.60-2.00	0.18-0.21	Low	0.0-0.5	0.55	0.55	1	5	56
	6-19	10-18	1.40-1.55	0.60-2.00	0.15-0.20	Low	0.0-0.5	0.43	0.49			
	19-25	---	---	0.00-0.01	---		---	---	---			
	25-56	5-15	1.45-1.65	2.00-6.00	0.07-0.09	Low	0.0-0.5	0.15	0.28			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Chiara----------	0-6	10-18	1.25-1.40	0.60-2.00	0.19-0.21	Low	1.0-2.0	0.55	0.55	1	5	56
	6-17	10-18	1.35-1.55	0.60-2.00	0.16-0.19	Low	0.5-1.0	0.49	0.49			
	17-21	---	---	0.00-0.01	---		---	---	---			
3030:												
Deepeek---------	0-5	15-20	1.35-1.50	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.17	0.43	1	7	38
	5-18	25-35	1.40-1.60	0.20-0.60	0.10-0.13	Low	0.5-1.0	0.17	0.64			
	18-24	---	---	0.00-0.01	---		---	---	---			
	24-42	10-20	1.50-1.65	0.20-0.60	0.14-0.16	Low	0.0-0.5	0.24	0.43			
Alley----------	0-7	10-20	1.35-1.45	2.00-6.00	0.11-0.13	Low	1.0-2.0	0.05	0.49	5	5	56
	7-20	20-30	1.40-1.50	0.20-0.60	0.14-0.18	Moderate	0.5-1.0	0.15	0.43			
	20-40	5-10	1.45-1.55	0.20-0.60	0.11-0.13	Low	0.0-0.5	0.15	0.37			
	40-60	5-10	1.45-1.55	2.00-6.00	0.06-0.08	Low	0.0-0.5	0.05	0.32			
3100:												
Ratsow----------	0-7	15-20	1.15-1.30	0.60-2.00	0.13-0.18	Moderate	1.0-2.0	0.28	0.43	2	5	56
	7-29	35-50	1.30-1.50	0.06-0.20	0.14-0.20	High	0.0-0.8	0.28	0.32			
	29-30	---	---	0.00-0.01	---		---	---	---			
	30-34	---	---	0.00-0.01	---		---	---	---			
Quarz----------	0-6	15-27	1.10-1.25	0.60-2.00	0.07-0.12	Low	2.0-3.0	0.10	0.32	2	3	86
	6-15	30-40	1.25-1.40	0.20-0.60	0.08-0.14	Low	1.0-2.0	0.10	0.24			
	15-21	35-55	1.20-1.40	0.06-0.20	0.06-0.10	Moderate	0.5-1.0	0.10	0.37			
	21-25	---	---	0.00-0.01	---		---	---	---			
Susie Creek-----	0-10	20-27	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	5	6	48
	10-30	35-55	1.25-1.45	0.06-0.20	0.15-0.19	High	0.0-0.8	0.28	0.32			
	30-60	18-30	1.30-1.50	0.20-0.60	0.14-0.16	Moderate	0.0-0.5	0.28	0.32			
3510:												
Midraw----------	0-2	18-25	1.20-1.40	0.60-2.00	0.14-0.16	Moderate	1.0-2.0	0.24	0.43	1	6	48
	2-19	35-45	1.35-1.50	0.06-0.20	0.14-0.16	High	0.0-0.6	0.20	0.37			
	19-25	---	---	0.00-0.01	---		---	---	---			
	25-29	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
Troughs	0-2	20-27	1.25-1.40	0.20-0.60	0.12-0.14	Low	1.0-3.0	0.20	0.37	1	6	48
	2-14	27-35	1.30-1.50	0.20-0.60	0.10-0.18	Moderate	0.5-1.0	0.17	0.37			
	14-19	18-32	1.30-1.50	0.20-0.60	0.06-0.10	Low	0.0-0.5	0.10	0.37			
	19-20	---	---	---	---		---	---	---			
	20-24	---	---	---	---		---	---	---			
Midraw	0-2	18-25	1.20-1.40	0.60-2.00	0.14-0.16	Moderate	1.0-2.0	0.24	0.43	1	6	48
	2-19	35-45	1.35-1.50	0.06-0.20	0.14-0.16	High	0.0-0.6	0.20	0.37			
	19-25	---	---	0.00-0.01	---		---	---	---			
	25-29	---	---	0.00-0.01	---		---	---	---			
3710:												
Rock Outcrop.												
Petan	0-6	18-27	1.40-1.50	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.10	0.49	1	8	---
	6-19	40-60	1.25-1.40	0.00-0.06	0.08-0.10	Moderate	1.0-2.0	0.10	0.32			
	19-20	---	---	0.00-0.01	---		---	---	---			
	20-30	---	---	0.00-0.01	---		---	---	---			
Bulake	0-7	18-25	1.30-1.50	0.60-2.00	0.12-0.14	Moderate	1.0-2.0	0.24	0.43	1	6	48
	7-19	40-50	1.20-1.40	0.06-0.20	0.11-0.15	High	0.5-1.0	0.20	0.32			
	19-23	---	---	0.00-0.01	---		---	---	---			
3715:												
Petan	0-6	18-27	1.40-1.50	0.60-2.00	0.10-0.12	Low	2.0-3.0	0.10	0.49	1	8	---
	6-19	40-60	1.25-1.40	0.00-0.06	0.08-0.10	Moderate	1.0-2.0	0.10	0.32			
	19-20	---	---	0.00-0.01	---		---	---	---			
	20-30	---	---	0.00-0.01	---		---	---	---			
Deunah	0-9	15-27	1.20-1.40	0.60-2.00	0.15-0.20	Moderate	1.0-2.0	0.43	0.49	2	6	48
	9-26	60-70	1.25-1.45	0.00-0.06	0.12-0.15	High	0.5-1.0	0.20	0.20			
	26-33	---	---	---	---		---	---	---			
Hatpeak	0-10	15-25	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	2	5	56
	10-30	35-50	1.25-1.45	0.06-0.20	0.14-0.18	High	0.5-1.0	0.24	0.28			
	30-60	---	---	0.00-0.01	---		---	---	---			

TABLE 16.--PHYSICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Shrink-swell potential	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
3721:												
Hatpeak---------	0-10	15-25	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	2	5	56
	10-30	35-50	1.25-1.45	0.06-0.20	0.14-0.18	High	0.5-1.0	0.24	0.28			
	30-60	---	---	0.00-0.01	---		---	---	---			
Deunah----------	0-9	15-27	1.20-1.40	0.60-2.00	0.15-0.20	Moderate	1.0-2.0	0.43	0.49	2	6	48
	9-26	60-70	1.25-1.45	0.00-0.06	0.12-0.15	High	0.5-1.0	0.20	0.20			
	26-33	---	---	---	---		---	---	---			
3722:												
Hatpeak---------	0-10	15-25	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	2	5	56
	10-30	35-50	1.25-1.45	0.06-0.20	0.14-0.18	High	0.5-1.0	0.24	0.28			
	30-60	---	---	0.00-0.01	---		---	---	---			
Hatpeak---------	0-10	15-25	1.10-1.30	0.60-2.00	0.15-0.17	Moderate	1.0-3.0	0.32	0.37	2	5	56
	10-30	35-50	1.25-1.45	0.06-0.20	0.14-0.18	High	0.5-1.0	0.24	0.28			
	30-60	---	---	0.00-0.01	---		---	---	---			

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1:								
Rubble Land-----	0-60	---	---	---	---	---	---	---
120:								
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Lerrow----------	0-9	20-25	15.0-20.0	6.6-7.3	---	---	---	---
	9-14	30-40	20.0-25.0	6.6-7.3	---	---	---	---
	14-27	40-55	25.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
126:								
Cotant----------	0-3	20-27	20.0-25.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Lerrow----------	0-9	20-25	15.0-20.0	6.6-7.3	---	---	---	---
	9-14	30-40	20.0-25.0	6.6-7.3	---	---	---	---
	14-27	40-55	25.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Akler-----------	0-4	18-25	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	50-60	30.0-35.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
127:								
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Lerrow----------	0-9	20-25	15.0-20.0	6.6-7.3	---	---	---	---
	9-14	30-40	20.0-25.0	6.6-7.3	---	---	---	---
	14-27	40-55	25.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
128:								
Cotant----------	0-3	20-27	20.0-25.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Graley----------	0-12	10-18	10.0-20.0	6.6-7.8	---	---	---	---
	12-17	35-45	25.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
129:								
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Crooked Creek---	0-4	27-30	20.0-25.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	20.0-35.0	6.6-8.4	---	---	0-2	---
	37-60	25-40	15.0-30.0	6.6-8.4	---	---	0-2	---
130:								
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Booford---------	0-10	15-25	13.0-23.0	6.1-7.3	---	---	---	---
	10-19	35-50	30.0-46.0	6.6-7.3	---	---	---	---
	19-36	40-60	33.0-52.0	6.1-7.3	---	---	---	---
	36-46	---	---	---	---	---	---	---
140:								
Upville---------	0-10	15-22	13.0-21.0	6.6-7.3	---	---	---	---
	10-21	15-27	10.0-20.0	6.6-7.3	---	---	---	---
	21-60	0-5	0.0-4.0	6.6-7.3	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Upville---	0-10	15-22	15.0-25.0	6.6-7.3	---	---	---	---
	10-21	15-27	10.0-20.0	6.6-7.3	---	---	---	---
	21-60	0-5	0.0-5.0	6.6-7.3	---	---	---	---
141:								
Upville---	0-12	15-22	15.0-25.0	6.6-7.3	---	---	---	---
	12-26	15-27	10.0-20.0	6.6-7.3	---	---	---	---
	26-60	0-5	0.0-5.0	6.6-7.3	---	---	---	---
Kleckner---	0-8	15-25	13.0-21.0	6.1-7.3	---	---	---	---
	8-20	35-50	30.0-44.0	6.1-7.3	---	---	---	---
	20-42	35-50	29.0-42.0	6.6-7.8	---	---	---	---
	42-60	15-20	9.0-13.0	6.6-7.8	---	---	---	---
150:								
Gochea---	0-9	10-20	10.0-15.0	6.6-7.8	---	---	---	---
	9-25	25-35	15.0-25.0	7.4-7.8	---	---	---	---
	25-30	10-15	5.0-10.0	7.4-7.8	---	---	---	---
	30-60	2-5	0.0-5.0	7.4-7.8	0-1	---	---	---
161:								
Sonoma---	0-12	20-27	15.0-20.0	7.9-9.0	3-15	---	0-4	1-5
	12-60	25-35	20.0-25.0	7.9-9.0	3-15	0-1	0-4	5-12
162:								
Sonoma---	0-12	20-27	15.0-25.0	7.4-8.4	3-12	---	2-8	5-12
	12-60	25-35	15.0-30.0	7.9-9.0	3-12	---	2-8	0-12
184:								
Crooked Creek---	0-3	27-30	20.0-25.0	6.6-8.4	---	---	0-2	---
	3-37	35-50	20.0-35.0	6.6-8.4	---	---	0-2	---
	37-60	25-40	15.0-30.0	6.6-8.4	---	---	0-2	---
185:								
Crooked Creek---	0-4	27-30	20.0-25.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	20.0-35.0	6.6-8.4	---	---	0-2	---
	37-60	25-40	15.0-30.0	6.6-8.4	---	---	0-2	---
Crooked Creek---	0-4	27-30	20.0-25.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	20.0-35.0	6.6-8.4	---	---	0-2	---
	37-60	25-40	15.0-30.0	6.6-8.4	---	---	0-2	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
186:								
Crooked Creek---	0-4	27-30	20.0-25.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	20.0-35.0	6.6-8.4	---	---	0-2	---
	37-60	25-40	15.0-30.0	6.6-8.4	---	---	0-2	---
Crooked Creek---	0-4	27-30	20.0-25.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	20.0-35.0	6.6-8.4	---	---	0-2	---
	37-60	25-40	15.0-30.0	6.6-8.4	---	---	0-2	---
Crooked Creek---	0-4	30-40	25.0-35.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	25.0-40.0	6.6-8.4	---	---	0-2	---
	37-60	30-40	20.0-30.0	6.6-8.4	---	---	0-2	---
188:								
Crooked Creek---	0-4	27-30	20.0-25.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	20.0-35.0	6.6-8.4	---	---	0-2	---
	37-60	25-40	15.0-30.0	6.6-8.4	---	---	0-2	---
Welch-----------	0-10	15-20	15.0-20.0	6.1-7.3	---	---	---	---
	10-60	27-35	25.0-35.0	6.1-7.8	---	---	---	---
Crooked Creek---	0-4	30-40	25.0-35.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	25.0-40.0	6.6-8.4	---	---	0-2	---
	37-60	30-40	20.0-30.0	6.6-8.4	---	---	0-2	---
190:								
Heechee---------	0-7	15-27	15.0-25.0	6.6-7.3	---	---	---	---
	7-27	25-35	20.0-30.0	6.1-7.3	---	---	---	---
	27-61	10-20	10.0-15.0	6.1-7.3	---	---	---	---
Heechee---------	0-7	15-27	15.0-25.0	6.6-7.3	---	---	---	---
	7-27	25-35	20.0-30.0	6.6-7.3	---	---	---	---
	27-61	10-25	10.0-15.0	6.6-7.3	---	---	---	---
200:								
Lynnbow---------	0-4	18-25	15.0-21.0	6.1-7.3	---	---	---	---
	4-26	50-60	42.0-54.0	6.6-7.8	---	---	0-2	---
	26-40	40-55	33.0-46.0	7.9-8.4	1-5	---	0-2	---
	40-58	15-25	9.0-16.0	7.9-8.4	1-5	---	0-2	---
	58-68	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Rugar----------	0-2	15-27	14.0-32.0	6.1-7.3	---	---	---	---
	2-20	27-35	20.0-32.0	6.1-7.3	---	---	---	---
	20-43	40-55	28.0-45.0	6.1-7.3	---	---	---	---
	43-47	---	---	---	---	---	---	---
201:								
Lynnbow---------	0-4	18-25	15.0-21.0	6.1-7.3	---	---	---	---
	4-26	50-60	42.0-54.0	6.6-7.8	---	---	0-2	---
	26-40	40-55	33.0-46.0	7.9-8.4	1-5	---	0-2	---
	40-58	15-25	9.0-16.0	7.9-8.4	1-5	---	0-2	---
	58-68	---	---	---	---	---	---	---
Lerrow----------	0-9	20-25	15.0-20.0	6.6-7.3	---	---	---	---
	9-14	30-40	20.0-25.0	6.6-7.3	---	---	---	---
	14-27	40-55	25.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Crooked Creek---	0-4	27-30	20.0-25.0	6.6-8.4	---	---	0-2	---
	4-37	35-50	20.0-35.0	6.6-8.4	---	---	0-2	---
	37-60	25-40	15.0-30.0	6.6-8.4	---	---	0-2	---
210:								
Soonaker--------	0-3	5-15	5.0-13.0	6.6-7.3	---	---	---	---
	3-16	18-25	12.0-17.0	6.6-7.3	---	---	---	---
	16-24	10-25	6.0-16.0	6.6-7.8	---	---	---	---
	24-28	---	---	---	---	---	---	---
Bulake----------	0-7	18-25	13.0-19.0	6.6-7.3	---	---	---	---
	7-19	40-50	33.0-42.0	6.6-7.3	---	---	---	---
	19-23	---	---	---	---	---	---	---
220:								
Cavanaugh-------	0-5	20-25	16.0-24.0	6.1-7.3	---	---	---	---
	5-9	35-50	26.0-40.0	6.1-7.8	---	---	---	---
	9-21	35-50	25.0-36.0	6.1-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Rugar----------	0-2	27-35	23.0-38.0	6.1-7.3	---	---	---	---
	2-20	27-35	20.0-32.0	6.1-7.3	---	---	---	---
	20-43	40-55	28.0-45.0	6.1-7.3	---	---	---	---
	43-47	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
McIvey----------	0-16	20-27	15.0-30.0	6.6-7.3	---	---	---	---
	16-29	30-40	20.0-30.0	6.1-7.3	---	---	---	---
	29-65	40-50	25.0-30.0	6.1-7.3	---	---	---	---
221:								
Cavanaugh-------	0-5	20-25	16.0-24.0	6.1-7.3	---	---	---	---
	5-9	35-50	26.0-40.0	6.1-7.8	---	---	---	---
	9-21	35-50	25.0-36.0	6.1-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Quarz-----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Alyan-----------	0-9	27-35	20.0-35.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
233:								
Bioya-----------	0-10	8-18	10.0-20.0	7.4-8.4	---	---	0-2	---
	10-36	18-27	10.0-20.0	7.4-9.6	1-5	---	2-4	5-12
	36-60	---	---	---	---	---	---	---
Bilbo-----------	0-5	15-25	10.0-25.0	6.6-7.8	---	---	---	---
	5-40	35-50	20.0-40.0	6.6-7.8	---	---	0-2	0-12
	40-60	5-15	5.0-10.0	7.4-8.4	10-20	---	0-2	1-12
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-40	---	---	---	---	---	---	---
234:								
Bioya-----------	0-10	8-18	10.0-20.0	7.4-8.4	---	---	0-2	---
	10-36	18-27	10.0-20.0	7.4-9.6	1-5	---	2-4	5-12
	36-60	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Shabliss--------	0-10	5-15	4.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
Puett----------	0-3	5-15	5.0-17.0	7.9-9.0	1-5	---	0-2	0-5
	3-10	5-10	5.0-12.0	7.9-9.0	1-5	---	0-2	5-12
	10-14	---	---	---	---	---	---	---
235:								
Bioya----------	0-10	8-18	10.0-20.0	7.4-8.4	---	---	0-2	---
	10-36	18-27	10.0-20.0	7.4-9.6	1-5	---	2-4	5-12
	36-60	---	---	---	---	---	---	---
Trunk----------	0-5	10-20	10.0-20.0	6.6-7.8	---	---	---	0-5
	5-23	35-50	20.0-40.0	6.6-9.0	0-5	---	0-2	0-12
	23-27	---	---	---	---	---	---	---
Alley----------	0-7	7-15	6.0-19.0	6.6-7.3	---	---	---	---
	7-20	20-30	17.0-20.0	7.4-8.4	---	---	2-4	1-5
	20-40	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
	40-60	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
236:								
Bioya----------	0-10	8-18	10.0-20.0	7.4-8.4	---	---	0-2	---
	10-36	18-27	10.0-20.0	7.4-9.6	1-5	---	2-4	5-12
	36-60	---	---	---	---	---	---	---
Wieland---------	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
Kleckner--------	0-8	15-25	13.0-21.0	6.1-7.3	---	---	---	---
	8-20	35-50	30.0-44.0	6.1-7.3	---	---	---	---
	20-42	35-50	29.0-42.0	6.6-7.8	---	---	---	---
	42-60	15-20	9.0-13.0	6.6-7.8	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
241:								
Wickahoney------	0-2	20-25	15.0-25.0	6.1-7.3	---	---	---	---
	2-6	25-35	20.0-30.0	6.1-7.8	---	---	---	---
	6-14	35-55	25.0-40.0	6.1-7.8	---	---	---	---
	14-18	---	---	---	---	---	---	---
Deunah----------	0-9	15-27	15.0-25.0	5.6-7.3	---	---	---	---
	9-26	60-70	40.0-60.0	6.6-7.8	---	---	---	---
	26-33	---	---	---	---	---	---	---
Petan-----------	0-6	18-27	15.0-22.0	6.1-7.8	---	---	---	---
	6-19	40-60	34.0-52.0	6.1-7.8	---	---	---	---
	19-20	---	---	---	---	---	---	---
	20-30	---	---	---	---	---	---	---
270:								
Pernty----------	0-5	18-25	15.0-20.0	6.6-7.3	---	---	---	---
	5-14	25-35	15.0-20.0	6.6-7.3	---	---	---	---
	14-18	---	---	---	---	---	---	---
Loncan----------	0-17	18-27	15.0-20.0	6.6-7.3	---	---	---	---
	17-30	18-27	10.0-15.0	6.6-7.3	---	---	---	---
	30-34	---	---	---	---	---	---	---
Pernty----------	0-5	18-25	15.0-20.0	6.6-7.3	---	---	---	---
	5-14	25-35	15.0-20.0	6.6-7.3	---	---	---	---
	14-18	---	---	---	---	---	---	---
280:								
Humboldt--------	0-12	30-40	15.0-40.0	8.5-9.0	1-10	---	4-32	13-45
	12-52	35-45	20.0-35.0	7.9-9.0	1-10	---	2-32	13-30
	52-60	20-35	10.0-30.0	7.9-9.0	1-10	---	2-32	1-12
308:								
Akler-----------	0-4	18-25	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	50-60	30.0-35.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Pattani---------	0-14	40-50	34.0-38.0	6.6-7.8	---	---	---	---
	14-37	35-50	28.0-42.0	7.9-9.0	1-10	---	---	1-5
	37-41	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Cotant----------	0-3	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	3-20	40-60	25.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
309:								
Akler----------	0-4	18-25	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	50-60	30.0-35.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Susie Creek-----	0-10	20-27	16.0-25.0	6.6-7.3	---	---	---	---
	10-30	35-55	24.0-40.0	6.6-7.8	---	---	---	---
	30-60	18-30	12.0-22.0	7.4-9.0	0-3	---	0-2	0-5
457:								
Donna----------	0-10	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	10-30	60-70	45.0-55.0	6.6-7.3	---	---	---	---
	30-48	---	---	---	---	---	---	---
	48-60	15-25	10.0-15.0	7.4-8.4	0-5	---	0-4	---
Stampede--------	0-16	20-25	15.0-25.0	6.1-7.3	---	---	---	---
	16-37	40-55	25.0-35.0	6.6-7.8	---	---	---	---
	37-60	---	---	---	---	---	---	---
Short Creek-----	0-8	30-35	20.0-25.0	6.6-7.3	---	---	---	---
	8-23	40-50	25.0-30.0	6.6-8.4	---	---	---	---
	23-60	30-40	20.0-25.0	7.9-9.0	1-5	---	---	---
458:								
Donna----------	0-10	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	10-30	60-70	45.0-55.0	6.6-7.3	---	---	---	---
	30-48	---	---	---	---	---	---	---
	48-60	15-25	10.0-15.0	7.4-8.4	0-5	---	0-4	---
Stampede--------	0-16	20-25	15.0-25.0	6.1-7.3	---	---	---	---
	16-37	40-55	25.0-35.0	6.6-7.8	---	---	---	---
	37-60	---	---	---	---	---	---	---
464:								
Stampede--------	0-16	18-27	15.0-25.0	6.1-7.3	---	---	---	---
	16-37	40-55	25.0-35.0	6.6-7.8	---	---	---	---
	37-60	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
570:								
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Hapgood---------	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
571:								
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Tusel-----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
Gando-----------	0-9	10-18	10.0-15.0	7.4-8.4	---	---	---	---
	9-17	10-18	5.0-10.0	7.9-8.4	1-10	---	0-2	---
	17-21	---	---	---	---	---	---	---
572:								
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Reluctan--------	0-9	14-18	10.0-20.0	6.6-7.8	---	---	---	---
	9-27	25-35	20.0-35.0	6.6-7.8	---	---	---	---
	27-37	---	---	---	---	---	---	---
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
576:								
Sumine	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Hapgood	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
Cleavage	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
577:								
Sumine	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Hapgood	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
Chen	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
578:								
Sumine	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Tusel	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
Hapgood	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
579:								
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Pernty----------	0-5	20-25	16.0-21.0	6.6-7.3	---	---	---	---
	5-14	25-35	17.0-25.0	6.6-7.3	---	---	---	---
	14-18	---	---	---	---	---	---	---
Tusel-----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
580:								
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Pie Creek-------	0-5	15-25	13.0-21.0	6.6-7.3	---	---	---	---
	5-23	60-70	50.0-60.0	6.6-7.3	---	---	---	---
	23-27	---	---	---	---	---	---	---
Reluctan--------	0-9	15-22	15.0-25.0	6.6-7.8	---	---	---	---
	9-27	25-35	15.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
581:								
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Hapgood---------	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
582:								
Sumine	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Tusel	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
Cleavage	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
583:								
Sumine	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Hapgood	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
Pernty	0-5	18-25	15.0-20.0	6.6-7.3	---	---	---	---
	5-14	25-35	15.0-20.0	6.6-7.3	---	---	---	---
	14-18	---	---	---	---	---	---	---
584:								
Sumine	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Tusel	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
Hapgood	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
585:								
Rock Outcrop.								
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Rubble Land-----	0-60	---	---	---	---	---	---	---
586:								
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Loncan----------	0-17	18-27	15.0-20.0	6.6-7.3	---	---	---	---
	17-30	18-27	10.0-15.0	6.6-7.3	---	---	---	---
	30-34	---	---	---	---	---	---	---
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
600:								
Hapgood---------	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
Bullump---------	0-12	15-25	15.0-30.0	6.1-7.8	---	---	---	---
	12-46	25-35	10.0-25.0	6.1-7.8	---	---	---	---
	46-50	---	---	---	---	---	---	---
Gando-----------	0-9	10-18	10.0-15.0	7.4-8.4	---	---	---	---
	9-17	10-18	5.0-10.0	7.9-8.4	1-10	---	0-2	---
	17-21	---	---	---	---	---	---	---
601:								
Hapgood---------	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Blitzen---------	0-10	20-27	14.0-22.0	6.6-7.8	---	---	---	---
	10-33	35-60	30.0-52.0	6.6-7.8	---	---	---	---
	33-37	---	---	---	---	---	---	---
Tusel----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
602:								
Hapgood---------	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
Hackwood--------	0-26	10-27	12.0-35.0	6.1-7.3	---	---	---	---
	26-34	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	34-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
Tusel----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
623:								
Rock Outcrop.								
Soughe----------	0-10	10-20	10.0-25.0	6.6-8.4	---	---	---	0-5
	10-19	25-35	20.0-30.0	6.6-8.4	---	---	0-2	0-5
	19-23	---	---	---	---	---	---	---
624:								
Rock Outcrop.								
Soughe----------	0-13	10-20	10.0-25.0	6.6-8.4	---	---	---	0-5
	13-20	25-35	20.0-30.0	6.6-8.4	---	---	0-2	0-5
	20-24	---	---	---	---	---	---	---
Soughe----------	0-13	10-20	10.0-25.0	6.6-8.4	---	---	---	0-5
	13-20	25-35	20.0-30.0	6.6-8.4	---	---	0-2	0-5
	20-24	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
625:								
Soughe----------	0-13	10-20	10.0-25.0	6.6-8.4	---	---	---	0-5
	13-20	25-35	20.0-30.0	6.6-8.4	---	---	0-2	0-5
	20-24	---	---	---	---	---	---	---
Alyan----------	0-9	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	9-16	40-55	33.0-48.0	6.6-7.8	---	---	---	---
	16-28	40-55	33.0-46.0	6.6-7.8	---	---	---	---
	28-32	40-55	32.0-45.0	6.6-7.8	---	---	---	---
	32-42	---	---	---	---	---	---	---
Shalper---------	0-2	18-26	11.0-25.0	6.6-7.3	---	---	---	---
	2-11	24-35	12.0-25.0	6.6-7.3	---	---	---	---
	11-15	---	---	---	---	---	---	---
626:								
Soughe----------	0-13	10-20	10.0-25.0	6.6-8.4	---	---	---	0-5
	13-20	25-35	20.0-30.0	6.6-8.4	---	---	0-2	0-5
	20-24	---	---	---	---	---	---	---
Vanwyper---------	0-10	18-25	15.0-25.0	6.6-7.8	---	---	---	---
	10-25	35-55	20.0-45.0	6.6-7.8	---	---	---	0-5
	25-29	---	---	---	---	---	---	---
Soughe----------	0-13	10-20	10.0-25.0	6.6-8.4	---	---	---	0-5
	13-20	25-35	20.0-30.0	6.6-8.4	---	---	0-2	0-5
	20-24	---	---	---	---	---	---	---
690:								
Welch-----------	0-10	15-20	15.0-20.0	6.1-7.3	---	---	---	---
	10-60	27-35	25.0-35.0	6.1-7.8	---	---	---	---
Welch-----------	0-10	15-20	25.0-35.0	6.1-7.3	---	---	---	---
	10-60	27-35	20.0-40.0	6.1-7.8	---	---	---	---
920:								
Bullump---------	0-12	15-25	15.0-30.0	6.1-7.8	---	---	---	---
	12-46	25-35	10.0-25.0	6.1-7.8	---	---	---	---
	46-50	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Gando----------	0-9	10-18	10.0-15.0	7.4-8.4	---	---	---	---
	9-17	10-18	5.0-10.0	7.9-8.4	1-10	---	0-2	---
	17-21	---	---	---	---	---	---	---
Tusel----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
921:								
Bullump---------	0-12	15-25	15.0-30.0	6.1-7.8	---	---	---	---
	12-46	25-35	10.0-25.0	6.1-7.8	---	---	---	---
	46-50	---	---	---	---	---	---	---
Hackwood--------	0-26	10-27	12.0-35.0	6.1-7.3	---	---	---	---
	26-34	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	34-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
922:								
Bullump---------	0-12	15-25	15.0-30.0	6.1-7.8	---	---	---	---
	12-46	25-35	10.0-25.0	6.1-7.8	---	---	---	---
	46-50	---	---	---	---	---	---	---
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Hapgood---------	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
1130:								
Clementine------	0-3	15-25	20.0-35.0	6.6-7.3	---	---	---	0-5
	3-44	25-35	25.0-45.0	6.6-9.0	0-5	---	0-2	1-12
	44-60	25-33	20.0-35.0	7.9-9.0	1-5	---	0-2	1-12

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1131:								
Clementine------	0-3	15-25	20.0-35.0	6.6-7.3	---	---	---	0-5
	3-44	25-35	25.0-45.0	6.6-9.0	0-5	---	0-2	1-12
	44-60	25-33	20.0-35.0	7.9-9.0	1-5	---	0-2	1-12
Clementine------	0-3	15-25	20.0-35.0	6.6-7.3	---	---	---	0-5
	3-44	25-35	25.0-45.0	6.6-9.0	0-5	---	0-2	1-12
	44-60	25-33	20.0-35.0	7.9-9.0	1-5	---	0-2	1-12
Clementine------	0-3	15-25	20.0-35.0	6.6-7.3	---	---	---	0-5
	3-44	25-35	25.0-45.0	6.6-9.0	0-1	---	---	0-5
	44-60	25-33	20.0-35.0	7.9-9.0	1-5	---	0-2	0-5
1135:								
Clementine------	0-3	15-25	20.0-35.0	6.6-7.3	---	---	---	0-5
	3-44	25-35	25.0-45.0	6.6-9.0	0-5	---	0-2	1-12
	44-60	25-33	20.0-35.0	7.9-9.0	1-5	---	0-2	1-12
Clurde----------	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
1150:								
Clurde----------	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
Wieland---------	0-4	18-27	15.0-30.0	7.4-8.4	---	---	0-2	---
	4-30	40-55	30.0-60.0	7.4-9.0	0-5	---	0-4	---
	30-60	10-20	20.0-40.0	7.9-9.0	5-20	---	0-8	0-5
1155:								
Clurde----------	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1156:								
Clurde----------	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
Kortty----------	0-6	8-15	5.0-15.0	7.9-9.0	---	---	0-2	5-12
	6-12	25-35	15.0-30.0	8.5-9.0	---	---	0-2	5-12
	12-42	15-25	10.0-20.0	7.9-9.0	0-5	---	0-8	13-30
	42-55	10-20	5.0-15.0	7.9-9.0	1-5	---	0-4	13-45
	55-60	---	---	---	---	---	---	---
1157:								
Clurde----------	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
Zevadez---------	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-26	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	26-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-40	---	---	---	---	---	---	---
1190:								
Cherry Spring---	0-8	10-15	8.0-13.0	6.6-7.8	---	---	---	---
	8-23	20-35	13.0-23.0	7.4-9.0	0-5	---	---	1-5
	23-45	---	---	---	---	---	---	---
Enko----------	0-8	10-18	10.0-20.0	6.6-8.4	---	---	0-4	0-5
	8-15	10-18	10.0-20.0	6.6-8.4	---	---	0-4	0-5
	15-38	10-18	5.0-15.0	7.4-9.0	1-5	---	4-16	13-45
	38-60	10-18	5.0-15.0	7.9-9.6	1-5	---	4-16	13-45
1191:								
Cherry Spring---	0-8	10-20	8.0-16.0	6.6-7.8	---	---	---	---
	8-23	20-35	13.0-23.0	7.4-9.0	0-5	---	---	1-5
	23-45	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Wieland---------	0-4	18-27	15.0-30.0	7.4-8.4	---	---	0-2	---
	4-30	40-55	30.0-60.0	7.4-9.0	0-5	---	0-4	---
	30-60	10-20	20.0-40.0	7.9-9.0	5-20	---	0-8	0-5
1193:								
Cherry Spring---	0-8	10-15	8.0-13.0	6.6-7.8	---	---	---	---
	8-23	20-35	13.0-23.0	7.4-9.0	0-5	---	---	1-5
	23-45	---	---	---	---	---	---	---
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-40	---	---	---	---	---	---	---
1210:								
Skull Creek-----	0-6	8-18	8.0-18.0	7.4-8.4	---	---	---	---
	6-34	8-18	6.0-15.0	7.9-9.0	0-10	---	0-4	0-5
	34-38	---	---	---	---	---	---	---
Shabliss--------	0-10	5-15	4.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
Puett-----------	0-3	5-10	4.0-9.0	7.9-9.0	1-5	---	0-2	---
	3-10	5-10	3.0-8.0	7.9-9.0	1-5	---	0-2	0-5
	10-14	---	---	---	---	---	---	---
1220:								
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Fulstone--------	0-5	10-20	10.0-15.0	6.1-7.3	---	---	---	---
	5-17	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	17-40	---	---	---	---	---	---	---
1221:								
Hunnton---------	0-3	20-27	15.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Fulstone--------	0-5	18-25	20.0-25.0	6.1-7.3	---	---	---	---
	5-17	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	17-40	---	---	---	---	---	---	---
1223:								
Hunnton---------	0-3	20-27	15.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Shabliss--------	0-10	5-15	4.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
Puett-----------	0-3	4-10	3.0-8.0	7.9-9.0	5-10	---	0-2	---
	3-10	8-15	5.0-11.0	7.9-9.0	5-10	---	0-2	1-12
	10-20	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1224:								
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Trunk----------	0-5	15-27	10.0-25.0	6.6-7.8	---	---	---	0-5
	5-23	35-50	20.0-45.0	6.6-9.0	0-5	---	0-2	0-12
	23-27	---	---	---	---	---	---	---
Shabliss--------	0-10	7-15	6.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
1226:								
Hunnton---------	0-3	20-27	15.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Wieland---------	0-4	18-27	15.0-30.0	7.4-8.4	---	---	0-2	---
	4-30	40-55	30.0-60.0	7.4-9.0	0-5	---	0-4	---
	30-60	10-20	20.0-40.0	7.9-9.0	5-20	---	0-8	0-5
Clementine------	0-3	15-25	20.0-35.0	6.6-7.3	---	---	---	0-5
	3-44	25-35	25.0-45.0	6.6-9.0	0-5	---	0-2	1-12
	44-60	25-33	20.0-35.0	7.9-9.0	1-5	---	0-2	1-12
1227:								
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-40	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Bilbo----------	0-5	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	5-40	35-50	20.0-30.0	6.6-7.8	---	---	---	0-12
	40-60	5-15	0.0-10.0	7.4-8.4	5-10	---	0-2	1-12
1228:								
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
1229:								
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-44	---	---	---	---	---	---	---
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-40	---	---	---	---	---	---	---
Wieland---------	0-4	8-18	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
1230:								
Fulstone---------	0-5	18-25	20.0-25.0	6.1-7.3	---	---	---	---
	5-17	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	17-40	---	---	---	---	---	---	---
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1231:								
Fulstone--------	0-5	18-25	20.0-25.0	6.1-7.3	---	---	---	---
	5-17	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	17-40	---	---	---	---	---	---	---
Fulstone--------	0-5	18-25	20.0-25.0	6.1-7.3	---	---	---	---
	5-17	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	17-40	---	---	---	---	---	---	---
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
1232:								
Fulstone--------	0-5	18-25	20.0-25.0	6.1-7.3	---	---	---	---
	5-17	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	17-40	---	---	---	---	---	---	---
Fulstone--------	0-5	10-20	10.0-15.0	6.1-7.3	---	---	---	---
	5-17	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	17-40	---	---	---	---	---	---	---
Wieland---------	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
1241:								
Enko------------	0-8	10-18	10.0-25.0	6.6-8.4	---	---	0-4	0-5
	8-15	10-18	10.0-25.0	6.6-8.4	---	---	0-4	1-12
	15-38	10-18	10.0-25.0	7.4-9.0	0-15	---	4-16	5-12
	38-60	10-18	10.0-25.0	7.9-9.6	0-5	---	4-16	13-30
Shabliss--------	0-10	5-15	4.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
Orovada---------	0-5	10-15	15.0-20.0	6.6-8.4	---	---	---	0-5
	5-29	5-18	10.0-20.0	7.4-8.4	0-5	---	0-4	0-5
	29-60	5-18	10.0-20.0	7.9-9.6	1-15	---	4-16	1-12

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1242:								
Enko----------	0-8	10-18	10.0-25.0	6.6-8.4	---	---	0-4	0-5
	8-15	10-18	10.0-25.0	6.6-8.4	---	---	0-4	1-12
	15-38	10-18	10.0-25.0	7.4-9.0	0-15	---	4-16	5-12
	38-60	10-18	10.0-25.0	7.9-9.6	0-5	---	4-16	13-30
Enko----------	0-8	10-18	10.0-25.0	6.6-8.4	---	---	0-4	0-5
	8-15	10-18	10.0-25.0	6.6-8.4	---	---	0-4	1-12
	15-38	10-18	10.0-25.0	7.4-9.0	0-15	---	4-16	5-12
	38-60	10-18	10.0-25.0	7.9-9.6	0-5	---	4-16	13-30
1260:								
Kleckner---------	0-8	15-25	13.0-21.0	6.1-7.3	---	---	---	---
	8-20	35-50	30.0-44.0	6.1-7.3	---	---	---	---
	20-42	35-50	29.0-42.0	6.6-7.8	---	---	---	---
	42-60	15-20	9.0-13.0	6.6-7.8	---	---	---	---
Upville---------	0-10	15-22	15.0-25.0	6.6-7.3	---	---	---	---
	10-19	15-27	10.0-20.0	6.6-7.3	---	---	---	---
	19-61	0-5	0.0-5.0	6.6-7.3	---	---	---	---
Fulstone---------	0-5	18-25	20.0-25.0	6.1-7.3	---	---	---	---
	5-17	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	17-40	---	---	---	---	---	---	---
1261:								
Kleckner---------	0-8	15-25	13.0-21.0	6.1-7.3	---	---	---	---
	8-20	35-50	30.0-44.0	6.1-7.3	---	---	---	---
	20-42	35-50	29.0-42.0	6.6-7.8	---	---	---	---
	42-60	15-20	9.0-13.0	6.6-7.8	---	---	---	---
Heechee---------	0-7	15-27	15.0-25.0	6.6-7.3	---	---	---	---
	7-27	25-35	20.0-30.0	6.6-7.3	---	---	---	---
	27-61	10-25	10.0-15.0	6.6-7.3	---	---	---	---
1290:								
Tweba-----------	0-15	10-20	15.0-20.0	7.4-9.0	1-10	---	0-4	1-12
	15-27	10-15	5.0-15.0	7.4-9.0	1-10	---	0-4	1-12
	27-60	5-10	0.0-10.0	7.4-9.0	1-10	---	0-2	1-5

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1350:								
Shabliss--------	0-10	7-15	6.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
Hunnton---------	0-3	20-27	15.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Bioya-----------	0-10	8-18	10.0-20.0	7.4-8.4	---	---	0-2	---
	10-36	18-27	10.0-20.0	7.4-9.6	1-5	---	2-4	5-12
	36-60	---	---	---	---	---	---	---
1351:								
Shabliss--------	0-10	5-15	4.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
1352:								
Shabliss--------	0-10	5-15	4.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
Skull Creek-----	0-6	8-18	8.0-18.0	7.4-8.4	---	---	---	---
	6-34	8-18	6.0-15.0	7.9-9.0	0-10	---	0-4	0-5
	34-38	---	---	---	---	---	---	---
Puett-----------	0-3	8-15	6.0-11.0	7.9-9.0	5-10	---	0-2	---
	3-10	8-15	5.0-11.0	7.9-9.0	5-10	---	0-2	1-12
	10-20	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1360:								
Orovada	0-5	10-15	15.0-20.0	6.6-8.4	---	---	---	0-5
	5-29	5-18	10.0-20.0	7.4-8.4	0-5	---	0-4	1-12
	29-60	5-18	10.0-20.0	7.9-9.6	0-10	0-2	4-16	13-45
1362:								
Orovada	0-5	10-15	15.0-20.0	6.6-8.4	---	---	---	0-5
	5-29	5-18	10.0-20.0	7.4-8.4	0-5	---	0-4	0-5
	29-60	5-18	10.0-20.0	7.9-9.6	1-15	---	4-16	1-12
Clurde	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
Wieland	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
1363:								
Orovada	0-5	10-15	15.0-20.0	6.6-8.4	---	---	---	0-5
	5-29	5-18	10.0-20.0	7.4-8.4	0-5	---	0-4	1-12
	29-60	5-18	10.0-20.0	7.9-9.6	0-10	0-2	4-16	13-45
Tweba	0-5	10-20	10.0-20.0	7.4-9.0	0-1	---	0-4	1-5
	5-35	10-15	7.0-13.0	7.4-9.6	1-10	---	0-4	5-12
	35-60	5-10	3.0-7.0	7.4-9.0	0-10	---	0-2	1-12
Weso	0-6	5-18	7.0-25.0	7.9-9.0	---	---	0-4	1-12
	6-12	5-20	5.0-25.0	7.9-9.0	---	---	0-8	5-12
	12-25	4-15	2.0-15.0	7.9-9.0	1-4	---	0-8	13-45
	25-60	4-12	2.0-10.0	7.9-9.0	0-5	---	4-16	13-45
1530:								
Creemon	0-8	5-10	5.0-10.0	7.9-9.0	0-5	---	2-4	13-30
	8-14	8-18	7.0-15.0	7.9-9.0	5-10	---	4-32	13-30
	14-47	8-18	7.0-15.0	7.9-9.0	5-10	---	8-32	31-90
	47-60	5-10	4.0-8.0	8.5-9.0	5-10	---	8-32	31-90
Placeritos	0-13	18-27	20.0-40.0	7.9-8.4	1-5	---	0-2	1-12
	13-60	18-27	20.0-35.0	7.9-9.0	5-10	0-1	0-4	13-30

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1572:								
Weso	0-6	5-18	7.0-25.0	7.9-9.0	---	---	0-4	1-12
	6-12	5-20	5.0-25.0	7.9-9.0	---	---	0-8	5-12
	12-25	4-15	2.0-15.0	7.9-9.0	1-4	---	0-8	13-45
	25-60	4-12	2.0-10.0	7.9-9.0	0-5	---	4-16	13-45
Orovada	0-5	10-15	15.0-20.0	6.6-8.4	---	---	---	0-5
	5-29	5-18	10.0-20.0	7.4-8.4	0-5	---	0-4	0-5
	29-60	5-18	10.0-20.0	7.9-9.6	1-15	---	4-16	1-12
Shabliss	0-10	5-15	4.0-13.0	6.6-8.4	0-5	---	0-4	---
	10-16	---	---	---	---	---	---	---
	16-35	5-18	3.0-12.0	7.9-9.0	5-15	---	4-8	1-12
	35-60	5-15	3.0-10.0	7.9-9.0	5-15	---	4-8	1-12
1573:								
Weso	0-6	5-18	7.0-25.0	7.9-9.0	---	---	0-4	1-12
	6-12	5-20	5.0-25.0	7.9-9.0	---	---	0-8	5-12
	12-25	4-15	2.0-15.0	7.9-9.0	1-4	---	0-8	13-45
	25-60	4-12	2.0-10.0	7.9-9.0	0-5	---	4-16	13-45
Orovada	0-5	10-15	15.0-20.0	6.6-8.4	---	---	---	0-5
	5-29	5-18	10.0-20.0	7.4-8.4	0-5	---	0-4	0-5
	29-60	5-18	10.0-20.0	7.9-9.6	1-15	---	4-16	1-12
Tweba	0-5	10-20	10.0-20.0	7.4-9.0	0-1	---	0-4	1-5
	5-35	10-15	7.0-13.0	7.4-9.6	1-10	---	0-4	5-12
	35-60	5-10	3.0-7.0	7.4-9.0	0-10	---	0-2	1-12
1617:								
Cleavage	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Hapgood	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Tweener---------	0-5	15-20	11.0-16.0	6.6-7.3	---	---	---	---
	5-8	25-40	17.0-36.0	6.6-7.3	---	---	---	---
	8-18	---	---	---	---	---	---	---
1618:								
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---
1619:								
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Tusk------------	0-14	10-27	10.0-25.0	6.6-7.3	---	---	---	---
	14-38	27-35	20.0-35.0	6.6-7.8	---	---	---	---
	38-60	20-35	15.0-30.0	7.4-7.8	---	---	---	---
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
1621:								
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Graley----------	0-12	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	12-17	35-45	20.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
1622:								
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Hapgood---------	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
1623:								
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Hapgood---------	0-13	15-25	15.0-25.0	6.1-7.3	---	---	---	---
	13-41	18-27	15.0-20.0	6.1-7.3	---	---	---	---
	41-55	10-15	5.0-10.0	6.1-7.3	---	---	---	---
	55-59	---	---	---	---	---	---	---
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
1625:								
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
1626:								
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Carstump--------	0-14	12-20	10.0-20.0	6.6-7.3	---	---	---	---
	14-36	40-55	35.0-45.0	6.6-9.0	1-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
Chen------------	0-7	15-25	13.0-21.0	6.1-7.8	---	---	---	---
	7-15	40-55	33.0-52.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
1628:								
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Chen------------	0-7	15-25	13.0-21.0	6.1-7.8	---	---	---	---
	7-15	40-55	33.0-52.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Reluctan--------	0-9	15-22	15.0-25.0	6.6-7.8	---	---	---	---
	9-27	25-35	15.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
1640:								
Tusk------------	0-14	10-27	10.0-25.0	6.6-7.3	---	---	---	---
	14-38	27-35	20.0-35.0	6.6-7.8	---	---	---	---
	38-60	20-35	15.0-30.0	7.4-7.8	---	---	---	---
Cleavage--------	0-4	15-25	10.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-28	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Hackwood--------	0-26	10-27	12.0-35.0	6.1-7.3	---	---	---	---
	26-34	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	34-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
1650:								
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Tusk------------	0-14	10-27	10.0-25.0	6.6-7.3	---	---	---	---
	14-38	27-35	20.0-35.0	6.6-7.8	---	---	---	---
	38-60	20-35	15.0-30.0	7.4-7.8	---	---	---	---
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1651:								
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Reluctan--------	0-9	14-18	10.0-20.0	6.6-7.8	---	---	---	---
	9-27	25-35	20.0-35.0	6.6-7.8	---	---	---	---
	27-37	---	---	---	---	---	---	---
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1652:								
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Graley----------	0-12	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	12-17	35-45	20.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1653:								
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Reluctan--------	0-9	15-22	15.0-25.0	6.6-7.8	---	---	---	---
	9-27	25-35	15.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Graley----------	0-7	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	7-17	35-45	20.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
1655:								
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Thwoop----------	0-4	14-22	10.0-17.0	6.6-7.8	---	---	---	---
	4-10	20-27	14.0-20.0	6.6-7.8	---	---	---	---
	10-25	35-45	29.0-38.0	6.6-7.8	0-5	---	---	---
	25-27	---	---	---	---	---	---	---
	27-37	---	---	---	---	---	---	---
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---
1656:								
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Gumble----------	0-4	15-20	11.0-16.0	6.6-7.8	---	---	---	---
	4-18	40-60	33.0-50.0	7.4-8.4	0-5	---	0-2	---
	18-22	---	---	---	---	---	---	---
1657:								
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Alyan----------	0-9	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
1658:								
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Vanwyper--------	0-10	18-25	15.0-25.0	6.6-7.8	---	---	---	---
	10-25	35-55	20.0-45.0	6.6-7.8	---	---	---	0-5
	25-29	---	---	---	---	---	---	---
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1659:								
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Carstump--------	0-14	12-20	10.0-20.0	6.6-7.3	---	---	---	---
	14-36	40-55	35.0-45.0	6.6-9.0	1-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
1660:								
Susie Creek-----	0-10	20-27	16.0-25.0	6.6-7.3	---	---	---	---
	10-30	35-55	24.0-40.0	6.6-7.8	---	---	---	---
	30-60	18-30	12.0-22.0	7.4-9.0	0-3	---	0-2	0-5

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Pie Creek-------	0-5	10-20	10.0-18.0	6.6-7.3	---	---	---	---
	5-23	60-70	50.0-60.0	6.6-7.3	---	---	---	---
	23-27	---	---	---	---	---	---	---
Pattani---------	0-14	40-50	34.0-38.0	6.6-7.8	---	---	---	---
	14-37	35-50	28.0-42.0	7.9-9.0	1-10	---	---	1-5
	37-41	---	---	---	---	---	---	---
1671:								
Linkup----------	0-3	10-24	5.0-20.0	6.1-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.1-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Carstump--------	0-14	15-25	10.0-25.0	6.6-7.3	---	---	---	---
	14-36	40-55	35.0-45.0	6.6-9.0	1-5	---	0-2	---
	36-60	---	---	---	---	---	---	---
Linkup----------	0-3	10-20	5.0-15.0	6.1-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.1-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
1672:								
Linkup----------	0-3	10-20	5.0-15.0	6.1-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.1-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Carstump--------	0-14	12-20	10.0-20.0	6.6-7.3	---	---	---	---
	14-36	40-55	35.0-45.0	6.6-9.0	1-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
Linkup----------	0-3	10-20	5.0-15.0	6.1-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.1-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1673:								
Linkup----------	0-3	14-20	10.0-15.0	6.1-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.6-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Quarz-----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Alyan-----------	0-9	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	9-16	40-55	33.0-48.0	6.6-7.8	---	---	---	---
	16-28	40-55	33.0-46.0	6.6-7.8	---	---	---	---
	28-32	40-55	32.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
1675:								
Linkup----------	0-3	27-33	20.0-25.0	6.6-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.6-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Snowmore--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	0-2	0-5
	4-13	20-30	15.0-30.0	7.4-7.8	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-8.4	0-15	---	0-2	0-12
	22-28	---	---	---	---	---	---	---
	28-32	---	---	---	---	---	---	---
Ratsow----------	0-7	15-20	14.0-18.0	7.4-7.8	---	---	---	---
	7-29	35-50	25.0-36.0	7.4-8.4	0-3	---	0-2	---
	29-30	---	---	---	---	---	---	---
	30-34	---	---	---	---	---	---	---
1676:								
Linkup----------	0-3	10-24	5.0-20.0	6.1-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.1-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Quarz----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
1680:								
Carstump--------	0-14	15-25	10.0-25.0	6.6-7.3	---	---	---	---
	14-36	40-55	35.0-45.0	6.6-9.0	1-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
Reluctan--------	0-9	14-18	10.0-20.0	6.6-7.8	---	---	---	---
	9-27	25-35	20.0-35.0	6.6-7.8	---	---	---	---
	27-37	---	---	---	---	---	---	---
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1685:								
Carstump--------	0-14	15-25	10.0-25.0	6.6-7.3	---	---	---	---
	14-36	40-55	35.0-45.0	6.6-9.0	1-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Graley----------	0-12	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	12-17	35-45	20.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
1686:								
Carstump--------	0-14	12-20	10.0-20.0	6.6-7.3	---	---	---	---
	14-36	40-55	35.0-45.0	6.6-9.0	1-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
Reluctan--------	0-9	14-18	10.0-20.0	6.6-7.8	---	---	---	---
	9-27	25-35	20.0-35.0	6.6-7.8	---	---	---	---
	27-37	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1687:								
Carstump--------	0-14	12-20	9.0-18.0	6.6-7.3	---	---	---	---
	14-36	40-55	33.0-46.0	6.6-9.0	0-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
Linkup----------	0-3	10-24	5.0-20.0	6.1-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.1-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Carstump--------	0-14	12-20	10.0-20.0	6.6-7.3	---	---	---	---
	14-36	40-55	35.0-45.0	6.6-9.0	1-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
1691:								
Rock Outcrop.								
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---
Rubble Land-----	0-60	---	---	---	---	---	---	---
1700:								
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Quarz-----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1702:								
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
McIvey----------	0-16	20-27	15.0-30.0	6.6-7.3	---	---	---	---
	16-29	30-40	20.0-30.0	6.1-7.3	---	---	---	---
	29-65	40-50	25.0-30.0	6.1-7.3	---	---	---	---
Blitzen---------	0-10	27-35	18.0-27.0	6.6-7.8	---	---	---	---
	10-33	35-60	30.0-52.0	6.6-7.8	---	---	---	---
	33-37	---	---	---	---	---	---	---
1703:								
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Lerrow----------	0-9	20-25	15.0-20.0	6.6-7.3	---	---	---	---
	9-14	30-40	20.0-25.0	6.6-7.3	---	---	---	---
	14-27	40-55	25.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Bullump---------	0-12	15-25	15.0-30.0	6.1-7.8	---	---	---	---
	12-46	25-35	10.0-25.0	6.1-7.8	---	---	---	---
	46-50	---	---	---	---	---	---	---
1711:								
Reluctan--------	0-9	14-18	10.0-20.0	6.6-7.8	---	---	---	---
	9-27	25-35	20.0-35.0	6.6-7.8	---	---	---	---
	27-37	---	---	---	---	---	---	---
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Cleavage--------	0-4	15-25	11.0-21.0	6.6-7.8	---	---	---	---
	4-18	20-35	14.0-25.0	6.6-7.8	---	---	---	---
	18-28	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1712:								
Reluctan--------	0-9	14-18	10.0-20.0	6.6-7.8	---	---	---	---
	9-27	25-35	20.0-35.0	6.6-7.8	---	---	---	---
	27-37	---	---	---	---	---	---	---
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
1713:								
Reluctan--------	0-9	15-22	15.0-25.0	6.6-7.8	---	---	---	---
	9-27	25-35	15.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Erakatak--------	0-4	15-27	16.0-32.0	6.6-7.3	---	---	---	---
	4-19	35-50	30.0-44.0	6.6-7.3	---	---	---	---
	19-32	40-60	33.0-52.0	6.6-7.3	---	---	---	---
	32-35	---	---	---	---	---	---	---
	35-45	---	---	---	---	---	---	---
Rugar-----------	0-2	15-27	14.0-32.0	6.1-7.3	---	---	---	---
	2-20	27-35	20.0-32.0	6.1-7.3	---	---	---	---
	20-43	40-55	28.0-45.0	6.1-7.3	---	---	---	---
	43-47	---	---	---	---	---	---	---
1720:								
Quarz-----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Alyan-----------	0-9	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	9-16	40-55	33.0-48.0	6.6-7.8	---	---	---	---
	16-28	40-55	33.0-46.0	6.6-7.8	---	---	---	---
	28-32	40-55	32.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1725:								
Quarz-----------	0-6	15-27	15.0-25.0	6.6-7.3	---	---	---	---
	6-9	30-40	20.0-30.0	6.6-7.3	---	---	---	---
	9-21	35-55	20.0-35.0	6.6-7.3	---	---	---	---
	21-25	---	---	---	---	---	---	---
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Loncan----------	0-17	18-27	15.0-20.0	6.6-7.3	---	---	---	---
	17-30	18-27	10.0-15.0	6.6-7.3	---	---	---	---
	30-34	---	---	---	---	---	---	---
1726:								
Quarz-----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---
1730:								
Graley----------	0-12	10-18	10.0-20.0	6.6-7.8	---	---	---	---
	12-17	35-45	25.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Erakatak--------	0-4	15-27	16.0-32.0	6.6-7.3	---	---	---	---
	4-19	35-50	30.0-44.0	6.6-7.3	---	---	---	---
	19-32	40-60	33.0-50.0	6.6-7.3	---	---	---	---
	32-36	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
1732:								
Graley----------	0-12	10-15	10.0-15.0	6.6-7.8	---	---	---	---
	12-17	35-45	20.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Quarz----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1733:								
Graley----------	0-12	10-15	10.0-15.0	6.6-7.8	---	---	---	---
	12-17	35-45	20.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Loncan----------	0-17	18-27	15.0-20.0	6.6-7.3	---	---	---	---
	17-30	18-27	10.0-15.0	6.6-7.3	---	---	---	---
	30-34	---	---	---	---	---	---	---
1740:								
Erakatak--------	0-4	15-27	16.0-32.0	6.6-7.3	---	---	---	---
	4-19	35-50	30.0-44.0	6.6-7.3	---	---	---	---
	19-32	40-60	33.0-50.0	6.6-7.3	---	---	---	---
	32-36	---	---	---	---	---	---	---
Cleavage--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Hackwood--------	0-26	10-27	12.0-35.0	6.1-7.3	---	---	---	---
	26-34	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	34-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1741:								
Erakatak--------	0-4	27-35	20.0-38.0	6.6-7.3	---	---	---	---
	4-19	35-50	30.0-44.0	6.6-7.3	---	---	---	---
	19-32	40-60	33.0-50.0	6.6-7.3	---	---	---	---
	32-36	---	---	---	---	---	---	---
Chen------------	0-7	20-25	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Tusk------------	0-14	10-27	10.0-25.0	6.6-7.3	---	---	---	---
	14-38	27-35	20.0-35.0	6.6-7.8	---	---	---	---
	38-60	20-35	15.0-30.0	7.4-7.8	---	---	---	---
1742:								
Erakatak--------	0-4	15-27	16.0-32.0	6.6-7.3	---	---	---	---
	4-19	35-50	30.0-44.0	6.6-7.3	---	---	---	---
	19-32	40-60	33.0-52.0	6.6-7.3	---	---	---	---
	32-35	---	---	---	---	---	---	---
	35-45	---	---	---	---	---	---	---
Rugar-----------	0-2	27-35	23.0-38.0	6.1-7.3	---	---	---	---
	2-20	27-35	20.0-32.0	6.1-7.3	---	---	---	---
	20-43	40-55	28.0-45.0	6.1-7.3	---	---	---	---
	43-47	---	---	---	---	---	---	---
Tusel-----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
1744:								
Erakatak--------	0-4	27-35	20.0-38.0	6.6-7.3	---	---	---	---
	4-19	35-50	30.0-44.0	6.6-7.3	---	---	---	---
	19-32	40-60	33.0-50.0	6.6-7.3	---	---	---	---
	32-36	---	---	---	---	---	---	---
Graley----------	0-12	10-18	10.0-20.0	6.6-7.8	---	---	---	---
	12-17	35-45	25.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Tusel----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
1746:								
Booford---------	0-10	15-25	13.0-23.0	6.1-7.3	---	---	---	---
	10-19	35-50	30.0-46.0	6.6-7.3	---	---	---	---
	19-36	40-60	33.0-52.0	6.1-7.3	---	---	---	---
	36-46	---	---	---	---	---	---	---
Cotant----------	0-3	27-40	25.0-35.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Blitzen---------	0-10	27-35	18.0-27.0	6.6-7.8	---	---	---	---
	10-33	35-60	30.0-52.0	6.6-7.8	---	---	---	---
	33-37	---	---	---	---	---	---	---
1800:								
Bregar----------	0-6	15-25	10.0-25.0	6.1-7.8	---	---	---	---
	6-11	25-35	15.0-30.0	6.1-7.8	---	---	---	---
	11-15	---	---	---	---	---	---	---
Bregar----------	0-6	15-25	10.0-25.0	6.1-7.8	---	---	---	---
	6-11	25-35	15.0-30.0	6.1-7.8	---	---	---	---
	11-15	---	---	---	---	---	---	---
Carstump--------	0-14	12-20	9.0-18.0	6.6-7.3	---	---	---	---
	14-36	40-55	33.0-46.0	6.6-9.0	0-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
1802:								
Bregar----------	0-2	15-25	10.0-25.0	6.1-7.8	---	---	---	---
	2-7	25-35	15.0-30.0	6.1-7.8	---	---	---	---
	7-11	---	---	---	---	---	---	---
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---
1803:								
Rock Outcrop.								
Bregar----------	0-2	8-15	5.0-15.0	6.1-7.8	---	---	---	---
	2-7	25-35	15.0-30.0	6.1-7.8	---	---	---	---
	7-11	---	---	---	---	---	---	---
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
1805:								
Bregar----------	0-2	15-25	15.0-25.0	6.1-7.8	---	---	---	---
	2-11	25-35	20.0-30.0	6.1-7.8	---	---	---	---
	11-15	---	---	---	---	---	---	---
Deseed----------	0-4	15-25	11.0-21.0	6.6-7.3	---	---	---	---
	4-26	35-45	29.0-40.0	6.6-7.8	---	---	---	---
	26-30	---	---	---	---	---	---	---
Linkup----------	0-3	10-20	5.0-15.0	6.1-7.3	---	---	---	---
	3-5	27-45	15.0-30.0	6.1-7.3	---	---	---	---
	5-17	40-55	25.0-35.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
1810:								
Shively---------	0-9	10-18	10.0-15.0	7.4-7.8	---	---	---	---
	9-21	10-18	10.0-15.0	7.4-7.8	---	---	---	---
	21-41	10-22	5.0-15.0	7.4-7.8	---	---	---	---
	41-60	---	---	---	---	---	---	---
Ninemile--------	0-4	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	4-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Hackwood--------	0-26	10-27	12.0-35.0	6.1-7.3	---	---	---	---
	26-34	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	34-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
1830:								
Vanwyper--------	0-10	18-25	25.0-35.0	6.6-7.3	---	---	---	---
	10-25	35-55	20.0-30.0	6.6-7.8	---	---	---	0-5
	25-29	---	---	---	---	---	---	---
Alyan-----------	0-9	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
Vanwyper--------	0-10	18-25	25.0-35.0	6.6-7.3	---	---	---	---
	10-25	35-55	20.0-30.0	6.6-7.8	---	---	---	0-5
	25-29	---	---	---	---	---	---	---
1831:								
Vanwyper--------	0-10	18-25	15.0-25.0	6.6-7.8	---	---	---	---
	10-25	35-55	20.0-45.0	6.6-7.8	---	---	---	0-5
	25-29	---	---	---	---	---	---	---
Trunk-----------	0-5	10-20	10.0-20.0	6.6-7.8	---	---	---	0-5
	5-23	35-50	20.0-40.0	6.6-9.0	0-5	---	0-2	0-12
	23-27	---	---	---	---	---	---	---
Vanwyper--------	0-10	18-25	15.0-25.0	6.6-7.8	---	---	---	---
	10-25	35-55	20.0-45.0	6.6-7.8	---	---	---	0-5
	25-29	---	---	---	---	---	---	---
1832:								
Vanwyper--------	0-10	18-25	15.0-25.0	6.6-7.8	---	---	---	---
	10-25	35-55	20.0-45.0	6.6-7.8	---	---	---	0-5
	25-29	---	---	---	---	---	---	---
Trunk-----------	0-5	27-35	20.0-30.0	6.6-7.8	---	---	---	0-5
	5-23	35-50	20.0-40.0	6.6-9.0	0-5	---	0-2	0-12
	23-27	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Trunk	0-5	27-35	20.0-30.0	6.6-7.8	---	---	---	0-5
	5-23	35-50	20.0-40.0	6.6-9.0	0-5	---	0-2	0-12
	23-27	---	---	---	---	---	---	---
1833:								
Rock Outcrop.								
Vanwyper	0-10	18-25	15.0-25.0	6.6-7.8	---	---	---	---
	10-25	35-55	20.0-45.0	6.6-7.8	---	---	---	0-5
	25-29	---	---	---	---	---	---	---
Trunk	0-5	10-20	10.0-20.0	6.6-7.8	---	---	---	0-5
	5-23	35-50	20.0-40.0	6.6-9.0	0-5	---	0-2	0-12
	23-27	---	---	---	---	---	---	---
1852:								
Gumble	0-4	15-20	11.0-16.0	6.6-7.8	---	---	---	---
	4-18	40-60	33.0-50.0	7.4-8.4	---	---	0-2	---
	18-22	---	---	---	---	---	---	---
Tuffo	0-6	5-15	10.0-30.0	6.6-7.8	---	---	---	---
	6-13	5-15	5.0-20.0	6.6-7.8	---	---	---	---
	13-17	---	---	---	---	---	---	---
Hunnton	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
1853:								
Rock Outcrop.								
Gumble	0-4	15-20	11.0-16.0	6.6-7.8	---	---	---	---
	4-18	40-60	33.0-50.0	7.4-8.4	0-5	---	0-2	---
	18-28	---	---	---	---	---	---	---
Tuffo	0-6	5-15	10.0-30.0	6.6-7.8	---	---	---	---
	6-13	5-15	5.0-20.0	6.6-7.8	---	---	---	---
	13-17	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
1854:								
Gumble----------	0-4	15-20	11.0-16.0	6.6-7.8	---	---	---	---
	4-18	40-60	33.0-50.0	7.4-8.4	0-5	---	0-2	---
	18-28	---	---	---	---	---	---	---
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
1855:								
Gumble----------	0-4	15-20	11.0-16.0	6.6-7.8	---	---	---	---
	4-18	40-60	33.0-50.0	7.4-8.4	0-5	---	0-2	---
	18-28	---	---	---	---	---	---	---
Puett Variant---	0-2	10-15	7.0-11.0	8.5-9.0	5-10	---	0-2	---
	2-17	10-15	6.0-10.0	8.5-9.0	5-10	---	0-2	1-5
	17-27	---	---	---	---	---	---	---
Xeric Torriorthents--	0-3	8-15	7.0-13.0	7.9-8.4	0-1	---	---	---
	3-7	---	---	---	---	---	---	---
1870:								
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Graley----------	0-12	10-18	10.0-20.0	6.6-7.8	---	---	---	---
	12-17	35-45	25.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Quarz----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
1871:								
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Cotant----------	0-3	20-27	20.0-25.0	6.6-7.8	---	---	---	---
	3-20	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Graley----------	0-12	10-18	10.0-20.0	6.6-7.8	---	---	---	---
	12-17	35-45	25.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
1872:								
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Tusel----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
1874:								
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Quarz----------	0-6	27-35	25.0-35.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---
Arcia----------	0-15	18-27	17.0-26.0	6.6-7.3	---	---	---	---
	15-21	30-40	28.0-38.0	6.6-7.3	---	---	---	---
	21-39	40-60	34.0-52.0	6.6-7.3	---	---	---	---
	39-43	---	---	---	---	---	---	---
1875:								
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Bregar----------	0-6	15-25	10.0-25.0	6.1-7.8	---	---	---	---
	6-11	25-35	15.0-30.0	6.1-7.8	---	---	---	---
	11-15	---	---	---	---	---	---	---
Ramires---------	0-5	27-35	20.0-27.0	6.6-7.3	---	---	---	---
	5-40	35-50	30.0-44.0	6.6-7.8	---	---	---	---
	40-44	---	---	---	---	---	---	---
1876:								
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Arcia----------	0-15	18-27	17.0-26.0	6.6-7.3	---	---	---	---
	15-21	30-40	28.0-38.0	6.6-7.3	---	---	---	---
	21-39	40-60	34.0-52.0	6.6-7.3	---	---	---	---
	39-43	---	---	---	---	---	---	---
1877:								
Chen----------	0-7	15-25	13.0-21.0	6.1-7.8	---	---	---	---
	7-15	40-55	33.0-52.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Bregar----------	0-2	8-15	5.0-15.0	6.1-7.8	---	---	---	---
	2-7	25-35	15.0-30.0	6.1-7.8	---	---	---	---
	7-11	---	---	---	---	---	---	---
Loncan----------	0-17	18-27	15.0-20.0	6.6-7.3	---	---	---	---
	17-30	18-27	10.0-15.0	6.6-7.3	---	---	---	---
	30-34	---	---	---	---	---	---	---
1880:								
Chen----------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Blitzen---------	0-9	20-27	14.0-22.0	6.6-7.8	---	---	---	---
	9-33	35-60	30.0-52.0	6.6-7.8	---	---	---	---
	33-43	---	---	---	---	---	---	---
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---
1881:								
Chen------------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Blitzen---------	0-10	27-35	18.0-27.0	6.6-7.8	---	---	---	---
	10-33	35-60	30.0-52.0	6.6-7.8	---	---	---	---
	33-37	---	---	---	---	---	---	---
Loncan----------	0-17	18-27	15.0-20.0	6.6-7.3	---	---	---	---
	17-30	18-27	10.0-15.0	6.6-7.3	---	---	---	---
	30-34	---	---	---	---	---	---	---
1888:								
Chen------------	0-7	15-25	15.0-20.0	6.6-7.8	---	---	---	---
	7-15	40-55	25.0-30.0	6.6-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Pie Creek-------	0-5	10-20	10.0-18.0	6.6-7.3	---	---	---	---
	5-16	60-70	50.0-60.0	6.6-7.3	---	---	---	---
	16-23	35-45	29.0-38.0	7.4-8.4	1-5	---	0-2	---
	23-27	---	---	---	---	---	---	---
Alyan-----------	0-9	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
1889:								
Chen------------	0-7	20-27	15.0-25.0	6.1-7.8	---	---	---	---
	7-15	40-55	25.0-40.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
1910:								
Mahala----------	0-5	20-25	15.0-20.0	6.6-7.3	---	---	---	---
	5-14	45-60	30.0-35.0	7.4-8.4	---	---	0-2	---
	14-26	35-60	20.0-35.0	7.4-8.4	0-5	---	0-2	---
	26-30	---	---	---	---	---	---	---
Ramires----------	0-5	27-35	20.0-27.0	6.6-7.3	---	---	---	---
	5-40	35-50	30.0-44.0	6.6-7.8	---	---	---	---
	40-44	---	---	---	---	---	---	---
1920:								
Lerrow----------	0-9	20-25	15.0-20.0	6.6-7.3	---	---	---	---
	9-14	30-40	20.0-25.0	6.6-7.3	---	---	---	---
	14-27	40-55	25.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Chen----------	0-7	15-25	13.0-21.0	6.1-7.8	---	---	---	---
	7-15	40-55	33.0-52.0	6.1-7.8	---	---	---	---
	15-19	---	---	---	---	---	---	---
Cotant----------	0-3	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	3-20	40-60	25.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
1921:								
Lerrow----------	0-9	20-25	15.0-20.0	6.6-7.3	---	---	---	---
	9-14	30-40	20.0-25.0	6.6-7.3	---	---	---	---
	14-27	40-55	25.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Quarz----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Rugar----------	0-2	15-27	14.0-32.0	6.1-7.3	---	---	---	---
	2-20	27-35	20.0-32.0	6.1-7.3	---	---	---	---
	20-43	40-55	28.0-45.0	6.1-7.3	---	---	---	---
	43-47	---	---	---	---	---	---	---
1931:								
Tweener---------	0-5	15-20	11.0-16.0	6.6-7.3	---	---	---	---
	5-8	25-40	17.0-36.0	6.6-7.3	---	---	---	---
	8-18	---	---	---	---	---	---	---
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
Reluctan--------	0-9	14-18	10.0-20.0	6.6-7.8	---	---	---	---
	9-27	25-35	20.0-35.0	6.6-7.8	---	---	---	---
	27-37	---	---	---	---	---	---	---
1932:								
Tweener---------	0-5	15-20	10.0-15.0	6.6-7.3	---	---	---	---
	5-8	25-40	20.0-30.0	6.6-7.3	---	---	---	---
	8-12	---	---	---	---	---	---	---
Sumine----------	0-10	10-20	20.0-30.0	6.6-7.8	---	---	---	---
	10-29	25-35	20.0-30.0	6.6-7.8	---	---	---	---
	29-33	---	---	---	---	---	---	---
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
1933:								
Tweener---------	0-5	15-20	11.0-16.0	6.6-7.3	---	---	---	---
	5-8	25-40	17.0-36.0	6.6-7.3	---	---	---	---
	8-18	---	---	---	---	---	---	---
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
1950:								
McIvey----------	0-16	20-27	15.0-25.0	6.6-7.3	---	---	---	---
	16-29	30-40	20.0-30.0	6.1-7.3	---	---	---	---
	29-65	40-50	25.0-35.0	6.1-7.3	---	---	---	---
McIvey----------	0-16	20-27	15.0-30.0	6.6-7.3	---	---	---	---
	16-29	30-40	20.0-30.0	6.1-7.3	---	---	---	---
	29-65	40-50	25.0-30.0	6.1-7.3	---	---	---	---
Tusel-----------	0-17	10-20	10.0-25.0	6.1-7.3	---	---	---	---
	17-58	25-35	15.0-35.0	6.1-7.3	---	---	---	---
	58-62	---	---	---	---	---	---	---
1980:								
Thwoop----------	0-4	14-22	10.0-17.0	6.6-7.8	---	---	---	---
	4-10	20-27	14.0-20.0	6.6-7.8	---	---	---	---
	10-25	35-45	29.0-38.0	6.6-7.8	0-5	---	---	---
	25-27	---	---	---	---	---	---	---
	27-37	---	---	---	---	---	---	---
Trunk-----------	0-5	10-20	10.0-20.0	6.6-7.8	---	---	---	0-5
	5-23	35-50	20.0-40.0	6.6-9.0	0-5	---	0-2	0-12
	23-27	---	---	---	---	---	---	---
Pequop----------	0-12	12-23	11.0-24.0	6.6-7.3	---	---	---	---
	12-50	20-35	14.0-27.0	6.6-7.8	---	---	---	---
	50-60	15-25	10.0-17.0	6.6-7.8	---	---	---	---
2000:								
Alyan-----------	0-9	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	9-16	40-55	33.0-48.0	6.6-7.8	---	---	---	---
	16-28	40-55	33.0-46.0	6.6-7.8	---	---	---	---
	28-32	40-55	32.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Cotant----------	0-3	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	3-20	40-60	25.0-50.0	6.6-7.8	---	---	---	---
	20-24	---	---	---	---	---	---	---
Akler----------	0-4	18-25	15.0-20.0	6.6-7.8	---	---	---	---
	4-18	50-60	30.0-35.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
2001:								
Alyan----------	0-9	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
Bregar----------	0-6	15-25	10.0-25.0	6.1-7.8	---	---	---	---
	6-11	25-35	15.0-30.0	6.1-7.8	---	---	---	---
	11-15	---	---	---	---	---	---	---
Alyan----------	0-9	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
2002:								
Alyan----------	0-9	27-35	20.0-35.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
Alyan----------	0-9	27-35	20.0-35.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
Quarz----------	0-6	20-27	15.0-25.0	6.6-7.8	---	---	---	---
	6-21	35-55	30.0-55.0	6.6-7.8	---	---	---	---
	21-25	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2003:								
Alyan----------	0-9	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	9-16	40-55	33.0-48.0	6.6-7.8	---	---	---	---
	16-28	40-55	33.0-46.0	6.6-7.8	---	---	---	---
	28-32	40-55	32.0-45.0	6.6-7.8	---	---	---	---
	32-42	---	---	---	---	---	---	---
Deepeek---------	0-5	15-20	11.0-16.0	7.4-7.8	---	---	---	---
	5-18	25-35	16.0-23.0	7.9-9.0	0-1	---	0-4	1-12
	18-24	---	---	---	---	---	---	---
	24-42	10-20	6.0-13.0	8.5-9.0	1-5	---	0-8	13-30
Susie Creek-----	0-10	10-20	9.0-20.0	7.4-7.8	---	---	---	---
	10-30	35-55	24.0-40.0	6.6-7.8	---	---	---	---
	30-60	18-30	12.0-22.0	7.4-9.0	0-3	---	0-2	0-5
2004:								
Alyan----------	0-9	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	9-16	40-55	33.0-48.0	6.6-7.8	---	---	---	---
	16-28	40-55	33.0-46.0	6.6-7.8	---	---	---	---
	28-32	40-55	32.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
Ninemile--------	0-4	20-27	14.0-20.0	6.1-7.8	---	---	---	---
	4-19	40-60	38.0-52.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Alyan----------	0-9	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---
2005:								
Rock Outcrop.								
Alyan----------	0-9	18-27	10.0-25.0	6.6-7.8	---	---	---	---
	9-16	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	16-28	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	28-32	40-55	25.0-45.0	6.6-7.8	---	---	---	---
	32-36	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Graley----------	0-12	10-15	10.0-15.0	6.6-7.8	---	---	---	---
	12-17	35-45	20.0-35.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
2171:								
Deseed----------	0-4	15-25	11.0-21.0	6.6-7.3	---	---	---	---
	4-26	35-45	29.0-40.0	6.6-7.8	---	---	---	---
	26-30	---	---	---	---	---	---	---
Reluctan--------	0-9	15-22	15.0-25.0	6.6-7.8	---	---	---	---
	9-27	25-35	15.0-30.0	6.6-7.8	---	---	---	---
	27-31	---	---	---	---	---	---	---
Cleavage--------	0-4	15-25	15.0-25.0	6.6-7.8	---	---	---	---
	4-18	20-35	15.0-30.0	6.6-7.8	---	---	---	---
	18-22	---	---	---	---	---	---	---
2173:								
Deseed----------	0-4	15-25	11.0-21.0	6.6-7.3	---	---	---	---
	4-26	35-45	29.0-40.0	6.6-7.8	---	---	---	---
	26-30	---	---	---	---	---	---	---
Quarz-----------	0-6	15-27	15.0-25.0	6.6-7.3	---	---	---	---
	6-15	30-40	20.0-30.0	6.6-7.3	---	---	---	---
	15-21	35-55	20.0-35.0	6.6-7.3	---	---	---	---
	21-25	---	---	---	---	---	---	---
2205:								
Coltroop--------	0-5	15-20	11.0-16.0	7.4-7.8	---	---	0-2	1-5
	5-17	20-30	13.0-20.0	7.4-8.4	0-5	---	0-2	1-12
	17-32	---	---	---	---	---	---	---
	32-42	---	---	---	---	---	---	---
Snowmore--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	0-2	0-5
	4-13	20-30	15.0-30.0	7.4-7.8	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-8.4	0-15	---	0-2	0-12
	22-29	---	---	---	---	---	---	---
	29-39	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2206:								
Coltroop	0-5	12-18	9.0-15.0	7.4-8.4	---	---	---	---
	5-17	20-30	13.0-20.0	7.4-8.4	0-5	---	0-2	1-12
	17-32	---	---	---	---	---	---	---
	32-42	---	---	---	---	---	---	---
Vanwyper	0-10	18-25	13.0-19.0	6.6-7.3	---	---	---	---
	10-25	35-55	28.0-45.0	6.6-7.8	---	---	---	---
	25-29	---	---	---	---	---	---	---
2310:								
Bulake	0-7	18-25	13.0-19.0	6.6-7.3	---	---	---	---
	7-19	40-50	33.0-42.0	6.6-7.3	---	---	---	---
	19-23	---	---	---	---	---	---	---
Deunah	0-9	15-27	15.0-25.0	5.6-7.3	---	---	---	---
	9-26	60-70	40.0-60.0	6.6-7.8	---	---	---	---
	26-33	---	---	---	---	---	---	---
Bulake	0-7	15-20	11.0-16.0	6.6-7.3	---	---	---	---
	7-19	40-50	33.0-42.0	6.6-7.3	---	---	---	---
	19-23	---	---	---	---	---	---	---
2311:								
Bulake	0-7	15-20	11.0-16.0	6.6-7.3	---	---	---	---
	7-19	40-50	33.0-42.0	6.6-7.3	---	---	---	---
	19-23	---	---	---	---	---	---	---
Hatpeak	0-10	15-25	15.0-30.0	6.1-7.3	---	---	---	---
	10-30	35-50	30.0-50.0	6.6-7.8	---	---	0-2	---
	30-60	---	---	---	---	---	---	---
Petan	0-6	18-27	15.0-22.0	6.1-7.8	---	---	---	---
	6-19	40-60	34.0-52.0	6.1-7.8	---	---	---	---
	19-20	---	---	---	---	---	---	---
	20-30	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2505:								
Buffaran--------	0-5	10-18	8.0-15.0	6.6-7.8	---	---	---	---
	5-18	35-50	29.0-42.0	6.6-8.4	---	---	0-2	---
	18-25	---	---	---	---	---	---	---
	25-60	---	---	---	---	---	---	---
Zevadez---------	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
2511:								
Bilbo-----------	0-5	5-10	5.0-10.0	6.6-7.3	---	---	---	---
	5-40	35-50	20.0-30.0	6.6-7.8	---	---	---	0-12
	40-60	5-15	0.0-10.0	7.4-8.4	5-10	---	0-2	1-12
Alley-----------	0-7	7-15	6.0-19.0	6.6-7.3	---	---	---	---
	7-20	20-30	17.0-20.0	7.4-8.4	---	---	2-4	1-5
	20-40	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
	40-60	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
Deepeek---------	0-5	15-20	11.0-16.0	7.4-7.8	---	---	---	---
	5-18	25-35	16.0-23.0	7.9-9.0	0-1	---	0-4	1-12
	18-24	---	---	---	---	---	---	---
	24-42	10-20	6.0-13.0	8.5-9.0	1-5	---	0-8	13-30
2514:								
Bilbo-----------	0-5	10-20	5.0-20.0	6.6-7.8	---	---	---	---
	5-40	35-50	20.0-40.0	6.6-7.8	---	---	0-2	0-12
	40-60	5-15	5.0-10.0	7.4-8.4	10-20	---	0-2	1-12
Susie Creek-----	0-10	10-20	9.0-20.0	7.4-7.8	---	---	---	---
	10-30	35-55	24.0-40.0	6.6-7.8	---	---	---	---
	30-60	18-30	12.0-22.0	7.4-9.0	0-3	---	0-2	0-5
Buffaran--------	0-5	10-18	8.0-15.0	6.6-7.8	---	---	---	---
	5-18	35-50	29.0-42.0	6.6-8.4	---	---	0-2	---
	18-25	---	---	---	---	---	---	---
	25-60	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2521:								
Dewar	0-4	15-20	10.0-20.0	6.6-8.4	---	---	---	---
	4-14	27-35	15.0-30.0	6.6-8.4	1-5	---	---	---
	14-19	20-27	10.0-20.0	8.5-9.0	5-10	---	0-2	---
	19-32	---	---	---	---	---	---	---
	32-60	10-15	5.0-15.0	7.9-9.6	20-30	---	0-4	---
Chiara	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
Chiara	0-6	10-18	15.0-25.0	7.4-8.4	---	---	---	0-5
	6-17	10-18	15.0-40.0	7.4-8.4	0-1	---	0-2	5-25
	17-21	---	---	---	---	---	---	---
2522:								
Dewar	0-4	15-20	10.0-20.0	6.6-8.4	---	---	---	---
	4-14	27-35	15.0-30.0	6.6-8.4	1-5	---	---	---
	14-19	20-27	10.0-20.0	8.5-9.0	5-10	---	0-2	---
	19-32	---	---	---	---	---	---	---
	32-60	10-15	5.0-15.0	7.9-9.6	20-30	---	0-4	---
Sodhouse	0-6	10-18	5.0-15.0	7.9-8.4	0-5	---	---	1-12
	6-19	10-18	5.0-15.0	7.9-9.0	5-15	---	0-2	13-30
	19-25	---	---	---	---	---	---	---
	25-60	5-15	5.0-10.0	7.9-9.0	5-10	---	0-8	13-45
2531:								
Rock Outcrop.								
Clurde Variant	0-13	18-27	13.0-20.0	6.6-7.3	---	---	---	---
	13-19	20-25	13.0-17.0	6.6-7.3	---	---	---	---
	19-32	5-15	3.0-10.0	6.6-7.8	---	---	0-2	---
	32-42	---	---	---	---	---	---	---
Clurde	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2541:								
Kelk	0-13	15-20	10.0-20.0	6.6-8.4	0-5	---	0-4	1-5
	13-48	18-27	20.0-30.0	7.4-8.4	1-5	---	0-8	5-12
	48-60	18-27	20.0-30.0	8.5-9.0	1-5	---	4-16	13-30
2545:								
Kelk	0-13	15-20	10.0-20.0	6.6-8.4	0-5	---	0-4	1-5
	13-48	18-27	20.0-30.0	7.4-8.4	1-5	---	0-8	5-12
	48-60	18-27	20.0-30.0	8.5-9.0	1-5	---	4-16	13-30
Clurde	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
2555:								
Piline	0-12	35-40	20.0-30.0	7.4-7.8	---	---	---	---
	12-60	35-50	20.0-40.0	7.4-7.8	---	---	0-2	0-5
2560:								
McCleary	0-4	20-27	12.0-17.0	7.9-8.4	---	---	0-2	---
	4-60	40-50	32.0-41.0	7.9-8.4	---	---	0-2	---
2561:								
McCleary	0-5	20-27	12.0-17.0	7.9-8.4	---	---	0-2	---
	5-60	40-50	32.0-41.0	7.9-8.4	---	---	0-2	---
2571:								
Chiara	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
Chiara	0-6	10-18	15.0-25.0	7.4-8.4	---	---	---	0-5
	6-17	10-18	15.0-40.0	7.4-8.4	0-1	---	0-2	5-25
	17-21	---	---	---	---	---	---	---
Chiara	0-6	10-18	15.0-25.0	7.4-8.4	---	---	---	0-5
	6-17	10-18	15.0-40.0	7.4-8.4	0-1	---	0-2	5-25
	17-21	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2572:								
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
Chiara----------	0-4	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	4-14	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	14-18	---	---	---	---	---	---	---
2573:								
Chiara----------	0-6	10-18	15.0-25.0	7.4-8.4	---	---	---	0-5
	6-17	10-18	15.0-40.0	7.4-8.4	0-1	---	0-2	5-25
	17-21	---	---	---	---	---	---	---
Chiara----------	0-6	10-18	15.0-25.0	7.4-8.4	---	---	---	0-5
	6-17	10-18	15.0-40.0	7.4-8.4	0-1	---	0-2	5-25
	17-21	---	---	---	---	---	---	---
2575:								
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
Dacker----------	0-6	10-20	15.0-20.0	6.6-7.8	---	---	---	---
	6-25	27-35	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	25-32	25-33	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	32-60	---	---	---	---	---	---	---
Shalake---------	0-8	12-18	9.0-17.0	7.4-8.4	---	---	---	---
	8-25	12-18	8.0-15.0	7.4-9.0	0-5	---	0-4	0-5
	25-60	---	---	---	---	---	---	---
2577:								
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
Orovada---------	0-5	10-15	15.0-20.0	6.6-8.4	---	---	---	0-5
	5-29	5-18	10.0-20.0	7.4-8.4	0-5	---	0-4	0-5
	29-60	5-18	10.0-20.0	7.9-9.6	1-15	---	4-16	1-12

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2600:								
Shalake	0-8	12-18	9.0-17.0	7.4-8.4	---	---	---	---
	8-25	12-18	8.0-15.0	7.4-9.0	0-5	---	0-4	0-5
	25-60	---	---	---	---	---	---	---
Chiara	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
Shalake	0-8	12-18	9.0-17.0	7.4-8.4	---	---	---	---
	8-25	12-18	8.0-15.0	7.4-9.0	0-5	---	0-4	0-5
	25-60	---	---	---	---	---	---	---
2611:								
Dacker	0-6	15-25	20.0-25.0	6.6-7.8	---	---	---	---
	6-25	27-35	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	25-32	25-33	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	32-60	---	---	---	---	---	---	---
Hunnton	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
2612:								
Dacker	0-6	10-20	15.0-20.0	6.6-7.8	---	---	---	---
	6-25	27-35	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	25-32	25-33	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	32-60	---	---	---	---	---	---	---
Zevadez	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
2615:								
Dacker	0-6	10-20	15.0-20.0	6.6-7.8	---	---	---	---
	6-25	27-35	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	25-32	25-33	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	32-60	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
2621:								
Gochea----------	0-9	10-20	10.0-15.0	6.6-7.8	---	---	---	---
	9-25	25-35	15.0-25.0	7.4-7.8	---	---	---	---
	25-30	10-15	5.0-10.0	7.4-7.8	---	---	---	---
	30-60	2-5	0.0-5.0	7.4-7.8	0-1	---	---	---
Susie Creek-----	0-10	20-27	16.0-25.0	6.6-7.3	---	---	---	---
	10-30	35-55	24.0-40.0	6.6-7.8	---	---	---	---
	30-60	18-30	12.0-22.0	7.4-9.0	0-3	---	0-2	0-5
Carstump--------	0-14	12-20	9.0-18.0	6.6-7.3	---	---	---	---
	14-36	40-55	33.0-46.0	6.6-9.0	0-5	---	0-2	---
	36-40	---	---	---	---	---	---	---
2641:								
Olac------------	0-4	15-22	11.0-17.0	6.1-7.8	---	---	---	---
	4-14	23-30	15.0-20.0	6.1-7.8	---	---	---	---
	14-18	---	---	---	---	---	---	---
Snowmore--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	0-2	0-5
	4-13	20-30	15.0-30.0	7.4-7.8	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-8.4	0-15	---	0-2	0-12
	22-29	---	---	---	---	---	---	---
	29-39	---	---	---	---	---	---	---
2650:								
Wieland---------	0-4	18-27	15.0-30.0	7.4-8.4	---	---	0-2	---
	4-30	40-55	30.0-60.0	7.4-9.0	0-5	---	0-4	---
	30-60	10-20	20.0-40.0	7.9-9.0	5-20	---	0-8	0-5
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Zevadez	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
2651:								
Wieland	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
Buffaran	0-5	10-18	8.0-15.0	6.6-7.8	---	---	---	---
	5-18	35-50	29.0-42.0	6.6-8.4	---	---	0-2	---
	18-25	---	---	---	---	---	---	---
	25-60	---	---	---	---	---	---	---
2652:								
Wieland	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
Dacker	0-6	15-25	20.0-25.0	6.6-7.8	---	---	---	---
	6-25	27-35	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	25-32	25-33	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	32-60	---	---	---	---	---	---	---
Zevadez	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
2655:								
Wieland	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
Gumble	0-4	15-20	11.0-16.0	6.6-7.8	---	---	---	---
	4-18	40-60	33.0-50.0	7.4-8.4	0-5	---	0-2	---
	18-28	---	---	---	---	---	---	---
Bilbo	0-5	15-25	10.0-25.0	6.6-7.8	---	---	---	---
	5-40	35-50	20.0-40.0	6.6-7.8	---	---	0-2	0-12
	40-60	5-15	5.0-10.0	7.4-8.4	10-20	---	0-2	1-12

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2656:								
Wieland---------	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
Hunnton---------	0-3	10-25	10.0-25.0	7.4-8.4	---	---	0-4	0-5
	3-6	20-30	15.0-25.0	7.9-8.4	---	---	0-4	0-5
	6-36	45-55	35.0-55.0	7.4-8.4	0-5	---	0-4	1-5
	36-40	---	---	---	---	---	---	---
Thwoop----------	0-4	14-22	10.0-17.0	6.6-7.8	---	---	---	---
	4-10	20-27	14.0-20.0	6.6-7.8	---	---	---	---
	10-25	35-45	29.0-38.0	6.6-7.8	0-5	---	---	---
	25-27	---	---	---	---	---	---	---
	27-37	---	---	---	---	---	---	---
2658:								
Wieland---------	0-5	18-27	15.0-30.0	7.4-8.4	---	---	0-2	---
	5-26	40-55	30.0-60.0	7.4-9.0	0-5	---	0-4	---
	26-52	27-35	25.0-40.0	7.9-9.0	5-20	---	0-8	0-5
	52-60	10-20	20.0-40.0	7.9-9.0	5-20	---	0-8	0-5
2666:								
Puett-----------	0-3	5-10	4.0-9.0	7.9-9.0	1-5	---	0-2	---
	3-10	5-10	3.0-8.0	7.9-9.0	1-5	0-1	0-2	0-5
	10-14	---	---	---	---	---	---	---
Orovada---------	0-5	10-15	15.0-20.0	6.6-8.4	---	---	---	0-5
	5-29	5-18	10.0-20.0	7.4-8.4	0-5	---	0-4	0-5
	29-60	5-18	10.0-20.0	7.9-9.6	1-15	---	4-16	1-12
2667:								
Rock Outcrop.								
Puett-----------	0-3	10-20	10.0-20.0	7.9-9.0	1-5	---	0-2	0-5
	3-10	5-10	5.0-10.0	7.9-9.0	1-5	---	0-2	5-12
	10-14	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Clurde----------	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
2668:								
Puett----------	0-3	10-20	10.0-20.0	7.9-9.0	1-5	---	0-2	0-5
	3-10	5-10	5.0-10.0	7.9-9.0	1-5	---	0-2	5-12
	10-14	---	---	---	---	---	---	---
Yuko----------	0-4	10-18	10.0-20.0	6.1-7.3	---	---	---	---
	4-14	30-40	25.0-35.0	6.1-8.4	---	---	0-2	---
	14-18	---	---	---	---	---	---	---
Zevadez---------	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
2710:								
Ramires---------	0-5	15-20	11.0-16.0	7.4-7.8	---	---	---	---
	5-24	35-40	29.0-36.0	7.4-8.4	0-1	---	---	---
	24-40	15-20	10.0-14.0	7.9-8.4	1-5	---	0-2	---
	40-50	---	---	---	---	---	---	---
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
Bilbo----------	0-5	10-20	5.0-20.0	6.6-7.8	---	---	---	---
	5-40	35-50	20.0-40.0	6.6-7.8	---	---	0-2	0-12
	40-60	5-15	5.0-10.0	7.4-8.4	10-20	---	0-2	1-12
2711:								
Ramires---------	0-5	15-20	11.0-16.0	7.4-7.8	---	---	---	---
	5-24	35-40	29.0-36.0	7.4-8.4	0-1	---	---	---
	24-40	15-20	10.0-14.0	7.9-8.4	1-5	---	0-2	---
	40-50	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Bilbo----------	0-5	10-20	5.0-20.0	6.6-7.8	---	---	---	---
	5-40	35-50	20.0-40.0	6.6-7.8	---	---	0-2	0-12
	40-60	5-15	5.0-10.0	7.4-8.4	10-20	---	0-2	1-12
Buffaran--------	0-5	10-18	8.0-15.0	6.6-7.8	---	---	---	---
	5-18	35-50	29.0-42.0	6.6-8.4	---	---	0-2	---
	18-25	---	---	---	---	---	---	---
	25-60	---	---	---	---	---	---	---
2741:								
Wilsor----------	0-7	15-20	11.0-16.0	6.6-7.3	---	---	---	---
	7-17	25-35	16.0-23.0	7.4-8.4	---	---	0-2	---
	17-46	15-25	9.0-16.0	8.5-9.0	5-10	---	4-8	13-45
	46-56	---	---	---	---	---	---	---
Wilsor----------	0-7	15-20	11.0-16.0	6.6-7.3	---	---	---	---
	7-17	25-35	16.0-23.0	7.4-8.4	---	---	0-2	---
	17-46	15-25	9.0-16.0	8.5-9.0	5-10	---	4-8	13-45
	46-56	---	---	---	---	---	---	---
2751:								
Yuko----------	0-4	10-18	10.0-20.0	6.1-7.3	---	---	---	---
	4-14	30-40	25.0-35.0	6.1-8.4	---	---	0-2	---
	14-18	---	---	---	---	---	---	---
Chime----------	0-6	18-25	13.0-19.0	7.4-7.8	---	---	---	---
	6-15	27-35	17.0-23.0	7.4-7.8	---	---	0-2	---
	15-22	20-35	12.0-22.0	7.4-8.4	---	---	0-2	---
	22-32	---	---	---	---	---	---	---
Clurde----------	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
2775:								
Zevadez----------	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
Wieland---------	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
2776:								
Zevadez---------	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
2777:								
Zevadez---------	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
Wieland---------	0-4	8-22	10.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
Clurde----------	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
2778:								
Zevadez---------	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
Yuko------------	0-4	10-18	10.0-20.0	6.1-7.3	---	---	---	---
	4-14	30-40	25.0-35.0	6.1-8.4	---	---	0-2	---
	14-18	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Kelk	0-13	15-20	10.0-20.0	6.6-8.4	0-5	---	0-4	1-5
	13-48	18-27	20.0-30.0	7.4-8.4	1-5	---	0-8	5-12
	48-60	18-27	20.0-30.0	8.5-9.0	1-5	---	4-16	13-30
2780:								
Snowmore	0-4	10-20	10.0-20.0	7.4-7.8	---	---	---	0-5
	4-13	20-30	10.0-25.0	7.4-9.0	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-9.0	0-5	---	0-2	5-12
	22-28	---	---	---	---	---	---	---
	28-38	---	---	---	---	---	---	---
Snowmore	0-4	15-20	15.0-20.0	6.6-7.8	---	---	0-2	0-5
	4-13	20-30	15.0-30.0	7.4-7.8	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-8.4	0-15	---	0-2	0-12
	22-29	---	---	---	---	---	---	---
	29-39	---	---	---	---	---	---	---
2781:								
Snowmore	0-4	10-20	10.0-20.0	7.4-7.8	---	---	---	0-5
	4-13	20-30	10.0-25.0	7.4-9.0	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-9.0	0-5	---	0-2	5-12
	22-28	---	---	---	---	---	---	---
	28-38	---	---	---	---	---	---	---
Snowmore	0-4	15-25	10.0-25.0	7.4-7.8	---	---	---	0-5
	4-13	20-30	10.0-25.0	7.4-9.0	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-9.0	0-5	---	0-2	5-12
	22-28	---	---	---	---	---	---	---
	28-38	---	---	---	---	---	---	---
Snowmore	0-4	15-20	15.0-20.0	6.6-7.8	---	---	0-2	0-5
	4-13	20-30	15.0-30.0	7.4-7.8	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-8.4	0-15	---	0-2	0-12
	22-29	---	---	---	---	---	---	---
	29-39	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
2782:								
Snowmore--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	0-2	0-5
	4-13	20-30	15.0-30.0	7.4-7.8	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-8.4	0-15	---	0-2	0-12
	22-29	---	---	---	---	---	---	---
	29-39	---	---	---	---	---	---	---
Zevadez---------	0-10	10-20	10.0-20.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
Snowmore--------	0-4	10-20	10.0-20.0	7.4-7.8	---	---	---	0-5
	4-13	20-30	10.0-25.0	7.4-9.0	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-9.0	0-5	---	0-2	5-12
	22-28	---	---	---	---	---	---	---
	28-38	---	---	---	---	---	---	---
2783:								
Snowmore--------	0-4	15-20	15.0-20.0	6.6-7.8	---	---	0-2	0-5
	4-13	20-30	15.0-30.0	7.4-7.8	---	---	0-2	0-12
	13-22	25-35	15.0-30.0	7.9-8.4	0-15	---	0-2	0-12
	22-29	---	---	---	---	---	---	---
	29-39	---	---	---	---	---	---	---
Willhill--------	0-6	18-25	15.0-25.0	6.6-7.8	---	---	---	---
	6-11	27-35	20.0-30.0	6.6-7.8	---	---	---	---
	11-23	16-25	10.0-25.0	7.9-9.0	15-30	---	0-2	0-5
	23-27	---	---	---	---	---	---	---
2790:								
Old Camp--------	0-6	10-20	8.0-16.0	6.6-7.8	---	---	0-2	0-5
	6-16	27-35	17.0-23.0	6.6-9.0	0-5	---	0-2	0-5
	16-20	---	---	---	---	---	---	---
Troughs---------	0-2	20-27	15.0-25.0	7.4-8.4	---	---	0-2	0-5
	2-14	27-35	20.0-30.0	7.4-9.0	0-10	---	0-2	0-5
	14-20	---	---	---	---	---	---	---
	20-24	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Olac	0-4	15-22	11.0-17.0	6.1-7.8	---	---	---	---
	4-14	23-30	15.0-20.0	6.1-7.8	---	---	---	---
	14-18	---	---	---	---	---	---	---
2801:								
Bartome	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
Alley	0-7	10-20	0.0-20.0	6.6-8.4	---	---	---	0-5
	7-20	20-30	10.0-25.0	6.6-8.4	10-20	---	0-2	0-5
	20-40	10-20	5.0-20.0	7.9-9.0	15-30	---	2-8	1-12
	40-60	5-10	4.0-7.0	7.9-9.0	15-30	---	2-8	1-12
Clurde	0-6	15-20	12.0-18.0	6.6-7.8	---	---	---	---
	6-29	18-23	13.0-18.0	7.9-8.4	0-1	---	0-2	0-5
	29-43	15-20	10.0-15.0	7.9-8.4	0-3	---	0-2	0-5
	43-60	5-10	3.0-8.0	7.9-8.4	0-3	---	0-2	0-5
2802:								
Bartome	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
Buffaran	0-5	10-18	8.0-15.0	6.6-7.8	---	---	---	---
	5-18	35-50	29.0-42.0	6.6-8.4	---	---	0-2	---
	18-25	---	---	---	---	---	---	---
	25-60	---	---	---	---	---	---	---
2803:								
Bartome	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
Buffaran	0-5	10-18	8.0-15.0	6.6-7.8	---	---	---	---
	5-18	35-50	29.0-42.0	6.6-8.4	---	---	0-2	---
	18-25	---	---	---	---	---	---	---
	25-60	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Ramires---------	0-5	15-20	11.0-16.0	7.4-7.8	---	---	---	---
	5-24	35-40	29.0-36.0	7.4-8.4	0-1	---	---	---
	24-40	15-20	10.0-14.0	7.9-8.4	1-5	---	0-2	---
	40-50	---	---	---	---	---	---	---
2804:								
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
2805:								
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
2807:								
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
Coltroop--------	0-5	15-20	11.0-16.0	7.4-7.8	---	---	0-2	1-5
	5-17	20-30	13.0-20.0	7.4-8.4	0-5	---	0-2	1-12
	17-32	---	---	---	---	---	---	---
	32-42	---	---	---	---	---	---	---
Zevadez---------	0-10	15-25	10.0-25.0	6.6-7.8	---	---	---	---
	10-19	20-35	10.0-30.0	7.4-8.4	0-4	---	---	1-12
	19-60	10-20	5.0-15.0	7.4-8.4	0-4	---	0-2	---
2808:								
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Susie Creek-----	0-10	10-20	9.0-20.0	7.4-7.8	---	---	---	---
	10-30	35-55	24.0-40.0	6.6-7.8	---	---	---	---
	30-60	18-30	12.0-22.0	7.4-9.0	0-3	---	0-2	0-5
Wieland---------	0-4	5-20	5.0-20.0	7.4-8.4	---	---	0-2	0-5
	4-30	40-55	25.0-45.0	7.4-9.0	0-5	---	0-4	2-12
	30-60	10-20	5.0-15.0	7.9-9.0	5-20	---	0-8	2-12
2809:								
Bartome---------	0-7	12-20	15.0-25.0	6.6-8.4	---	---	---	---
	7-14	27-35	15.0-30.0	6.6-9.0	0-5	---	0-4	0-5
	14-28	---	---	---	---	---	---	---
	28-42	---	---	---	---	---	---	---
Dacker----------	0-6	15-25	20.0-25.0	6.6-7.8	---	---	---	---
	6-25	27-35	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	25-32	25-33	25.0-35.0	7.4-8.4	---	---	0-4	0-5
	32-60	---	---	---	---	---	---	---
2820:								
Rock Outcrop.								
Alley-----------	0-7	7-15	6.0-19.0	6.6-7.3	---	---	---	---
	7-20	20-30	17.0-20.0	7.4-8.4	---	---	2-4	1-5
	20-40	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
	40-60	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
Vanwyper--------	0-10	18-25	13.0-19.0	6.6-7.3	---	---	---	---
	10-25	35-55	28.0-45.0	6.6-7.8	---	---	---	---
	25-29	---	---	---	---	---	---	---
2822:								
Rock Outcrop.								
Rubble Land.								
Alley-----------	0-7	7-15	6.0-19.0	6.6-7.3	---	---	---	---
	7-20	20-30	17.0-20.0	7.4-8.4	---	---	2-4	1-5
	20-40	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
	40-60	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
3000:								
Handy----------	0-10	10-25	8.0-19.0	6.6-7.8	---	---	---	---
	10-28	40-50	33.0-42.0	6.6-8.4	0-10	---	---	---
	28-60	5-15	3.0-10.0	7.9-9.0	5-10	---	0-2	1-12
Wilsor----------	0-7	15-20	11.0-16.0	6.6-7.3	---	---	---	---
	7-17	25-35	16.0-23.0	7.4-8.4	---	---	0-2	---
	17-46	15-25	9.0-16.0	8.5-9.0	5-10	---	4-8	13-45
	46-56	---	---	---	---	---	---	---
Deseed----------	0-4	15-25	11.0-21.0	6.6-7.3	---	---	---	---
	4-26	35-45	29.0-40.0	6.6-7.8	---	---	---	---
	26-30	---	---	---	---	---	---	---
3010:								
Relley----------	0-6	18-27	25.0-40.0	7.9-9.0	0-5	---	0-2	0-5
	6-14	18-27	20.0-35.0	7.9-9.0	1-5	---	0-2	0-5
	14-25	18-27	20.0-35.0	7.9-9.0	1-5	---	0-2	0-5
	25-60	18-27	20.0-35.0	7.9-9.0	5-15	---	8-32	25-60
Kelk----------	0-13	15-20	10.0-20.0	6.6-8.4	0-5	---	0-4	1-5
	13-48	18-27	20.0-30.0	7.4-8.4	1-5	---	0-8	5-12
	48-60	18-27	20.0-30.0	8.5-9.0	1-5	---	4-16	13-30
3020:								
Sodhouse--------	0-6	10-18	10.0-25.0	7.9-8.4	0-5	---	0-2	5-12
	6-19	10-18	10.0-25.0	7.9-9.0	0-10	---	0-2	13-30
	19-25	---	---	---	---	---	---	---
	25-56	5-15	5.0-10.0	7.9-9.0	5-10	---	0-8	13-45
Chiara----------	0-6	10-18	15.0-28.0	6.6-8.4	---	---	0-2	0-5
	6-17	10-18	15.0-28.0	6.6-9.0	0-25	---	0-4	5-25
	17-21	---	---	---	---	---	---	---
3030:								
Deepeek---------	0-5	15-20	11.0-16.0	7.4-7.8	---	---	---	---
	5-18	25-35	16.0-23.0	7.9-9.0	0-1	---	0-4	1-12
	18-24	---	---	---	---	---	---	---
	24-42	10-20	6.0-13.0	8.5-9.0	1-5	---	0-8	13-30

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Alley	0-7	10-20	8.0-16.0	6.6-7.3	---	---	---	---
	7-20	20-30	17.0-20.0	7.4-8.4	---	---	2-4	1-5
	20-40	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
	40-60	5-10	3.0-7.0	7.9-9.0	1-5	---	4-8	5-12
3100:								
Ratsow	0-7	15-20	14.0-18.0	7.4-7.8	---	---	---	---
	7-29	35-50	25.0-36.0	7.4-8.4	0-3	---	0-2	---
	29-30	---	---	---	---	---	---	---
	30-34	---	---	---	---	---	---	---
Quarz	0-6	15-27	15.0-25.0	6.6-7.3	---	---	---	---
	6-15	30-40	20.0-30.0	6.6-7.3	---	---	---	---
	15-21	35-55	20.0-35.0	6.6-7.3	---	---	---	---
	21-25	---	---	---	---	---	---	---
Susie Creek	0-10	20-27	16.0-25.0	6.6-7.3	---	---	---	---
	10-30	35-55	24.0-40.0	6.6-7.8	---	---	---	---
	30-60	18-30	12.0-22.0	7.4-9.0	0-3	---	0-2	0-5
3510:								
Midraw	0-2	18-25	10.0-25.0	6.6-7.8	---	---	---	0-5
	2-19	35-45	20.0-35.0	6.6-8.4	---	---	0-2	0-12
	19-25	---	---	---	---	---	---	---
	25-29	---	---	---	---	---	---	---
Troughs	0-2	20-27	15.0-25.0	7.4-8.4	---	---	0-2	0-5
	2-14	27-35	20.0-30.0	7.4-9.0	0-10	---	0-2	0-5
	14-19	18-32	10.0-25.0	7.9-9.6	15-40	---	0-4	2-10
	19-20	---	---	---	---	---	---	---
	20-24	---	---	---	---	---	---	---
Midraw	0-2	18-25	10.0-25.0	6.6-7.8	---	---	---	0-5
	2-19	35-45	20.0-35.0	6.6-8.4	---	---	0-2	0-12
	19-25	---	---	---	---	---	---	---
	25-29	---	---	---	---	---	---	---
3710:								
Rock Outcrop.								

TABLE 17.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	pH	Pct	Pct	mmhos/cm	
Petan	0-6	18-27	15.0-22.0	6.1-7.8	---	---	---	---
	6-19	40-60	34.0-52.0	6.1-7.8	---	---	---	---
	19-20	---	---	---	---	---	---	---
	20-30	---	---	---	---	---	---	---
Bulake	0-7	18-25	13.0-19.0	6.6-7.3	---	---	---	---
	7-19	40-50	33.0-42.0	6.6-7.3	---	---	---	---
	19-23	---	---	---	---	---	---	---
3715:								
Petan	0-6	18-27	15.0-22.0	6.1-7.8	---	---	---	---
	6-19	40-60	34.0-52.0	6.1-7.8	---	---	---	---
	19-20	---	---	---	---	---	---	---
	20-30	---	---	---	---	---	---	---
Deunah	0-9	15-27	15.0-25.0	5.6-7.3	---	---	---	---
	9-26	60-70	40.0-60.0	6.6-7.8	---	---	---	---
	26-33	---	---	---	---	---	---	---
Hatpeak	0-10	15-25	15.0-30.0	6.1-7.3	---	---	---	---
	10-30	35-50	30.0-50.0	6.6-7.8	---	---	0-2	---
	30-60	---	---	---	---	---	---	---
3721:								
Hatpeak	0-10	15-25	15.0-30.0	6.1-7.3	---	---	---	---
	10-30	35-50	30.0-50.0	6.6-7.8	---	---	0-2	---
	30-60	---	---	---	---	---	---	---
Deunah	0-9	15-27	15.0-25.0	5.6-7.3	---	---	---	---
	9-26	60-70	40.0-60.0	6.6-7.8	---	---	---	---
	26-33	---	---	---	---	---	---	---
3722:								
Hatpeak	0-10	15-25	15.0-30.0	6.1-7.3	---	---	---	---
	10-30	35-50	30.0-50.0	6.6-7.8	---	---	0-2	---
	30-60	---	---	---	---	---	---	---
Hatpeak	0-10	15-25	15.0-30.0	6.1-7.3	---	---	---	---
	10-30	35-50	30.0-50.0	6.6-7.8	---	---	0-2	---
	30-60	---	---	---	---	---	---	---

TABLE 18.--WATER FEATURES

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1:									
Rubble Land-----	A	None	---	---	>6.0	---	---	---	---
120:									
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Lerrow----------	C	None	---	---	>6.0	---	---	---	---
Cotant----------	D	None	---	---	>6.0	---	---	---	---
126:									
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Lerrow----------	C	None	---	---	>6.0	---	---	---	---
Akler-----------	D	None	---	---	>6.0	---	---	---	---
127:									
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Lerrow----------	C	None	---	---	>6.0	---	---	---	---
128:									
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Graley----------	D	None	---	---	>6.0	---	---	---	---
129:									
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Chen------------	D	None	---	---	>6.0	---	---	---	---
Crooked Creek---	D	Occasional	Brief	Mar-Jun	1.0-1.5	Apparent	Jan-Jul	---	---
130:									
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Booford---------	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
140:									
Upville	B	Frequent	Long	Feb-Jun	>6.0	---	---	---	---
Upville	B	None	---	---	>6.0	---	---	---	---
141:									
Upville	B	None	---	---	>6.0	---	---	---	---
Kleckner	C	None	---	---	>6.0	---	---	---	---
150:									
Gochea	B	None	---	---	>6.0	---	---	---	---
161:									
Sonoma	B	None	---	---	>6.0	---	---	---	---
162:									
Sonoma	C	Occasional	Long	Mar-Jun	3.5-5.0	Apparent	Mar-Jun	---	---
184:									
Crooked Creek	D	Frequent	Brief	Mar-Jun	1.0-1.5	Apparent	Jan-Jul	---	---
185:									
Crooked Creek	D	Frequent	Brief	Mar-Jun	1.0-1.5	Apparent	Jan-Jul	---	---
Crooked Creek	D	Frequent	Brief	Mar-Jun	1.0-1.5	Apparent	Jan-Jul	---	---
186:									
Crooked Creek	D	Frequent	Brief	Mar-Jun	1.0-1.5	Apparent	Jan-Jul	---	---
Crooked Creek	D	Occasional	Brief	Mar-Jun	1.0-1.5	Apparent	Jan-Jul	---	---
Crooked Creek	C	Rare	---	---	5.0-6.0	Apparent	Jan-Mar	---	---
188:									
Crooked Creek	D	Frequent	Brief	Mar-Jun	1.0-1.5	Apparent	Jan-Jul	---	---
Welch	B	Rare	---	---	4.0-6.0	Apparent	Mar-Jun	---	---
Crooked Creek	C	Rare	---	---	5.0-6.0	Apparent	Jan-Mar	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				Maximum ponding depth
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	
					Ft				Ft
190:									
Heechee	B	None	---	---	>6.0	---	---	---	---
Heechee	B	None	---	---	>6.0	---	---	---	---
200:									
Lynnbow	D	None	---	---	>6.0	---	---	---	---
Rugar	C	None	---	---	>6.0	---	---	---	---
201:									
Lynnbow	D	None	---	---	>6.0	---	---	---	---
Lerrow	C	None	---	---	>6.0	---	---	---	---
Crooked Creek	D	Occasional	Brief	Mar-Jun	1.0-1.5	Apparent	Jan-Jul	---	---
210:									
Soonaker	C	None	---	---	>6.0	---	---	---	---
Bulake	D	None	---	---	>6.0	---	---	---	---
220:									
Cavanaugh	C	None	---	---	>6.0	---	---	---	---
Rugar	C	None	---	---	>6.0	---	---	---	---
McIvey	C	None	---	---	>6.0	---	---	---	---
221:									
Cavanaugh	C	None	---	---	>6.0	---	---	---	---
Quarz	C	None	---	---	>6.0	---	---	---	---
Alyan	C	None	---	---	>6.0	---	---	---	---
233:									
Bioya	C	None	---	---	>6.0	---	---	---	---
Bilbo	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Chiara----------	D	None	---	---	>6.0	---	---	---	---
234:									
Bioya----------	C	None	---	---	>6.0	---	---	---	---
Shabliss--------	D	None	---	---	>6.0	---	---	---	---
Puett----------	D	None	---	---	>6.0	---	---	---	---
235:									
Bioya----------	C	None	---	---	>6.0	---	---	---	---
Trunk----------	D	None	---	---	>6.0	---	---	---	---
Alley----------	B	None	---	---	>6.0	---	---	---	---
236:									
Bioya----------	C	None	---	---	>6.0	---	---	---	---
Wieland---------	C	None	---	---	>6.0	---	---	---	---
Kleckner--------	C	None	---	---	>6.0	---	---	---	---
241:									
Wickahoney------	D	None	---	---	>6.0	---	---	---	---
Deunah----------	D	None	---	---	>6.0	---	---	---	---
Petan----------	D	None	---	---	>6.0	---	---	---	---
270:									
Pernty----------	D	None	---	---	>6.0	---	---	---	---
Loncan----------	C	None	---	---	>6.0	---	---	---	---
Pernty----------	D	None	---	---	>6.0	---	---	---	---
280:									
Humboldt--------	D	Occasional	Long	Feb-Jun	0.5-2.0	Apparent	Dec-Jun	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
308:									
Akler	D	None	---	---	>6.0	---	---	---	---
Pattani	D	None	---	---	>6.0	---	---	---	---
Cotant	D	None	---	---	>6.0	---	---	---	---
309:									
Akler	D	None	---	---	>6.0	---	---	---	---
Susie Creek	C	None	---	---	>6.0	---	---	---	---
457:									
Donna	D	None	---	---	>6.0	---	---	---	---
Stampede	D	None	---	---	>6.0	---	---	---	---
Short Creek	C	None	---	---	>6.0	---	---	---	---
458:									
Donna	D	None	---	---	>6.0	---	---	---	---
Stampede	D	None	---	---	>6.0	---	---	---	---
464:									
Stampede	D	None	---	---	>6.0	---	---	---	---
570:									
Sumine	C	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
571:									
Sumine	C	None	---	---	>6.0	---	---	---	---
Tusel	B	None	---	---	>6.0	---	---	---	---
Gando	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
572:									
Sumine	C	None	---	---	>6.0	---	---	---	---
Reluctan	C	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---
576:									
Sumine	C	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---
577:									
Sumine	C	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
Chen	D	None	---	---	>6.0	---	---	---	---
578:									
Sumine	C	None	---	---	>6.0	---	---	---	---
Tusel	B	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
579:									
Sumine	C	None	---	---	>6.0	---	---	---	---
Pernty	D	None	---	---	>6.0	---	---	---	---
Tusel	B	None	---	---	>6.0	---	---	---	---
580:									
Sumine	C	None	---	---	>6.0	---	---	---	---
Pie Creek	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Reluctan--------	C	None	---	---	>6.0	---	---	---	---
581:									
Sumine----------	C	None	---	---	>6.0	---	---	---	---
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
582:									
Sumine----------	C	None	---	---	>6.0	---	---	---	---
Tusel-----------	B	None	---	---	>6.0	---	---	---	---
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
583:									
Sumine----------	C	None	---	---	>6.0	---	---	---	---
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
Pernty----------	D	None	---	---	>6.0	---	---	---	---
584:									
Sumine----------	C	None	---	---	>6.0	---	---	---	---
Tusel-----------	B	None	---	---	>6.0	---	---	---	---
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
585:									
Sumine----------	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
Rubble Land-----	A	None	---	---	>6.0	---	---	---	---
586:									
Sumine----------	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Loncan----------	C	None	---	---	>6.0	---	---	---	---
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
600:									
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
Bullump---------	B	None	---	---	>6.0	---	---	---	---
Gando-----------	D	None	---	---	>6.0	---	---	---	---
601:									
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
Blitzen---------	C	None	---	---	>6.0	---	---	---	---
Tusel-----------	B	None	---	---	>6.0	---	---	---	---
602:									
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
Hackwood--------	B	None	---	---	>6.0	---	---	---	---
Tusel-----------	B	None	---	---	>6.0	---	---	---	---
623:									
Soughe----------	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
624:									
Soughe----------	D	None	---	---	>6.0	---	---	---	---
Soughe----------	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
625:									
Soughe----------	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Alyan	C	None	---	---	>6.0	---	---	---	---
Shalper	D	None	---	---	>6.0	---	---	---	---
626:									
Soughe	D	None	---	---	>6.0	---	---	---	---
Vanwyper	C	None	---	---	>6.0	---	---	---	---
Soughe	D	None	---	---	>6.0	---	---	---	---
690:									
Welch	B	Rare	---	---	4.0-6.0	Apparent	Mar-Jun	---	---
Welch	D	Frequent	Brief	Mar-Jun	1.0-1.5	Apparent	Nov-Jun	---	---
920:									
Bullump	B	None	---	---	>6.0	---	---	---	---
Gando	D	None	---	---	>6.0	---	---	---	---
Tusel	B	None	---	---	>6.0	---	---	---	---
921:									
Bullump	B	None	---	---	>6.0	---	---	---	---
Hackwood	B	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---
922:									
Bullump	B	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
1130:									
Clementine	B	Rare	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1131:									
Clementine	B	Rare	---	---	>6.0	---	---	---	---
Clementine	B	Rare	---	---	>6.0	---	---	---	---
Clementine	C	Occasional	Brief	Feb-May	1.5-2.0	Apparent	Feb-Jul	---	---
1135:									
Clementine	B	Rare	---	---	>6.0	---	---	---	---
Clurde	B	None	---	---	>6.0	---	---	---	---
1150:									
Clurde	B	None	---	---	>6.0	---	---	---	---
Wieland	C	None	---	---	>6.0	---	---	---	---
1155:									
Clurde	B	None	---	---	>6.0	---	---	---	---
1156:									
Clurde	B	None	---	---	>6.0	---	---	---	---
Kortty	B	None	---	---	>6.0	---	---	---	---
1157:									
Clurde	B	None	---	---	>6.0	---	---	---	---
Zevadez	C	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
1190:									
Cherry Spring	C	None	---	---	>6.0	---	---	---	---
Enko	C	None	---	---	>6.0	---	---	---	---
1191:									
Cherry Spring	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Wieland---------	C	None	---	---	>6.0	---	---	---	---
1193:									
Cherry Spring---	C	None	---	---	>6.0	---	---	---	---
Hunnton---------	C	None	---	---	>6.0	---	---	---	---
Chiara----------	D	None	---	---	>6.0	---	---	---	---
1210:									
Skull Creek-----	C	None	---	---	>6.0	---	---	---	---
Shabliss--------	D	None	---	---	>6.0	---	---	---	---
Puett-----------	D	None	---	---	>6.0	---	---	---	---
1220:									
Hunnton---------	C	None	---	---	>6.0	---	---	---	---
Hunnton---------	C	None	---	---	>6.0	---	---	---	---
Fulstone--------	D	None	---	---	>6.0	---	---	---	---
1221:									
Hunnton---------	C	None	---	---	>6.0	---	---	---	---
Hunnton---------	C	None	---	---	>6.0	---	---	---	---
Fulstone--------	D	None	---	---	>6.0	---	---	---	---
1223:									
Hunnton---------	C	None	---	---	>6.0	---	---	---	---
Shabliss--------	D	None	---	---	>6.0	---	---	---	---
Puett-----------	D	None	---	---	>6.0	---	---	---	---
1224:									
Hunnton---------	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Trunk	D	None	---	---	>6.0	---	---	---	---
Shabliss	D	None	---	---	>6.0	---	---	---	---
1226:									
Hunnton	C	None	---	---	>6.0	---	---	---	---
Wieland	C	None	---	---	>6.0	---	---	---	---
Clementine	B	Rare	---	---	>6.0	---	---	---	---
1227:									
Hunnton	C	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
Bilbo	C	None	---	---	>6.0	---	---	---	---
1228:									
Hunnton	C	None	---	---	>6.0	---	---	---	---
Hunnton	C	None	---	---	>6.0	---	---	---	---
1229:									
Hunnton	C	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
Wieland	C	None	---	---	>6.0	---	---	---	---
1230:									
Fulstone	D	None	---	---	>6.0	---	---	---	---
Hunnton	C	None	---	---	>6.0	---	---	---	---
1231:									
Fulstone	D	None	---	---	>6.0	---	---	---	---
Fulstone	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Hunnton---------	C	None	---	---	>6.0	---	---	---	---
1232:									
Fulstone--------	D	None	---	---	>6.0	---	---	---	---
Fulstone--------	D	None	---	---	>6.0	---	---	---	---
Wieland---------	C	None	---	---	>6.0	---	---	---	---
1241:									
Enko------------	C	None	---	---	>6.0	---	---	---	---
Shabliss--------	D	None	---	---	>6.0	---	---	---	---
Orovada---------	B	None	---	---	>6.0	---	---	---	---
1242:									
Enko------------	C	None	---	---	>6.0	---	---	---	---
Enko------------	C	None	---	---	>6.0	---	---	---	---
1260:									
Kleckner--------	C	None	---	---	>6.0	---	---	---	---
Upville---------	B	None	---	---	>6.0	---	---	---	---
Fulstone--------	D	None	---	---	>6.0	---	---	---	---
1261:									
Kleckner--------	C	None	---	---	>6.0	---	---	---	---
Heechee---------	B	None	---	---	>6.0	---	---	---	---
1290:									
Tweba-----------	B	Rare	---	---	3.5-5.0	Apparent	Feb-Jun	---	---
1350:									
Shabliss--------	D	None	---	---	>6.0	---	---	---	---
Hunnton---------	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Bioya----------	C	None	---	---	>6.0	---	---	---	---
1351:									
Shabliss--------	D	None	---	---	>6.0	---	---	---	---
Bartome---------	D	None	---	---	>6.0	---	---	---	---
1352:									
Shabliss--------	D	None	---	---	>6.0	---	---	---	---
Skull Creek-----	C	None	---	---	>6.0	---	---	---	---
Puett-----------	D	None	---	---	>6.0	---	---	---	---
1360:									
Orovada---------	B	Rare	---	---	>6.0	---	---	---	---
1362:									
Orovada---------	B	None	---	---	>6.0	---	---	---	---
Clurde----------	B	None	---	---	>6.0	---	---	---	---
Wieland---------	C	None	---	---	>6.0	---	---	---	---
1363:									
Orovada---------	B	Rare	---	---	>6.0	---	---	---	---
Twaba-----------	C	Rare	---	---	3.0-3.5	Apparent	Feb-Jun	---	---
Weso------------	B	None	---	---	>6.0	---	---	---	---
1530:									
Creemon---------	B	None	---	---	>6.0	---	---	---	---
Placeritos------	B	None	---	---	>6.0	---	---	---	---
1572:									
Weso------------	B	None	---	---	>6.0	---	---	---	---
Orovada---------	B	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				Maximum ponding depth
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	
					Ft				Ft
Shabliss	D	None	---	---	>6.0	---	---	---	---
1573:									
Weso	B	None	---	---	>6.0	---	---	---	---
Orovada	B	None	---	---	>6.0	---	---	---	---
Tweba	C	Rare	---	---	3.0-3.5	Apparent	Feb-Jun	---	---
1617:									
Cleavage	D	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
Tweener	D	None	---	---	>6.0	---	---	---	---
1618:									
Cleavage	D	None	---	---	>6.0	---	---	---	---
Sumine	C	None	---	---	>6.0	---	---	---	---
Pequop	B	None	---	---	>6.0	---	---	---	---
1619:									
Cleavage	D	None	---	---	>6.0	---	---	---	---
Tusk	B	None	---	---	>6.0	---	---	---	---
Sumine	C	None	---	---	>6.0	---	---	---	---
1621:									
Cleavage	D	None	---	---	>6.0	---	---	---	---
Graley	D	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---
1622:									
Cleavage	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Sumine----------	C	None	---	---	>6.0	---	---	---	---
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
1623:									
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
Sumine----------	C	None	---	---	>6.0	---	---	---	---
1625:									
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Sumine----------	C	None	---	---	>6.0	---	---	---	---
1626:									
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
Carstump--------	C	None	---	---	>6.0	---	---	---	---
Chen------------	D	None	---	---	>6.0	---	---	---	---
1628:									
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
Chen------------	D	None	---	---	>6.0	---	---	---	---
Reluctan--------	C	None	---	---	>6.0	---	---	---	---
1640:									
Tusk------------	B	None	---	---	>6.0	---	---	---	---
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
Hackwood--------	B	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1650:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Tusk	B	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1651:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Reluctan	C	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1652:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Graley	D	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1653:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Reluctan	C	None	---	---	>6.0	---	---	---	---
Graley	D	None	---	---	>6.0	---	---	---	---
1655:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Thwoop	C	None	---	---	>6.0	---	---	---	---
Pequop	B	None	---	---	>6.0	---	---	---	---
1656:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Pequop	B	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Gumble----------	D	None	---	---	>6.0	---	---	---	---
1657:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Alyan-----------	C	None	---	---	>6.0	---	---	---	---
1658:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Vanwyper--------	C	None	---	---	>6.0	---	---	---	---
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
1659:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Carstump--------	C	None	---	---	>6.0	---	---	---	---
1660:									
Susie Creek-----	C	None	---	---	>6.0	---	---	---	---
Pie Creek-------	D	None	---	---	>6.0	---	---	---	---
Pattani---------	D	None	---	---	>6.0	---	---	---	---
1671:									
Linkup----------	D	None	---	---	>6.0	---	---	---	---
Carstump--------	C	None	---	---	>6.0	---	---	---	---
Linkup----------	D	None	---	---	>6.0	---	---	---	---
1672:									
Linkup----------	D	None	---	---	>6.0	---	---	---	---
Carstump--------	C	None	---	---	>6.0	---	---	---	---
Linkup----------	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1673:									
Linkup	D	None	---	---	>6.0	---	---	---	---
Quarz	C	None	---	---	>6.0	---	---	---	---
Alyan	C	None	---	---	>6.0	---	---	---	---
1675:									
Linkup	D	None	---	---	>6.0	---	---	---	---
Snowmore	C	None	---	---	>6.0	---	---	---	---
Ratsow	C	None	---	---	>6.0	---	---	---	---
1676:									
Linkup	D	None	---	---	>6.0	---	---	---	---
Quarz	C	None	---	---	>6.0	---	---	---	---
1680:									
Carstump	C	None	---	---	>6.0	---	---	---	---
Reluctan	C	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1685:									
Carstump	C	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
Graley	D	None	---	---	>6.0	---	---	---	---
1686:									
Carstump	C	None	---	---	>6.0	---	---	---	---
Reluctan	C	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1687:									
Carstump	C	None	---	---	>6.0	---	---	---	---
Linkup	D	None	---	---	>6.0	---	---	---	---
Carstump	C	None	---	---	>6.0	---	---	---	---
1691:									
Pequop	B	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
Rubble Land	A	None	---	---	>6.0	---	---	---	---
1700:									
Cotant	D	None	---	---	>6.0	---	---	---	---
Quarz	C	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1702:									
Cotant	D	None	---	---	>6.0	---	---	---	---
McIvey	C	None	---	---	>6.0	---	---	---	---
Blitzen	C	None	---	---	>6.0	---	---	---	---
1703:									
Cotant	D	None	---	---	>6.0	---	---	---	---
Lerrow	C	None	---	---	>6.0	---	---	---	---
Bullump	B	None	---	---	>6.0	---	---	---	---
1711:									
Reluctan	C	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				Maximum ponding depth
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	
					Ft				Ft
Cleavage	D	None	---	---	>6.0	---	---	---	---
1712:									
Reluctan	C	None	---	---	>6.0	---	---	---	---
Sumine	C	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---
1713:									
Reluctan	C	None	---	---	>6.0	---	---	---	---
Erakatak	C	None	---	---	>6.0	---	---	---	---
Rugar	C	None	---	---	>6.0	---	---	---	---
1720:									
Quarz	C	None	---	---	>6.0	---	---	---	---
Alyan	C	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1725:									
Quarz	C	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---
Loncan	C	None	---	---	>6.0	---	---	---	---
1726:									
Quarz	C	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
Pequop	B	None	---	---	>6.0	---	---	---	---
1730:									
Graley	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Erakatak--------	C	None	---	---	>6.0	---	---	---	---
Chen------------	D	None	---	---	>6.0	---	---	---	---
1732:									
Graley----------	D	None	---	---	>6.0	---	---	---	---
Quarz-----------	C	None	---	---	>6.0	---	---	---	---
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
1733:									
Graley----------	D	None	---	---	>6.0	---	---	---	---
Loncan----------	C	None	---	---	>6.0	---	---	---	---
1740:									
Erakatak--------	C	None	---	---	>6.0	---	---	---	---
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
Hackwood--------	B	None	---	---	>6.0	---	---	---	---
1741:									
Erakatak--------	C	None	---	---	>6.0	---	---	---	---
Chen------------	D	None	---	---	>6.0	---	---	---	---
Tusk------------	B	None	---	---	>6.0	---	---	---	---
1742:									
Erakatak--------	C	None	---	---	>6.0	---	---	---	---
Rugar-----------	C	None	---	---	>6.0	---	---	---	---
Tusel-----------	B	None	---	---	>6.0	---	---	---	---
1744:									
Erakatak--------	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Graley----------	D	None	---	---	>6.0	---	---	---	---
Tusel----------	B	None	---	---	>6.0	---	---	---	---
1746:									
Booford---------	C	None	---	---	>6.0	---	---	---	---
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Blitzen---------	C	None	---	---	>6.0	---	---	---	---
1800:									
Bregar----------	D	None	---	---	>6.0	---	---	---	---
Bregar----------	D	None	---	---	>6.0	---	---	---	---
Carstump--------	C	None	---	---	>6.0	---	---	---	---
1802:									
Bregar----------	D	None	---	---	>6.0	---	---	---	---
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Pequop----------	B	None	---	---	>6.0	---	---	---	---
1803:									
Bregar----------	D	None	---	---	>6.0	---	---	---	---
Sumine----------	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
1805:									
Bregar----------	D	None	---	---	>6.0	---	---	---	---
Deseed----------	C	None	---	---	>6.0	---	---	---	---
Linkup----------	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1810:									
Shively	B	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
Hackwood	B	None	---	---	>6.0	---	---	---	---
1830:									
Vanwyper	C	None	---	---	>6.0	---	---	---	---
Alyan	C	None	---	---	>6.0	---	---	---	---
Vanwyper	C	None	---	---	>6.0	---	---	---	---
1831:									
Vanwyper	C	None	---	---	>6.0	---	---	---	---
Trunk	D	None	---	---	>6.0	---	---	---	---
Vanwyper	C	None	---	---	>6.0	---	---	---	---
1832:									
Vanwyper	C	None	---	---	>6.0	---	---	---	---
Trunk	D	None	---	---	>6.0	---	---	---	---
Trunk	D	None	---	---	>6.0	---	---	---	---
1833:									
Vanwyper	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
Trunk	D	None	---	---	>6.0	---	---	---	---
1852:									
Gumble	D	None	---	---	>6.0	---	---	---	---
Tuffo	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Hunnton---	C	None	---	---	>6.0	---	---	---	---
1853:									
Gumble---	D	None	---	---	>6.0	---	---	---	---
Tuffo---	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop---		None	---	---	>6.0	---	---	---	---
1854:									
Gumble---	D	None	---	---	>6.0	---	---	---	---
Chen---	D	None	---	---	>6.0	---	---	---	---
1855:									
Gumble---	D	None	---	---	>6.0	---	---	---	---
Puett Variant---	D	None	---	---	>6.0	---	---	---	---
Xeric Torriorthents--	D	None	---	---	>6.0	---	---	---	---
1870:									
Chen---	D	None	---	---	>6.0	---	---	---	---
Graley---	D	None	---	---	>6.0	---	---	---	---
Quarz---	C	None	---	---	>6.0	---	---	---	---
1871:									
Chen---	D	None	---	---	>6.0	---	---	---	---
Cotant---	D	None	---	---	>6.0	---	---	---	---
Graley---	D	None	---	---	>6.0	---	---	---	---
1872:									
Chen---	D	None	---	---	>6.0	---	---	---	---
Sumine---	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Tusel	B	None	---	---	>6.0	---	---	---	---
1874:									
Chen	D	None	---	---	>6.0	---	---	---	---
Quarz	C	None	---	---	>6.0	---	---	---	---
Arcia	C	None	---	---	>6.0	---	---	---	---
1875:									
Chen	D	None	---	---	>6.0	---	---	---	---
Bregar	D	None	---	---	>6.0	---	---	---	---
Ramires	C	None	---	---	>6.0	---	---	---	---
1876:									
Chen	D	None	---	---	>6.0	---	---	---	---
Chen	D	None	---	---	>6.0	---	---	---	---
Arcia	C	None	---	---	>6.0	---	---	---	---
1877:									
Chen	D	None	---	---	>6.0	---	---	---	---
Bregar	D	None	---	---	>6.0	---	---	---	---
Loncan	C	None	---	---	>6.0	---	---	---	---
1880:									
Chen	D	None	---	---	>6.0	---	---	---	---
Blitzen	C	None	---	---	>6.0	---	---	---	---
Pequop	B	None	---	---	>6.0	---	---	---	---
1881:									
Chen	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Blitzen	C	None	---	---	>6.0	---	---	---	---
Loncan	C	None	---	---	>6.0	---	---	---	---
1888:									
Chen	D	None	---	---	>6.0	---	---	---	---
Pie Creek	D	None	---	---	>6.0	---	---	---	---
Alyan	C	None	---	---	>6.0	---	---	---	---
1889:									
Chen	D	None	---	---	>6.0	---	---	---	---
Sumine	C	None	---	---	>6.0	---	---	---	---
1910:									
Mahala	D	None	---	---	>6.0	---	---	---	---
Ramires	C	None	---	---	>6.0	---	---	---	---
1920:									
Lerrow	C	None	---	---	>6.0	---	---	---	---
Chen	D	None	---	---	>6.0	---	---	---	---
Cotant	D	None	---	---	>6.0	---	---	---	---
1921:									
Lerrow	C	None	---	---	>6.0	---	---	---	---
Quarz	C	None	---	---	>6.0	---	---	---	---
Rugar	C	None	---	---	>6.0	---	---	---	---
1931:									
Tweener	D	None	---	---	>6.0	---	---	---	---
Cleavage	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Reluctan--------	C	None	---	---	>6.0	---	---	---	---
1932:									
Tweener---------	D	None	---	---	>6.0	---	---	---	---
Sumine----------	C	None	---	---	>6.0	---	---	---	---
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
1933:									
Tweener---------	D	None	---	---	>6.0	---	---	---	---
Pequop----------	B	None	---	---	>6.0	---	---	---	---
Cleavage--------	D	None	---	---	>6.0	---	---	---	---
1950:									
McIvey----------	C	None	---	---	>6.0	---	---	---	---
McIvey----------	C	None	---	---	>6.0	---	---	---	---
Tusel-----------	B	None	---	---	>6.0	---	---	---	---
1980:									
Thwoop----------	C	None	---	---	>6.0	---	---	---	---
Trunk-----------	D	None	---	---	>6.0	---	---	---	---
Pequop----------	B	None	---	---	>6.0	---	---	---	---
2000:									
Alyan-----------	C	None	---	---	>6.0	---	---	---	---
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Akler-----------	D	None	---	---	>6.0	---	---	---	---
2001:									
Alyan-----------	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Bregar----------	D	None	---	---	>6.0	---	---	---	---
Alyan----------	C	None	---	---	>6.0	---	---	---	---
2002:									
Alyan----------	C	None	---	---	>6.0	---	---	---	---
Alyan----------	C	None	---	---	>6.0	---	---	---	---
Quarz----------	C	None	---	---	>6.0	---	---	---	---
2003:									
Alyan----------	C	None	---	---	>6.0	---	---	---	---
Deepeek---------	D	None	---	---	>6.0	---	---	---	---
Susie Creek-----	C	None	---	---	>6.0	---	---	---	---
2004:									
Alyan----------	C	None	---	---	>6.0	---	---	---	---
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Alyan----------	C	None	---	---	>6.0	---	---	---	---
2005:									
Alyan----------	C	None	---	---	>6.0	---	---	---	---
Graley----------	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
2171:									
Deseed----------	C	None	---	---	>6.0	---	---	---	---
Reluctan--------	C	None	---	---	>6.0	---	---	---	---
Cleavage--------	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
2173:									
Deseed----------	C	None	---	---	>6.0	---	---	---	---
Quarz----------	C	None	---	---	>6.0	---	---	---	---
2205:									
Coltroop--------	D	None	---	---	>6.0	---	---	---	---
Snowmore--------	C	None	---	---	>6.0	---	---	---	---
2206:									
Coltroop--------	D	None	---	---	>6.0	---	---	---	---
Vanwyper--------	C	None	---	---	>6.0	---	---	---	---
2310:									
Bulake----------	D	None	---	---	>6.0	---	---	---	---
Deunah----------	D	None	---	---	>6.0	---	---	---	---
Bulake----------	D	None	---	---	>6.0	---	---	---	---
2311:									
Bulake----------	D	None	---	---	>6.0	---	---	---	---
Hatpeak---------	C	None	---	---	>6.0	---	---	---	---
Petan-----------	D	None	---	---	>6.0	---	---	---	---
2505:									
Buffaran--------	D	None	---	---	>6.0	---	---	---	---
Zevadez---------	C	None	---	---	>6.0	---	---	---	---
2511:									
Bilbo-----------	C	None	---	---	>6.0	---	---	---	---
Alley-----------	B	None	---	---	>6.0	---	---	---	---
Deepeek---------	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
2514:									
Bilbo	C	None	---	---	>6.0	---	---	---	---
Susie Creek	C	None	---	---	>6.0	---	---	---	---
Buffaran	D	None	---	---	>6.0	---	---	---	---
2521:									
Dewar	D	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
2522:									
Dewar	D	None	---	---	>6.0	---	---	---	---
Sodhouse	D	None	---	---	>6.0	---	---	---	---
2531:									
Clurde Variant	C	Occasional	Brief	APR-JUN	>6.0	---	---	---	---
Clurde	B	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
2541:									
Kelk	C	Occasional	Long	Feb-Jun	>6.0	---	---	---	---
2545:									
Kelk	C	None	---	---	>6.0	---	---	---	---
Clurde	B	None	---	---	>6.0	---	---	---	---
2555:									
Piline	D	None	---	---	-1.0-2.0	Perched	Jan-Jul	Long	1.0
2560:									
McCleary	D	Occasional	Long	Mar-Jun	0.5-1.5	Perched	Feb-May	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
2561:									
McCleary	D	Rare	---	---	>6.0	---	---	---	---
2571:									
Chiara	D	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
2572:									
Chiara	D	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
2573:									
Chiara	D	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
2575:									
Chiara	D	None	---	---	>6.0	---	---	---	---
Dacker	C	None	---	---	>6.0	---	---	---	---
Shalake	C	None	---	---	>6.0	---	---	---	---
2577:									
Chiara	D	None	---	---	>6.0	---	---	---	---
Orovada	B	None	---	---	>6.0	---	---	---	---
2600:									
Shalake	C	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
Shalake	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
2611:									
Dacker	C	None	---	---	>6.0	---	---	---	---
Hunnton	C	None	---	---	>6.0	---	---	---	---
2612:									
Dacker	C	None	---	---	>6.0	---	---	---	---
Zevadez	C	None	---	---	>6.0	---	---	---	---
2615:									
Dacker	C	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
2621:									
Gochea	B	None	---	---	>6.0	---	---	---	---
Susie Creek	C	None	---	---	>6.0	---	---	---	---
Carstump	C	None	---	---	>6.0	---	---	---	---
2641:									
Olac	D	None	---	---	>6.0	---	---	---	---
Snowmore	C	None	---	---	>6.0	---	---	---	---
2650:									
Wieland	C	None	---	---	>6.0	---	---	---	---
Bartome	D	None	---	---	>6.0	---	---	---	---
Zevadez	C	None	---	---	>6.0	---	---	---	---
2651:									
Wieland	C	None	---	---	>6.0	---	---	---	---
Buffaran	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
2652:									
Wieland	C	None	---	---	>6.0	---	---	---	---
Dacker	C	None	---	---	>6.0	---	---	---	---
Zevadez	C	None	---	---	>6.0	---	---	---	---
2655:									
Wieland	C	None	---	---	>6.0	---	---	---	---
Gumble	D	None	---	---	>6.0	---	---	---	---
Bilbo	C	None	---	---	>6.0	---	---	---	---
2656:									
Wieland	C	None	---	---	>6.0	---	---	---	---
Hunnton	C	None	---	---	>6.0	---	---	---	---
Thwoop	C	None	---	---	>6.0	---	---	---	---
2658:									
Wieland	C	None	---	---	>6.0	---	---	---	---
2666:									
Puett	D	None	---	---	>6.0	---	---	---	---
Orovada	B	None	---	---	>6.0	---	---	---	---
2667:									
Puett	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
Clurde	B	None	---	---	>6.0	---	---	---	---
2668:									
Puett	D	None	---	---	>6.0	---	---	---	---
Yuko	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Zevadez	C	None	---	---	>6.0	---	---	---	---
2710:									
Ramires	C	None	---	---	>6.0	---	---	---	---
Bartome	D	None	---	---	>6.0	---	---	---	---
Bilbo	C	None	---	---	>6.0	---	---	---	---
2711:									
Ramires	C	None	---	---	>6.0	---	---	---	---
Bilbo	C	None	---	---	>6.0	---	---	---	---
Buffaran	D	None	---	---	>6.0	---	---	---	---
2741:									
Wilsor	B	None	---	---	>6.0	---	---	---	---
Wilsor	B	None	---	---	>6.0	---	---	---	---
2751:									
Yuko	D	None	---	---	>6.0	---	---	---	---
Chime	C	None	---	---	>6.0	---	---	---	---
Clurde	B	None	---	---	>6.0	---	---	---	---
2775:									
Zevadez	C	None	---	---	>6.0	---	---	---	---
Bartome	D	None	---	---	>6.0	---	---	---	---
Wieland	C	None	---	---	>6.0	---	---	---	---
2776:									
Zevadez	C	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
2777:									
Zevadez	C	None	---	---	>6.0	---	---	---	---
Wieland	C	None	---	---	>6.0	---	---	---	---
Clurde	B	None	---	---	>6.0	---	---	---	---
2778:									
Zevadez	C	None	---	---	>6.0	---	---	---	---
Yuko	D	None	---	---	>6.0	---	---	---	---
Kelk	C	None	---	---	>6.0	---	---	---	---
2780:									
Snowmore	C	None	---	---	>6.0	---	---	---	---
Snowmore	C	None	---	---	>6.0	---	---	---	---
2781:									
Snowmore	C	None	---	---	>6.0	---	---	---	---
Snowmore	C	None	---	---	>6.0	---	---	---	---
Snowmore	C	None	---	---	>6.0	---	---	---	---
2782:									
Snowmore	C	None	---	---	>6.0	---	---	---	---
Zevadez	C	None	---	---	>6.0	---	---	---	---
Snowmore	C	None	---	---	>6.0	---	---	---	---
2783:									
Snowmore	C	None	---	---	>6.0	---	---	---	---
Willhill	C	None	---	---	>6.0	---	---	---	---
2790:									
Old Camp	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Troughs	D	None	---	---	>6.0	---	---	---	---
Olac	D	None	---	---	>6.0	---	---	---	---
2801:									
Bartome	D	None	---	---	>6.0	---	---	---	---
Alley	B	None	---	---	>6.0	---	---	---	---
Clurde	B	None	---	---	>6.0	---	---	---	---
2802:									
Bartome	D	None	---	---	>6.0	---	---	---	---
Buffaran	D	None	---	---	>6.0	---	---	---	---
2803:									
Bartome	D	None	---	---	>6.0	---	---	---	---
Buffaran	D	None	---	---	>6.0	---	---	---	---
Ramires	C	None	---	---	>6.0	---	---	---	---
2804:									
Bartome	D	None	---	---	>6.0	---	---	---	---
Chiara	D	None	---	---	>6.0	---	---	---	---
2805:									
Bartome	D	None	---	---	>6.0	---	---	---	---
2807:									
Bartome	D	None	---	---	>6.0	---	---	---	---
Coltroop	D	None	---	---	>6.0	---	---	---	---
Zevadez	C	None	---	---	>6.0	---	---	---	---
2808:									
Bartome	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Susie Creek-----	C	None	---	---	>6.0	---	---	---	---
Wieland---------	C	None	---	---	>6.0	---	---	---	---
2809:									
Bartome---------	D	None	---	---	>6.0	---	---	---	---
Dacker----------	C	None	---	---	>6.0	---	---	---	---
2820:									
Alley-----------	B	None	---	---	>6.0	---	---	---	---
Vanwyper--------	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
2822:									
Alley-----------	B	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
Rubble Land-----		None	---	---	>6.0	---	---	---	---
3000:									
Handy-----------	C	None	---	---	>6.0	---	---	---	---
Wilsor----------	B	None	---	---	>6.0	---	---	---	---
Deseed----------	C	None	---	---	>6.0	---	---	---	---
3010:									
Relley----------	B	Frequent	---	Dec-Jun	>6.0	---	---	---	---
Kelk------------	C	None	---	---	>6.0	---	---	---	---
3020:									
Sodhouse--------	D	None	---	---	>6.0	---	---	---	---
Chiara----------	D	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
3030:									
Deepeek	D	None	---	---	>6.0	---	---	---	---
Alley	B	None	---	---	>6.0	---	---	---	---
3100:									
Ratsow	C	None	---	---	>6.0	---	---	---	---
Quarz	C	None	---	---	>6.0	---	---	---	---
Susie Creek	C	None	---	---	>6.0	---	---	---	---
3510:									
Midraw	D	None	---	---	>6.0	---	---	---	---
Troughs	D	None	---	---	>6.0	---	---	---	---
Midraw	D	None	---	---	>6.0	---	---	---	---
3710:									
Petan	D	None	---	---	>6.0	---	---	---	---
Bulake	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
3715:									
Petan	D	None	---	---	>6.0	---	---	---	---
Deunah	D	None	---	---	>6.0	---	---	---	---
Hatpeak	C	None	---	---	>6.0	---	---	---	---
3721:									
Hatpeak	C	None	---	---	>6.0	---	---	---	---
Deunah	D	None	---	---	>6.0	---	---	---	---
3722:									
Hatpeak	C	None	---	---	>6.0	---	---	---	---

TABLE 18.--WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
Hatpeak---------	C	None	---	---	>6.0	---	---	---	---

TABLE 19.--SOIL FEATURES

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1:									
Rubble Land-----	>40	Hard	---	---	---	---	None		
120:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Lerrow----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
126:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Lerrow----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
Akler-----------	14-20	Soft	---	---	---	---	Low	Moderate	Low
127:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Lerrow----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
128:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Graley----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
129:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Chen------------	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Crooked Creek---	>60	---	---	---	---	---	High	High	Low
130:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Booford---------	20-40	Soft	---	---	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
140:									
Upville---------	>60	---	---	---	---	---	Moderate	Moderate	Low
Upville---------	>60	---	---	---	---	---	Moderate	Moderate	Low
141:									
Upville---------	>60	---	---	---	---	---	Moderate	Moderate	Low
Kleckner--------	>60	---	---	---	---	---	Low	Moderate	Low
150:									
Gochea----------	>60	---	---	---	---	---	Moderate	Moderate	Low
161:									
Sonoma----------	>60	---	---	---	---	---	High	High	Low
162:									
Sonoma----------	>60	---	---	---	---	---	High	High	Low
184:									
Crooked Creek---	>60	---	---	---	---	---	High	High	Low
185:									
Crooked Creek---	>60	---	---	---	---	---	High	High	Low
Crooked Creek---	>60	---	---	---	---	---	High	High	Low
186:									
Crooked Creek---	>60	---	---	---	---	---	High	High	Low
Crooked Creek---	>60	---	---	---	---	---	High	High	Low
Crooked Creek---	>60	---	---	---	---	---	High	High	Low
188:									
Crooked Creek---	>60	---	---	---	---	---	High	High	Low
Welch-----------	>60	---	---	---	---	---	High	Moderate	Low
Crooked Creek---	>60	---	---	---	---	---	High	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
190:									
Heechee	>60	---	---	---	---	---	Moderate	Moderate	Low
Heechee	>60	---	---	---	---	---	Moderate	Moderate	Low
200:									
Lynnbow	45-60	Soft	---	---	---	---	Low	High	Low
Rugar	40-60	Soft	---	---	---	---	Moderate	Moderate	Low
201:									
Lynnbow	45-60	Soft	---	---	---	---	Low	High	Low
Lerrow	20-40	Soft	---	---	---	---	Low	Moderate	Low
Crooked Creek	>60	---	---	---	---	---	High	High	Low
210:									
Soonaker	20-40	Soft	---	---	---	---	Moderate	Moderate	Low
Bulake	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
220:									
Cavanaugh	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Rugar	40-60	Soft	---	---	---	---	Moderate	Moderate	Low
McIvey	>60	---	---	---	---	---	Moderate	Moderate	Low
221:									
Cavanaugh	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
233:									
Bioya	>60	---	20-40	Thick	---	---	Moderate	High	Low
Bilbo	>60	---	---	---	---	---	Low	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Chiara----------	>60	---	10-20	Thick	---	---	Moderate	High	Low
234:									
Bioya----------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Shabliss--------	>60	---	10-15	Thin	---	---	Moderate	High	Low
Puett----------	10-20	Soft	---	---	---	---	Moderate	High	Low
235:									
Bioya----------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Trunk----------	20-40	Hard	---	---	---	---	Low	High	Low
Alley----------	>60	---	---	---	---	---	Moderate	High	Low
236:									
Bioya----------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Wieland---------	>60	---	---	---	---	---	Moderate	High	Low
Kleckner--------	>60	---	---	---	---	---	Low	Moderate	Low
241:									
Wickahoney------	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
Deunah----------	22-40	Hard	20-34	Thick	---	---	Moderate	Moderate	Moderate
Petan----------	15-23	Hard	14-20	Thin	---	---	Moderate	Moderate	Low
270:									
Pernty----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Loncan----------	21-38	Hard	---	---	---	---	Moderate	Moderate	Low
Pernty----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
280:									
Humboldt--------	>60	---	---	---	---	---	High	High	High

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
308:									
Akler	14-20	Soft	---	---	---	---	Low	Moderate	Low
Pattani	20-40	Soft	---	---	---	---	Low	High	Low
Cotant	12-20	Soft	---	---	---	---	Low	Moderate	Low
309:									
Akler	14-20	Soft	---	---	---	---	Low	Moderate	Low
Susie Creek	>60	---	---	---	---	---	Low	High	Low
457:									
Donna	>60	---	20-36	Thick	---	---	Moderate	High	Low
Stampede	>60	---	20-37	Thick	---	---	Moderate	Moderate	Low
Short Creek	>60	---	---	---	---	---	Moderate	High	Low
458:									
Donna	>60	---	20-36	Thick	---	---	Moderate	High	Low
Stampede	>60	---	20-37	Thick	---	---	Moderate	Moderate	Low
464:									
Stampede	>60	---	20-37	Thick	---	---	Moderate	Moderate	Low
570:									
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
571:									
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Tusel	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Gando	10-20	Hard	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
572:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
576:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
577:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Chen------------	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
578:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
579:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Pernty----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
580:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Pie Creek-------	23-40	Hard	---	---	---	---	Moderate	High	Low
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
581:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
582:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
583:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Pernty----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
584:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
585:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Rock Outcrop.									
Rubble Land-----	>40	Hard	---	---	---	---	None		
586:									
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Loncan----------	21-38	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
600:									
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Bullump---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Gando-----------	10-20	Hard	---	---	---	---	Moderate	High	Low
601:									
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Blitzen---------	20-40	Soft	---	---	---	---	Low	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
602:									
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Hackwood--------	>60	---	---	---	---	---	Moderate	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
623:									
Soughe----------	10-20	Hard	---	---	---	---	Moderate	High	Low
Rock Outcrop.									
624:									
Soughe----------	10-20	Hard	---	---	---	---	Moderate	High	Low
Soughe----------	10-20	Hard	---	---	---	---	Moderate	High	Low
Rock Outcrop.									
625:									
Soughe----------	10-20	Hard	---	---	---	---	Moderate	High	Low
Alyan-----------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Shalper---------	4-12	Hard	---	---	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
626:									
Soughe----------	10-20	Hard	---	---	---	---	Moderate	High	Low
Vanwyper--------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Soughe----------	10-20	Hard	---	---	---	---	Moderate	High	Low
690:									
Welch-----------	>60	---	---	---	---	---	High	Moderate	Low
Welch-----------	>60	---	---	---	---	---	High	Moderate	Low
920:									
Bullump---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Gando-----------	10-20	Hard	---	---	---	---	Moderate	High	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
921:									
Bullump---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Hackwood--------	>60	---	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
922:									
Bullump---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1130:									
Clementine------	>60	---	---	---	---	---	High	High	Low
1131:									
Clementine------	>60	---	---	---	---	---	High	High	Low
Clementine------	>60	---	---	---	---	---	High	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Clementine------	>60	---	---	---	---	---	High	High	Low
1135:									
Clementine------	>60	---	---	---	---	---	High	High	Low
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
1150:									
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
Wieland---------	>60	---	---	---	---	---	Moderate	High	Low
1155:									
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
1156:									
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
Kortty----------	>60	---	50-60	Thin	---	---	Low	High	Low
1157:									
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
Zevadez---------	>60	---	---	---	---	---	Moderate	High	Low
Chiara----------	>60	---	10-20	Thick	---	---	Moderate	High	Low
1190:									
Cherry Spring---	>60	---	20-40	Thick	---	---	Moderate	High	Low
Enko------------	>60	---	---	---	---	---	Moderate	High	Low
1191:									
Cherry Spring---	>60	---	20-40	Thick	---	---	Moderate	High	Low
Wieland---------	>60	---	---	---	---	---	Moderate	High	Low
1193:									
Cherry Spring---	>60	---	20-40	Thick	---	---	Moderate	High	Low
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Chiara----------	>60	---	10-20	Thick	---	---	Moderate	High	Low
1210:									
Skull Creek-----	>60	---	20-40	Thick	---	---	Moderate	High	Low
Shabliss--------	>60	---	10-15	Thin	---	---	Moderate	High	Low
Puett-----------	10-20	Soft	---	---	---	---	Moderate	High	Low
1220:									
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Fulstone--------	>60	---	14-20	Thick	---	---	Moderate	High	Low
1221:									
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Fulstone--------	>60	---	14-20	Thick	---	---	Moderate	High	Low
1223:									
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Shabliss--------	>60	---	10-15	Thin	---	---	Moderate	High	Low
Puett-----------	10-20	Soft	---	---	---	---	Moderate	High	Low
1224:									
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Trunk-----------	20-40	Hard	---	---	---	---	Low	High	Low
Shabliss--------	>60	---	10-15	Thin	---	---	Moderate	High	Low
1226:									
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Wieland---------	>60	---	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Clementine------	>60	---	---	---	---	---	High	High	Low
1227:									
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Chiara----------	>60	---	10-20	Thick	---	---	Moderate	High	Low
Bilbo-----------	>60	---	---	---	---	---	Low	High	Low
1228:									
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
1229:									
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Chiara----------	>60	---	10-20	Thick	---	---	Moderate	High	Low
Wieland---------	>60	---	---	---	---	---	Moderate	High	Low
1230:									
Fulstone--------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
1231:									
Fulstone--------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Fulstone--------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
1232:									
Fulstone--------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Fulstone--------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Wieland---------	>60	---	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1241:									
Enko	>60	---	---	---	---	---	Moderate	High	Low
Shabliss	>60	---	10-15	Thin	---	---	Moderate	High	Low
Orovada	>60	---	---	---	---	---	Moderate	High	Moderate
1242:									
Enko	>60	---	---	---	---	---	Moderate	High	Low
Enko	>60	---	---	---	---	---	Moderate	High	Low
1260:									
Kleckner	>60	---	---	---	---	---	Low	Moderate	Low
Upville	>60	---	---	---	---	---	Moderate	Moderate	Low
Fulstone	>60	---	14-20	Thick	---	---	Moderate	High	Low
1261:									
Kleckner	>60	---	---	---	---	---	Low	Moderate	Low
Heechee	>60	---	---	---	---	---	Moderate	Moderate	Low
1290:									
Tweba	>60	---	---	---	---	---	Moderate	High	Low
1350:									
Shabliss	>60	---	10-15	Thin	---	---	Moderate	High	Low
Hunnton	>60	---	20-40	Thick	---	---	Moderate	High	Low
Bioya	>60	---	20-40	Thick	---	---	Moderate	High	Low
1351:									
Shabliss	>60	---	10-15	Thin	---	---	Moderate	High	Low
Bartome	>60	---	14-20	Thick	---	---	Moderate	High	Low
1352:									
Shabliss	>60	---	10-15	Thin	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Skull Creek-----	>60	---	20-40	Thick	---	---	Moderate	High	Low
Puett-----------	10-20	Soft	---	---	---	---	Moderate	High	Low
1360:									
Orovada---------	>60	---	---	---	---	---	Moderate	High	Low
1362:									
Orovada---------	>60	---	---	---	---	---	Moderate	High	Moderate
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
Wieland---------	>60	---	---	---	---	---	Moderate	High	Low
1363:									
Orovada---------	>60	---	---	---	---	---	Moderate	High	Low
Tweba-----------	>60	---	---	---	---	---	Moderate	High	Low
Weso------------	>60	---	---	---	---	---	Low	High	Low
1530:									
Creemon---------	>60	---	---	---	---	---	Low	High	High
Placeritos------	>60	---	---	---	---	---	Moderate	High	Low
1572:									
Weso------------	>60	---	---	---	---	---	Low	High	Low
Orovada---------	>60	---	---	---	---	---	Moderate	High	Moderate
Shabliss--------	>60	---	10-15	Thin	---	---	Moderate	High	Low
1573:									
Weso------------	>60	---	---	---	---	---	Low	High	Low
Orovada---------	>60	---	---	---	---	---	Moderate	High	Moderate
Tweba-----------	>60	---	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1617:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Tweener	7-14	Hard	---	---	---	---	Moderate	Moderate	Low
1618:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Pequop	>60	---	---	---	---	---	Moderate	Moderate	Low
1619:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Tusk	>60	---	---	---	---	---	Moderate	Moderate	Low
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1621:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Graley	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
1622:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1623:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1625:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1626:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Carstump	20-40	Hard	---	---	---	---	Moderate	High	Low
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
1628:									
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Reluctan	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1640:									
Tusk	>60	---	---	---	---	---	Moderate	Moderate	Low
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Hackwood	>60	---	---	---	---	---	Moderate	Moderate	Low
1650:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Tusk	>60	---	---	---	---	---	Moderate	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
1651:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Reluctan	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1652:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Graley	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
1653:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Reluctan	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Graley	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
1655:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Thwoop	21-32	Hard	20-30	Thin	---	---	Moderate	Moderate	Low
Pequop	>60	---	---	---	---	---	Moderate	Moderate	Low
1656:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Pequop	>60	---	---	---	---	---	Moderate	Moderate	Low
Gumble	14-20	Soft	---	---	---	---	Moderate	High	Low
1657:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
1658:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Vanwyper	20-40	Hard	---	---	---	---	Low	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1659:									
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low
1660:									
Susie Creek-----	>60	---	---	---	---	---	Low	High	Low
Pie Creek-------	23-40	Hard	---	---	---	---	Moderate	High	Low
Pattani---------	20-40	Soft	---	---	---	---	Low	High	Low
1671:									
Linkup----------	14-20	Hard	---	---	---	---	Low	Moderate	Low
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low
Linkup----------	14-20	Hard	---	---	---	---	Low	Moderate	Low
1672:									
Linkup----------	14-20	Hard	---	---	---	---	Low	Moderate	Low
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low
Linkup----------	14-20	Hard	---	---	---	---	Low	Moderate	Low
1673:									
Linkup----------	14-20	Hard	---	---	---	---	Low	Moderate	Low
Quarz-----------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Alyan-----------	20-40	Hard	---	---	---	---	Low	Moderate	Low
1675:									
Linkup----------	14-20	Hard	---	---	---	---	Low	Moderate	Low
Snowmore--------	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
Ratsow----------	21-34	Hard	20-30	Thin	---	---	Low	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1676:									
Linkup----------	14-20	Hard	---	---	---	---	Low	Moderate	Low
Quarz----------	20-40	Hard	---	---	---	---	Low	Moderate	Low
1680:									
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
1685:									
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Graley----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
1686:									
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
1687:									
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low
Linkup----------	14-20	Hard	---	---	---	---	Low	Moderate	Low
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low
1691:									
Pequop----------	>60	---	---	---	---	---	Moderate	Moderate	Low
Rock Outcrop.									
Rubble Land-----	>40	Hard	---	---	---	---	None		

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1700:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Quarz----------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
1702:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
McIvey----------	>60	---	---	---	---	---	Moderate	Moderate	Low
Blitzen---------	20-40	Soft	---	---	---	---	Low	Moderate	Low
1703:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Lerrow----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
Bullump---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1711:									
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
1712:									
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
1713:									
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Erakatak--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Rugar-----------	40-60	Soft	---	---	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1720:									
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
1725:									
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
Cleavage	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Loncan	21-38	Hard	---	---	---	---	Moderate	Moderate	Low
1726:									
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Pequop	>60	---	---	---	---	---	Moderate	Moderate	Low
1730:									
Graley	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Erakatak	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
1732:									
Graley	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
1733:									
Graley	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Loncan	21-38	Hard	---	---	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1740:									
Erakatak--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Hackwood--------	>60	---	---	---	---	---	Moderate	Moderate	Low
1741:									
Erakatak--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Chen------------	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Tusk------------	>60	---	---	---	---	---	Moderate	Moderate	Low
1742:									
Erakatak--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Rugar-----------	40-60	Soft	---	---	---	---	Moderate	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1744:									
Erakatak--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Graley----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1746:									
Booford---------	20-40	Soft	---	---	---	---	Moderate	Moderate	Low
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Blitzen---------	20-40	Soft	---	---	---	---	Low	Moderate	Low
1800:									
Bregar----------	5-12	Hard	---	---	---	---	Moderate	Moderate	Low
Bregar----------	5-12	Hard	---	---	---	---	Moderate	Moderate	Low
Carstump--------	20-40	Hard	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1802:									
Bregar	5-12	Hard	---	---	---	---	Moderate	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Pequop	>60	---	---	---	---	---	Moderate	Moderate	Low
1803:									
Bregar	5-12	Hard	---	---	---	---	Moderate	Moderate	Low
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Rock Outcrop.									
1805:									
Bregar	5-12	Hard	---	---	---	---	Moderate	Moderate	Low
Deseed	20-30	Hard	---	---	---	---	Low	Moderate	Low
Linkup	14-20	Hard	---	---	---	---	Low	Moderate	Low
1810:									
Shively	40-60	Soft	---	---	---	---	Moderate	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Hackwood	>60	---	---	---	---	---	Moderate	Moderate	Low
1830:									
Vanwyper	20-40	Hard	---	---	---	---	Low	Moderate	Low
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
Vanwyper	20-40	Hard	---	---	---	---	Low	Moderate	Low
1831:									
Vanwyper	20-40	Hard	---	---	---	---	Low	Moderate	Low
Trunk	20-40	Hard	---	---	---	---	Low	High	Low
Vanwyper	20-40	Hard	---	---	---	---	Low	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1832:									
Vanwyper--------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Trunk----------	20-40	Hard	---	---	---	---	Low	High	Low
Trunk----------	20-40	Hard	---	---	---	---	Low	High	Low
1833:									
Vanwyper--------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Rock Outcrop.									
Trunk----------	20-40	Hard	---	---	---	---	Low	High	Low
1852:									
Gumble----------	14-20	Soft	---	---	---	---	Moderate	High	Low
Tuffo-----------	4-14	Soft	---	---	---	---	Moderate	Moderate	Low
Hunnton---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
1853:									
Gumble----------	14-20	Soft	---	---	---	---	Moderate	High	Low
Tuffo-----------	4-14	Soft	---	---	---	---	Moderate	Moderate	Low
Rock Outcrop.									
1854:									
Gumble----------	14-20	Soft	---	---	---	---	Moderate	High	Low
Chen------------	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
1855:									
Gumble----------	14-20	Soft	---	---	---	---	Moderate	High	Low
Puett Variant---	10-20	Hard	---	---	---	---	Moderate	High	Low
Xeric Torriorthents--	2-10	Soft	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1870:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Graley	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
1871:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Cotant	12-20	Soft	---	---	---	---	Low	Moderate	Low
Graley	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
1872:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Tusel	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1874:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
Arcia	30-40	Hard	---	---	---	---	Moderate	Moderate	Low
1875:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Bregar	5-12	Hard	---	---	---	---	Moderate	Moderate	Low
Ramires	24-40	Hard	---	---	---	---	Moderate	High	Low
1876:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Arcia	30-40	Hard	---	---	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1877:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Bregar	5-12	Hard	---	---	---	---	Moderate	Moderate	Low
Loncan	21-38	Hard	---	---	---	---	Moderate	Moderate	Low
1880:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Blitzen	20-40	Soft	---	---	---	---	Low	Moderate	Low
Pequop	>60	---	---	---	---	---	Moderate	Moderate	Low
1881:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Blitzen	20-40	Soft	---	---	---	---	Low	Moderate	Low
Loncan	21-38	Hard	---	---	---	---	Moderate	Moderate	Low
1888:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Pie Creek	23-40	Hard	---	---	---	---	Moderate	High	Low
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
1889:									
Chen	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Sumine	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1910:									
Mahala	20-40	Soft	---	---	---	---	Low	High	Low
Ramires	24-40	Hard	---	---	---	---	Moderate	High	Low
1920:									
Lerrow	20-40	Soft	---	---	---	---	Low	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Chen----------	12-20	Hard	---	---	---	---	Moderate	Moderate	Low
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
1921:									
Lerrow----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
Quarz----------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Rugar----------	40-60	Soft	---	---	---	---	Moderate	Moderate	Low
1931:									
Tweener---------	7-14	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1932:									
Tweener---------	7-14	Hard	---	---	---	---	Moderate	Moderate	Low
Sumine----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
1933:									
Tweener---------	7-14	Hard	---	---	---	---	Moderate	Moderate	Low
Pequop----------	>60	---	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
1950:									
McIvey----------	>60	---	---	---	---	---	Moderate	Moderate	Low
McIvey----------	>60	---	---	---	---	---	Moderate	Moderate	Low
Tusel-----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1980:									
Thwoop----------	21-32	Hard	20-30	Thin	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Trunk	20-40	Hard	---	---	---	---	Low	High	Low
Pequop	>60	---	---	---	---	---	Moderate	Moderate	Low
2000:									
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
Cotant	12-20	Soft	---	---	---	---	Low	Moderate	Low
Akler	14-20	Soft	---	---	---	---	Low	Moderate	Low
2001:									
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
Bregar	5-12	Hard	---	---	---	---	Moderate	Moderate	Low
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
2002:									
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
2003:									
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
Deepeek	>60	---	14-20	Thin	---	---	Moderate	High	Low
Susie Creek	>60	---	---	---	---	---	Low	High	Low
2004:									
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low
2005:									
Alyan	20-40	Hard	---	---	---	---	Low	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Graley----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Rock Outcrop.									
2171:									
Deseed----------	20-30	Hard	---	---	---	---	Low	Moderate	Low
Reluctan--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Cleavage--------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
2173:									
Deseed----------	20-30	Hard	---	---	---	---	Low	Moderate	Low
Quarz-----------	20-40	Hard	---	---	---	---	Low	Moderate	Low
2205:									
Coltroop--------	30-35	Hard	14-20	Thick	---	---	Moderate	High	Low
Snowmore--------	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
2206:									
Coltroop--------	30-35	Hard	14-20	Thick	---	---	Moderate	High	Low
Vanwyper--------	20-40	Hard	---	---	---	---	Low	Moderate	Low
2310:									
Bulake----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Deunah----------	22-40	Hard	20-34	Thick	---	---	Moderate	Moderate	Moderate
Bulake----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
2311:									
Bulake----------	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Hatpeak---------	>60	---	20-30	Thick	---	---	Moderate	High	Low
Petan-----------	15-23	Hard	14-20	Thin	---	---	Moderate	Moderate	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
2505:									
Buffaran--------	>60	---	14-20	Thick	---	---	Low	High	Low
Zevadez---------	>60	---	---	---	---	---	Moderate	High	Low
2511:									
Bilbo-----------	>60	---	---	---	---	---	Low	High	Low
Alley-----------	>60	---	---	---	---	---	Moderate	High	Low
Deepeek---------	>60	---	14-20	Thin	---	---	Moderate	High	Low
2514:									
Bilbo-----------	>60	---	---	---	---	---	Low	High	Low
Susie Creek-----	>60	---	---	---	---	---	Low	High	Low
Buffaran--------	>60	---	14-20	Thick	---	---	Low	High	Low
2521:									
Dewar-----------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Chiara----------	>60	---	10-20	Thick	---	---	Moderate	High	Low
Chiara----------	>60	---	12-20	Thick	---	---	Moderate	High	Low
2522:									
Dewar-----------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Sodhouse--------	>60	---	14-20	Thick	---	---	Low	High	Low
2531:									
Clurde Variant--	24-32	Hard	---	---	---	---	Moderate	High	Low
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
Rock Outcrop.									
2541:									
Kelk------------	>60	---	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
2545:									
Kelk	>60	---	---	---	---	---	Moderate	High	Low
Clurde	>60	---	---	---	---	---	Moderate	High	Low
2555:									
Piline	>60	---	---	---	---	---	Moderate	High	Low
2560:									
McCleary	>60	---	---	---	---	---	Moderate	High	Low
2561:									
McCleary	>60	---	---	---	---	---	Moderate	High	Low
2571:									
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low
Chiara	>60	---	12-20	Thick	---	---	Moderate	High	Low
Chiara	>60	---	12-20	Thick	---	---	Moderate	High	Low
2572:									
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low
2573:									
Chiara	>60	---	12-20	Thick	---	---	Moderate	High	Low
Chiara	>60	---	12-20	Thick	---	---	Moderate	High	Low
2575:									
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low
Dacker	>60	---	20-35	Thick	---	---	Moderate	High	Low
Shalake	>60	---	20-40	Thick	---	---	Moderate	High	Low
2577:									
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Orovada	>60	---	---	---	---	---	Moderate	High	Moderate
2600:									
Shalake	>60	---	20-40	Thick	---	---	Moderate	High	Low
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low
Shalake	>60	---	20-40	Thick	---	---	Moderate	High	Low
2611:									
Dacker	>60	---	20-35	Thick	---	---	Moderate	High	Low
Hunnton	>60	---	20-40	Thick	---	---	Moderate	High	Low
2612:									
Dacker	>60	---	20-35	Thick	---	---	Moderate	High	Low
Zevadez	>60	---	---	---	---	---	Moderate	High	Low
2615:									
Dacker	>60	---	20-35	Thick	---	---	Moderate	High	Low
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low
2621:									
Gochea	>60	---	---	---	---	---	Moderate	Moderate	Low
Susie Creek	>60	---	---	---	---	---	Low	High	Low
Carstump	20-40	Hard	---	---	---	---	Moderate	High	Low
2641:									
Olac	8-14	Hard	---	---	---	---	Moderate	Moderate	Low
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
2650:									
Wieland	>60	---	---	---	---	---	Moderate	High	Low
Bartome	>60	---	14-20	Thick	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Zevadez	>60	---	---	---	---	---	Moderate	High	Low
2651:									
Wieland	>60	---	---	---	---	---	Moderate	High	Low
Buffaran	>60	---	14-20	Thick	---	---	Low	High	Low
2652:									
Wieland	>60	---	---	---	---	---	Moderate	High	Low
Dacker	>60	---	20-35	Thick	---	---	Moderate	High	Low
Zevadez	>60	---	---	---	---	---	Moderate	High	Low
2655:									
Wieland	>60	---	---	---	---	---	Moderate	High	Low
Gumble	14-20	Soft	---	---	---	---	Moderate	High	Low
Bilbo	>60	---	---	---	---	---	Low	High	Low
2656:									
Wieland	>60	---	---	---	---	---	Moderate	High	Low
Hunnton	>60	---	20-40	Thick	---	---	Moderate	High	Low
Thwoop	21-32	Hard	20-30	Thin	---	---	Moderate	Moderate	Low
2658:									
Wieland	>60	---	---	---	---	---	Moderate	High	Low
2666:									
Puett	10-20	Soft	---	---	---	---	Moderate	High	Low
Orovada	>60	---	---	---	---	---	Moderate	High	Moderate
2667:									
Puett	10-20	Soft	---	---	---	---	Moderate	High	Low
Rock Outcrop.									

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
2668:									
Puett----------	10-20	Soft	---	---	---	---	Moderate	High	Low
Yuko----------	6-14	Soft	---	---	---	---	Moderate	High	Low
Zevadez---------	>60	---	---	---	---	---	Moderate	High	Low
2710:									
Ramires---------	30-40	Hard	---	---	---	---	Moderate	High	Low
Bartome---------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Bilbo----------	>60	---	---	---	---	---	Low	High	Low
2711:									
Ramires---------	30-40	Hard	---	---	---	---	Moderate	High	Low
Bilbo----------	>60	---	---	---	---	---	Low	High	Low
Buffaran--------	>60	---	14-20	Thick	---	---	Low	High	Low
2741:									
Wilsor----------	40-60	Soft	---	---	---	---	Moderate	High	Low
Wilsor----------	40-60	Soft	---	---	---	---	Moderate	High	Low
2751:									
Yuko----------	6-14	Soft	---	---	---	---	Moderate	High	Low
Chime----------	20-30	Soft	---	---	---	---	Moderate	High	Low
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
2775:									
Zevadez---------	>60	---	---	---	---	---	Moderate	High	Low
Bartome---------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Wieland---------	>60	---	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
2776:									
Zevadez	>60	---	---	---	---	---	Moderate	High	Low
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low
2777:									
Zevadez	>60	---	---	---	---	---	Moderate	High	Low
Wieland	>60	---	---	---	---	---	Moderate	High	Low
Clurde	>60	---	---	---	---	---	Moderate	High	Low
2778:									
Zevadez	>60	---	---	---	---	---	Moderate	High	Low
Yuko	6-14	Soft	---	---	---	---	Moderate	High	Low
Kelk	>60	---	---	---	---	---	Moderate	High	Low
2780:									
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
2781:									
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
2782:									
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
Zevadez	>60	---	---	---	---	---	Moderate	High	Low
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low
2783:									
Snowmore	21-40	Hard	20-34	Thick	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Willhill--------	21-40	Hard	---	---	---	---	Low	High	Low
2790:									
Old Camp--------	10-20	Hard	---	---	---	---	Moderate	High	Low
Troughs---------	20-30	Hard	12-20	Thick	---	---	Moderate	High	Low
Olac------------	8-14	Hard	---	---	---	---	Moderate	Moderate	Low
2801:									
Bartome---------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Alley-----------	>60	---	---	---	---	---	Moderate	High	Low
Clurde----------	>60	---	---	---	---	---	Moderate	High	Low
2802:									
Bartome---------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Buffaran--------	>60	---	14-20	Thick	---	---	Low	High	Low
2803:									
Bartome---------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Buffaran--------	>60	---	14-20	Thick	---	---	Low	High	Low
Ramires---------	30-40	Hard	---	---	---	---	Moderate	High	Low
2804:									
Bartome---------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Chiara----------	>60	---	10-20	Thick	---	---	Moderate	High	Low
2805:									
Bartome---------	>60	---	14-20	Thick	---	---	Moderate	High	Low
2807:									
Bartome---------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Coltroop--------	30-35	Hard	14-20	Thick	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Zevadez	>60	---	---	---	---	---	Moderate	High	Low
2808:									
Bartome	>60	---	14-20	Thick	---	---	Moderate	High	Low
Susie Creek	>60	---	---	---	---	---	Low	High	Low
Wieland	>60	---	---	---	---	---	Moderate	High	Low
2809:									
Bartome	>60	---	14-20	Thick	---	---	Moderate	High	Low
Dacker	>60	---	20-35	Thick	---	---	Moderate	High	Low
2820:									
Alley	>60	---	---	---	---	---	Moderate	High	Low
Vanwyper	20-40	Hard	---	---	---	---	Low	Moderate	Low
Rock Outcrop.									
2822:									
Alley	>60	---	---	---	---	---	Moderate	High	Low
Rock Outcrop.									
Rubble Land.									
3000:									
Handy	>60	---	---	---	---	---	Low	High	Low
Wilsor	40-60	Soft	---	---	---	---	Moderate	High	Low
Deseed	20-30	Hard	---	---	---	---	Low	Moderate	Low
3010:									
Relley	>60	---	---	---	---	---	Low	High	Moderate
Kelk	>60	---	---	---	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
3020:									
Sodhouse	>60	---	14-20	Thick	---	---	Low	High	Low
Chiara	>60	---	10-20	Thick	---	---	Moderate	High	Low
3030:									
Deepeek	>60	---	14-20	Thin	---	---	Moderate	High	Low
Alley	>60	---	---	---	---	---	Moderate	High	Low
3100:									
Ratsow	21-34	Hard	20-30	Thin	---	---	Low	High	Low
Quarz	20-40	Hard	---	---	---	---	Low	Moderate	Low
Susie Creek	>60	---	---	---	---	---	Low	High	Low
3510:									
Midraw	22-35	Hard	14-20	Thick	---	---	Low	High	Low
Troughs	20-30	Hard	12-20	Thick	---	---	Moderate	High	Low
Midraw	22-35	Hard	14-20	Thick	---	---	Low	High	Low
3710:									
Petan	15-23	Hard	14-20	Thin	---	---	Moderate	Moderate	Low
Bulake	14-20	Hard	---	---	---	---	Moderate	Moderate	Low
Rock Outcrop.									
3715:									
Petan	15-23	Hard	14-20	Thin	---	---	Moderate	Moderate	Low
Deunah	22-40	Hard	20-34	Thick	---	---	Moderate	Moderate	Moderate
Hatpeak	>60	---	20-30	Thick	---	---	Moderate	High	Low
3721:									
Hatpeak	>60	---	20-30	Thick	---	---	Moderate	High	Low

TABLE 19.--SOIL FEATURES --Continued

Map symbol and soil name	Bedrock		Cemented pan		Subsidence		Potential frost action	Risk of corrosion	
	Depth	Hardness	Depth	Kind	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
Deunah----------	22-40	Hard	20-34	Thick	---	---	Moderate	Moderate	Moderate
3722:									
Hatpeak---------	>60	---	20-30	Thick	---	---	Moderate	High	Low
Hatpeak---------	>60	---	20-30	Thick	---	---	Moderate	High	Low

TABLE 20.--CLASSIFICATION OF THE SOILS

Soil name	Family or higher taxonomic class
Akler	Xerollic Haplargids, clayey, montmorillonitic, frigid, shallow
Alley	Durixerollic Haplargids, fine-loamy, mixed, mesic
Alyan	Aridic Argixerolls, fine, montmorillonitic, frigid
Arcia	Pachic Argixerolls, fine, montmorillonitic, frigid
Bartome	Xerollic Durargids, loamy, mixed, mesic, shallow
Bilbo	Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic
Bioya	Xerollic Durorthids, fine-loamy, mixed, mesic
Blitzen	Aridic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Booford	Typic Argixerolls, fine, montmorillonitic, frigid
Bregar	Lithic Xerollic Haplargids, loamy-skeletal, mixed, frigid
Buffaran	Xerollic Durargids, clayey, montmorillonitic, mesic, shallow
Bulake	Lithic Mollic Haploxeralfs, clayey, montmorillonitic, frigid
Bullump	Pachic Argixerolls, loamy-skeletal, mixed, frigid
Carstump	Aridic Calcic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Cavanaugh	Ultic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Chen	Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Cherry Spring	Haploxerollic Durargids, fine-loamy, mixed, mesic
Chiara	Xerollic Durorthids, loamy, mixed, mesic, shallow
Chime	Durixerollic Haplargids, fine-loamy, mixed, mesic
Cleavage	Lithic Argixerolls, loamy-skeletal, mixed, frigid
Clementine	Cumulic Haplaquolls, fine-silty, mixed, mesic
Clurde Variant	Durixerollic Camborthids, loamy-skeletal, mixed, mesic
Clurde	Durixerollic Camborthids, fine-loamy, mixed, mesic
Coltroop	Xerollic Durorthids, loamy, mixed, mesic, shallow
Cotant	Aridic Argixerolls, clayey, montmorillonitic, frigid, shallow
Creemon	Duric Camborthids, coarse-silty, mixed, mesic
Crooked Creek	Cumulic Haplaquolls, fine, montmorillonitic, frigid
Dacker	Xerollic Durargids, fine-loamy, mixed, mesic
Deepeek	Xerollic Durargids, loamy-skeletal, mixed, mesic, shallow
Deseed	Xerollic Haplargids, fine, montmorillonitic, frigid
Deunah	Abruptic Durixeralfs, very-fine, montmorillonitic, frigid
Dewar	Xerollic Durargids, loamy, mixed, mesic, shallow
Donna	Abruptic Aridic Durixerolls, very-fine, montmorillonitic, frigid
Enko	Durixerollic Camborthids, coarse-loamy, mixed, mesic
Erakatak	Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Fulstone	Abruptic Xerollic Durargids, clayey, montmorillonitic, mesic, shallow
Gando	Lithic Haploxerolls, loamy-skeletal, mixed, frigid
Gochea	Durargidic Argixerolls, fine-loamy, mixed, frigid
Graley	Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid

TABLE 20.--CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Gumble	Xerollic Haplargids, clayey, montmorillonitic, mesic, shallow
Hackwood	Pachic Cryoborolls, fine-loamy, mixed
Handy	Xerollic Haplargids, fine, montmorillonitic, frigid
Hapgood	Pachic Cryoborolls, loamy-skeletal, mixed
Hatpeak	Typic Durixerolls, fine, montmorillonitic, frigid
Heechee	Typic Argixerolls, loamy-skeletal, mixed, frigid
Humboldt	Fluvaquentic Haplaquolls, fine, montmorillonitic (calcareous), mesic
Hunnton	Xerollic Durargids, fine, montmorillonitic, mesic
Kelk	Durixerollic Camborthids, fine-silty, mixed, mesic
Kleckner	Aridic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Kortty	Duric Haplargids, fine-loamy, mixed, mesic
Lerrow	Aridic Argixerolls, fine, montmorillonitic, frigid
Linkup	Lithic Xerollic Haplargids, clayey, montmorillonitic, frigid
Loncan	Aridic Haploxerolls, loamy-skeletal, mixed, frigid
Lynnbow	Typic Palexerolls, fine, montmorillonitic, frigid
Mahala	Xerollic Paleargids, fine, montmorillonitic, mesic
McCleary	Aeric Fluvaquents, fine, montmorillonitic, nonacid, mesic
McIvey	Typic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Midraw	Xerollic Durargids, clayey, montmorillonitic, mesic, shallow
Ninemile	Lithic Argixerolls, clayey, montmorillonitic, frigid
Olac	Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Old Camp	Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Orovada	Durixerollic Camborthids, coarse-loamy, mixed, mesic
Pattani	Entic Chromoxererts, fine, montmorillonitic, frigid
Pequop	Typic Argixerolls, loamy-skeletal, mixed, frigid
Pernty	Lithic Argixerolls, loamy-skeletal, mixed, frigid
Petan	Typic Durixerolls, clayey-skeletal, montmorillonitic, frigid, shallow
Pie Creek	Aridic Palexerolls, very-fine, montmorillonitic, frigid
Piline	Aquic Chromoxererts, fine, montmorillonitic, mesic
Placeritos	Aquic Xerofluvents, fine-silty, mixed (calcareous), mesic
Puett Variant	Lithic Torriorthents, loamy, mixed (calcareous), mesic
Puett	Xeric Torriorthents, loamy, mixed (calcareous), mesic, shallow
Quarz	Aridic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Ramires	Aridic Calcic Argixerolls, fine, montmorillonitic, frigid
Ratsow	Xerollic Durargids, fine, montmorillonitic, frigid
Relley	Duric Camborthids, fine-silty, mixed, mesic
Reluctan	Aridic Argixerolls, fine-loamy, mixed, frigid
Rugar	Pachic Argixerolls, fine, montmorillonitic, frigid
Shabliss	Haploxerollic Durorthids, loamy, mixed, mesic, shallow

TABLE 20.--CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Shalake	Xerollic Durorthids, coarse-loamy, mixed, mesic
Shalper	Lithic Argixerolls, loamy-skeletal, mixed, frigid
Shively	Pachic Haploxerolls, coarse-loamy, mixed, frigid
Short Creek	Xerollic Haplargids, clayey-skeletal, montmorillonitic, frigid
Skull Creek	Xerollic Durorthids, coarse-loamy, mixed, mesic
Snowmore	Xerollic Durargids, fine-loamy, mixed, mesic
Sodhouse	Typic Durorthids, loamy, mixed, mesic, shallow
Sonoma	Aeric Fluvaquents, fine-silty, mixed (calcareous), mesic
Soonaker	Mollic Haploxeralfs, fine-loamy, mixed, frigid
Soughe	Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic
Stampede	Aridic Durixerolls, fine, montmorillonitic, frigid
Sumine	Aridic Argixerolls, loamy-skeletal, mixed, frigid
Susie Creek	Durargidic Argixerolls, fine, montmorillonitic, frigid
Thwoop	Aridic Durixerolls, clayey-skeletal, montmorillonitic, frigid
Troughs	Xerollic Durargids, loamy-skeletal, mixed, mesic, shallow
Trunk	Xerollic Haplargids, fine, montmorillonitic, mesic
Tuffo	Vitrandic Torriorthents, ashy, nonacid, mesic, shallow
Tusel	Argic Pachic Cryoborolls, loamy-skeletal, mixed
Tusk	Pachic Argixerolls, fine-loamy, mixed, frigid
Tweba	Aeric Fluvaquents, coarse-loamy, mixed (calcareous), mesic
Tweener	Lithic Argixerolls, loamy-skeletal, mixed, frigid
Upville	Aridic Haploxerolls, sandy-skeletal, mixed, frigid
Vanwyper	Xerollic Haplargids, clayey-skeletal, montmorillonitic, mesic
Welch	Cumulic Haplaquolls, fine-loamy, mixed, frigid
Weso	Duric Camborthids, coarse-loamy, mixed, mesic
Wickahoney	Lithic Mollic Haploxeralfs, clayey-skeletal, montmorillonitic, frigid
Wieland	Durixerollic Haplargids, fine, montmorillonitic, mesic
Willhill	Durixerollic Haplargids, loamy-skeletal, mixed, mesic
Wilsor	Durixerollic Haplargids, fine-loamy, mixed, frigid
Xeric Torriorthents	Xeric Torriorthents, mesic
Yuko	Xerollic Haplargids, loamy, mixed, mesic, shallow
Zevadez	Durixerollic Haplargids, fine-loamy, mixed, mesic

Rangeland Plants and Woodland Understory

001--Rubble land

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions
		Soil name or Inclusion number--
		Rubble land

Range site number: none

Potential production (lb/acre):
Favorable years
Normal years
Unfavorable years

120--Cotant, moderately steep-Lerrow-Cotant association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Cotant	Lerrow	Cotant	Inclusion 1	Inclusion 2
Idaho fescue	FEID	30-50	40-60	30-50	15-25	---
Nevada bluegrass	PONE3	---	2-8	---	---	5-10
Sandberg bluegrass	POSE	---	---	---	2-8	---
Thurber needlegrass	STTH2	---	---	---	2-8	---
basin wildrye	ELCI2	---	2-8	---	---	60-70
bluebunch wheatgrass	AGSP	15-30	5-15	15-30	10-20	---
bluegrass	POA++	2-10	---	2-10	---	---
mat muhly	MURI	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	2-8
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---
antelope bitterbrush	PUTR2	2-5	---	2-5	5-10	---
basin big sagebrush	ARTRT	---	10-20	---	---	5-10
low sagebrush	ARAR8	15-25	---	15-25	25-35	---
Range site number		025XY017NV	025XY027NV	025XY017NV	025XY051NV	025XY003NV
Potential production (lb/acre):						
Favorable years		900	1300	900	500	4500
Normal years		700	900	700	300	3500
Unfavorable years		400	500	400	200	2000

126--Cotant-Lerrow-Akler association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cotant	Lerrow	Akler	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	2-5	---	---	5-30	---	40-60
Nevada bluegrass	PONE3	---	2-5	---	40-60	---	---	2-8
Sandberg bluegrass	POSE	---	---	2-8	---	---	---	---
Thurber needlegrass	STTH2	---	2-8	15-30	---	---	---	---
Webber ricegrass	STWE	---	---	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	20-40	---	---	---
basin wildrye	ELCI2	---	5-10	---	2-8	---	---	2-8
bluebunch wheatgrass	AGSP	15-30	50-60	20-40	---	---	---	5-15
bluegrass	POA++	2-10	---	---	---	5-15	---	---
mat muhly	MURI	---	---	---	2-8	---	---	---
meadow barley	HOBR2	---	---	---	2-5	---	---	---
sedge	CAREX	---	---	---	2-8	---	---	---
goldenweed	HAPLO2	---	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	2-5	2-10	---	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	10-20
black sagebrush	ARARN	---	---	---	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	---	---	---	---	---
sagebrush	ARTEM	---	---	20-30	---	30-35	---	---
Range site number		025XY017NV	025XY009NV	025XY018NV	025XY006NV	025XY024NV	none	025XY027NV
Potential production (lb/acre):								
Favorable years		900	1300	800	2000	400		1300
Normal years		700	900	600	1300	275		900
Unfavorable years		400	700	400	800	150		500

127--Cotant-Ninemile-Lerrow association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cotant	Ninemile	Lerrow	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	30-50	40-60	30-40	15-30	---	2-5
Nevada bluegrass	PONE3	---	---	2-8	2-5	---	40-60	2-5
Thurber needlegrass	STTH2	---	---	---	---	---	---	2-8
alpine timothy	PHAL2	---	---	---	---	---	20-40	---
basin wildrye	ELCI2	---	---	2-8	2-10	---	2-8	5-10
bluebunch wheatgrass	AGSP	15-30	15-30	5-15	15-30	---	---	50-60
bluegrass	POA++	2-10	2-10	---	---	---	---	---
bulbous oniongrass	MEBU	---	---	---	---	2-8	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
meadow barley	HOBR2	---	---	---	---	---	2-5	---
mountain brome	BRCA5	---	---	---	---	10-20	---	---
sedge	CAREX	---	---	---	---	---	2-8	---
slender wheatgrass	AGTR	---	---	---	---	2-8	---	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
lupine	LUPIN	---	---	---	---	10-15	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---	---
wyethia	WYETH	---	---	---	---	20-30	---	---
antelope bitterbrush	PUTR2	2-5	2-5	---	5-10	---	---	2-10
basin big sagebrush	ARTRT	---	---	10-20	---	---	---	---
low sagebrush	ARAR8	15-25	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	10-20	---	---	5-15

Range site number	025XY017NV	025XY017NV	025XY027NV	025XY012NV	025XY047NV	025XY006NV	025XY009NV
Potential production (lb/acre):							
Favorable years	900	900	1300	1400	2000	2000	1300
Normal years	700	700	900	1000	1500	1300	900
Unfavorable years	400	400	500	700	1000	800	700

128--Cotant-Graley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Cotant	Graley	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	30-40	40-60	2-5	---
Nevada bluegrass	PONE3	---	2-5	2-8	2-5	5-10
Thurber needlegrass	STTH2	---	---	---	2-8	---
alpine timothy	PHAL2	---	---	---	---	5-10
basin wildrye	ELCI2	---	2-10	2-8	5-10	---
bluebunch wheatgrass	AGSP	15-30	15-30	5-15	50-60	---
bluegrass	POA++	2-10	---	---	---	---
sedge	CAREX	---	---	---	---	5-10
tufted hairgrass	DECE	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	2-5
arrowleaf balsamroot	BASA3	---	2-5	---	---	---
cinquefoil	POTEN	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	2-5	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	---	2-10	---
basin big sagebrush	ARTRT	---	---	10-20	---	---
low sagebrush	ARAR8	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	5-15	---
Range site number		025XY017NV	025XY012NV	025XY027NV	025XY009NV	025XY005NV
Potential production (lb/acre):						
Favorable years		900	1400	1300	1300	3000
Normal years		700	1000	900	900	1700
Unfavorable years		400	700	500	700	1000

129--Cotant-Chen-Crooked Creek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cotant	Chen	Crooked Creek	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	30-50	---	30-50	2-5	30-40	---
Nevada bluegrass	PONE3	---	---	40-60	---	2-5	2-5	5-10
Thurber needlegrass	STTH2	---	---	---	---	2-8	---	---
alpine timothy	PHAL2	---	---	20-40	---	---	---	5-10
basin wildrye	ELCI2	---	---	2-8	---	5-10	2-10	---
bluebunch wheatgrass	AGSP	15-30	15-30	---	15-30	50-60	15-30	---
bluegrass	POA++	2-10	2-10	---	2-10	---	---	---
mat muhly	MURI	---	---	2-8	---	---	---	---
meadow barley	HOBR2	---	---	2-5	---	---	---	---
sedge	CAREX	---	---	2-8	---	---	---	5-10
tufted hairgrass	DECE	---	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	---	2-5
arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
antelope bitterbrush	PUTR2	2-5	2-5	---	2-5	2-10	5-10	---
low sagebrush	ARAR8	15-25	15-25	---	15-25	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	5-15	10-20	---
Range site number		025XY017NV	025XY017NV	025XY006NV	025XY017NV	025XY009NV	025XY012NV	025XY005NV
Potential production (lb/acre):								
Favorable years		900	900	2000	900	1300	1400	3000
Normal years		700	700	1300	700	900	1000	1700
Unfavorable years		400	400	800	400	700	700	1000

130--Cotant-Booford association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Cotant	Booford	Inclusion 1	Inclusion 2
Idaho fescue	FEID	30-50	30-40	---	---
Indian ricegrass	ORHY	---	---	15-30	---
Nevada bluegrass	PONE3	---	2-5	---	5-10
basin wildrye	ELCI2	---	2-10	2-8	60-70
bluebunch wheatgrass	AGSP	15-30	15-30	---	---
bluegrass	POA++	2-10	---	---	---
bottlebrush squirreltail	SIHY	---	---	5-10	---
mat muhly	MURI	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	15-30	---
antelope bitterbrush	PUTR2	2-5	5-10	2-8	---
basin big sagebrush	ARTRT	---	---	---	5-10
black sagebrush	ARARN	---	---	10-20	---
low sagebrush	ARAR8	15-25	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---
spiny hopsage	GRSP	---	---	2-5	---
Range site number		025XY017NV	025XY012NV	025XY025NV	025XY003NV
Potential production (lb/acre):					
Favorable years		900	1400	500	4500
Normal years		700	1000	350	3500
Unfavorable years		400	700	200	2000

140--Upville, frequently flooded-Upville association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Upville	Upville	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	---	---	---
Nevada bluegrass	PONE3	40-60	---	5-10	5-10
Thurber needlegrass	STTH2	---	10-20	---	---
alpine timothy	PHAL2	20-40	---	---	5-10
basin wildrye	ELCI2	2-8	2-8	60-70	---
bluebunch wheatgrass	AGSP	---	20-35	---	---
bluegrass	POA++	---	2-10	---	---
mat muhly	MURI	2-8	---	2-8	---
meadow barley	HOBR2	2-5	---	---	---
sedge	CAREX	2-8	---	---	5-10
streambank wheatgrass	AGDAR	---	---	2-8	---
tufted hairgrass	DECE	---	---	---	30-60
Sierra clover	TRWO	---	---	---	2-5
cinquefoil	POTEN	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---
antelope bitterbrush	PUTR2	---	2-8	---	---
basin big sagebrush	ARTRT	---	---	5-10	---
big sagebrush	ARTR2	---	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---
Range site number		025XY006NV	025XY014NV	025XY003NV	025XY005NV
Potential production (lb/acre):					
Favorable years		2000	1000	4500	3000
Normal years		1300	800	3500	1700
Unfavorable years		800	600	2000	1000

141--Upville-Kleckner association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Upville	Kleckner	Inclusion 1
Canby bluegrass	POCA	---	---	---
Nevada bluegrass	PONE3	---	---	---
Sandberg bluegrass	POSE	---	---	2-5
Thurber needlegrass	STTH2	10-20	10-20	15-25
basin wildrye	ELCI2	2-8	2-8	---
bluebunch wheatgrass	AGSP	20-35	20-35	25-40
bluegrass	POA++	2-10	2-10	---
Wyoming big sagebrush	ARTRW	---	---	15-25
antelope bitterbrush	PUTR2	2-8	2-8	---
basin big sagebrush	ARTRT	---	---	---
big sagebrush	ARTR2	10-20	10-20	---
mountain big sagebrush	ARVA2	---	---	---
Range site number		025XY014NV	025XY014NV	025XY019NV
Potential production (lb/acre):				
Favorable years		1000	1000	800
Normal years		800	800	600
Unfavorable years		600	600	400

150--Gochea gravelly loam, 2 to 4 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Gochea	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---
Idaho fescue	FEID	---	---	---	30-50
Nevada bluegrass	PONE3	---	---	40-60	---
Thurber needlegrass	STTH2	10-20	10-20	---	---
alpine timothy	PHAL2	---	---	20-40	---
basin wildrye	ELCI2	2-8	2-8	2-8	---
bluebunch wheatgrass	AGSP	20-35	20-35	---	15-30
bluegrass	POA++	2-10	2-10	---	2-10
mat muhly	MURI	---	---	2-8	---
meadow barley	HOBR2	---	---	2-5	---
sedge	CAREX	---	---	2-8	---
Wyoming big sagebrush	ARTRW	---	---	---	---
antelope bitterbrush	PUTR2	2-8	2-8	---	2-5
basin big sagebrush	ARTRT	---	---	---	---
big sagebrush	ARTR2	10-20	10-20	---	---
low sagebrush	ARAR8	---	---	---	15-25
mountain big sagebrush	ARVA2	---	---	---	---
Range site number		025XY014NV	025XY014NV	025XY006NV	025XY017NV
Potential production (lb/acre):					
Favorable years		1000	1000	2000	900
Normal years		800	800	1300	700
Unfavorable years		600	600	800	400

161--Sonoma silt loam, drained, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Sonoma	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	5-10	---	5-10
basin wildrye	ELCI2	60-70	55-65	60-70
creeping wildrye	ELTR3	---	5-15	---
mat muhly	MURI	2-8	---	2-8
streambank wheatgrass	AGDAR	2-8	---	2-8
western wheatgrass	AGSM	---	5-15	---
basin big sagebrush	ARTRT	5-10	10-15	5-10
black greasewood	SAVE4	---	2-8	---
Range site number		025XY003NV	024XY006NV	025XY003NV
Potential production (lb/acre):				
Favorable years		4500	1500	4500
Normal years		3500	1100	3500
Unfavorable years		2000	600	2000

162--Sonoma silt loam, drained, occasionally flooded

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Sonoma	Inclusion 1	Inclusion 2
basin wildrye	ELCI2	55-65	55-65	5-15
creeping wildrye	ELTR3	5-15	5-15	---
inland saltgrass	DISPS2	---	---	5-10
western wheatgrass	AGSM	5-15	5-15	---
basin big sagebrush	ARTRT	10-15	10-15	---
black greasewood	SAVE4	2-8	2-8	60-75
Range site number		024XY006NV	024XY006NV	024XY011NV
Potential production (lb/acre):				
Favorable years		1500	1500	500
Normal years		1100	1100	350
Unfavorable years		600	600	200

184--Crooked Creek silty clay loam, frequently flooded, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Crooked Creek	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	5-10	5-10	5-10
alpine timothy	PHAL2	5-10	5-10	---
basin wildrye	ELCI2	---	---	60-70
mat muhly	MURI	---	---	2-8
sedge	CAREX	5-10	5-10	---
streambank wheatgrass	AGDAR	---	---	2-8
tufted hairgrass	DECE	30-60	30-60	---
Sierra clover	TRWO	2-5	2-5	---
cinquefoil	POTEN	2-5	2-5	---
basin big sagebrush	ARTRT	---	---	5-10
Range site number		025XY005NV	025XY005NV	025XY003NV
Potential production (lb/acre):				
Favorable years		3000	3000	4500
Normal years		1700	1700	3500
Unfavorable years		1000	1000	2000

185--Crooked Creek, moderately wet-Crooked Creek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Crooked Creek	Crooked Creek	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	5-15	5-10	5-10	40-60	---
alkali sacaton	SPAI	---	---	---	---	5-25
alpine timothy	PHAL2	---	5-10	---	20-40	---
basin wildrye	ELCI2	---	---	60-70	2-8	50-60
creeping wildrye	ELTR3	---	---	---	---	---
inland saltgrass	DISPS2	2-5	---	---	---	---
mat muhly	MURI	2-5	---	2-8	2-8	---
meadow barley	HOBR2	---	---	---	2-5	---
sedge	CAREX	2-10	5-10	---	2-8	---
streambank wheatgrass	AGDAR	---	---	2-8	---	---
tufted hairgrass	DECE	---	30-60	---	---	---
wildrye	ELYMU	60-80	---	---	---	---
Sierra clover	TRWO	---	2-5	---	---	---
cinquefoil	POTEN	---	2-5	---	---	---
basin big sagebrush	ARTRT	---	---	5-10	---	---
black greasewood	SAVE4	---	---	---	---	5-15
rubber rabbitbrush	CHNA2	---	---	---	---	2-5
willow	SALIX	5-10	---	---	---	---
Range site number		025XY001NV	025XY005NV	025XY003NV	025XY006NV	024XY007NV
Potential production (lb/acre):						
Favorable years		3500	3000	4500	2000	1900
Normal years		2500	1700	3500	1300	1400
Unfavorable years		1800	1000	2000	800	800

186--Crooked Creek-Crooked Creek, occasionally flooded-Crooked Creek,

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Crooked Creek	Crooked Creek	Crooked Creek	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	5-10	40-60	5-10	5-10	5-10
alpine timothy	PHAL2	5-10	20-40	---	5-10	---
basin wildrye	ELCI2	---	2-8	60-70	---	60-70
mat muhly	MURI	---	2-8	2-8	---	2-8
meadow barley	HOBR2	---	2-5	---	---	---
sedge	CAREX	5-10	2-8	---	5-10	---
streambank wheatgrass	AGDAR	---	---	2-8	---	2-8
tufted hairgrass	DECE	30-60	---	---	30-60	---
Sierra clover	TRWO	2-5	---	---	2-5	---
cinquefoil	POTEN	2-5	---	---	2-5	---
basin big sagebrush	ARTRT	---	---	5-10	---	5-10
Range site number		025XY005NV	025XY006NV	025XY003NV	025XY005NV	025XY003NV
Potential production (lb/acre):						
Favorable years		3000	2000	4500	3000	4500
Normal years		1700	1300	3500	1700	3500
Unfavorable years		1000	800	2000	1000	2000

188--Crooked Creek-Welch-Crooked Creek, drained association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Crooked Creek	Welch	Crooked Creek	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	5-10	5-10	5-10	5-10	5-10
alpine timothy	PHAL2	5-10	---	---	5-10	5-10
basin wildrye	ELCI2	---	60-70	60-70	---	---
mat muhly	MURI	---	2-8	2-8	---	---
sedge	CAREX	5-10	---	---	5-10	5-10
streambank wheatgrass	AGDAR	---	2-8	2-8	---	---
tufted hairgrass	DECE	30-60	---	---	30-60	30-60
Sierra clover	TRWO	2-5	---	---	2-5	2-5
cinquefoil	POTEN	2-5	---	---	2-5	2-5
basin big sagebrush	ARTRT	---	5-10	5-10	---	---
Range site number		025XY005NV	025XY003NV	025XY003NV	025XY005NV	025XY005NV
Potential production (lb/acre):						
Favorable years		3000	4500	4500	3000	3000
Normal years		1700	3500	3500	1700	1700
Unfavorable years		1000	2000	2000	1000	1000

190--Heechee-Heechee, cobbly association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Heechee	Heechee	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	40-60	15-30	40-60	30-50	---
Nevada bluegrass	PONE3	2-8	---	2-8	---	5-10
Thurber needlegrass	STTH2	---	2-5	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10
basin wildrye	ELCI2	2-8	---	2-8	---	---
bluebunch wheatgrass	AGSP	5-15	10-20	5-15	15-30	---
bluegrass	POA++	---	---	---	2-10	---
sedge	CAREX	---	---	---	---	5-10
tufted hairgrass	DECE	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	2-5
antelope bitterbrush	PUTR2	---	20-40	---	2-5	---
basin big sagebrush	ARTRT	10-20	---	10-20	---	---
low sagebrush	ARAR8	---	---	---	15-25	---
mountain big sagebrush	ARVA2	---	5-10	---	---	---
Range site number		025XY027NV	025XY007NV	025XY027NV	025XY017NV	025XY005NV
Potential production (lb/acre):						
Favorable years		1300	2300	1300	900	3000
Normal years		900	1400	900	700	1700
Unfavorable years		500	900	500	400	1000

200--Lynnbow-Rugar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Lynnbow	Rugar	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	40-60	---	30-50	---	---
Nevada bluegrass	PONE3	---	2-8	---	---	5-10	5-10
Thurber needlegrass	STTH2	---	---	5-15	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	2-8	2-5	---	60-70	---
bluebunch wheatgrass	AGSP	15-30	5-15	60-80	15-30	---	---
bluegrass	POA++	2-10	---	---	2-10	---	---
mat muhly	MURI	---	---	---	---	2-8	---
sedge	CAREX	---	---	---	---	---	5-10
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---
tufted hairgrass	DECE	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	5-15	---	---	---
antelope bitterbrush	PUTR2	2-5	---	1-5	2-5	---	---
basin big sagebrush	ARTRT	---	10-20	---	---	5-10	---
low sagebrush	ARAR8	15-25	---	---	15-25	---	---
Range site number		025XY017NV	025XY027NV	025XY015NV	025XY017NV	025XY003NV	025XY005NV
Potential production (lb/acre):							
Favorable years		900	1300	1000	900	4500	3000
Normal years		700	900	700	700	3500	1700
Unfavorable years		400	500	500	400	2000	1000

201--Lynnbow-Lerrow-Crooked Creek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Lynnbow	Lerrow	Crooked Creek	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	40-60	---	30-50	30-50	30-50	30-50
Nevada bluegrass	PONE3	---	2-8	40-60	---	---	---	---
alpine timothy	PHAL2	---	---	20-40	---	---	---	---
basin wildrye	ELCI2	---	2-8	2-8	---	---	---	---
bluebunch wheatgrass	AGSP	15-30	5-15	---	15-30	15-30	15-30	15-30
bluegrass	POA++	2-10	---	---	2-10	2-10	2-10	2-10
mat muhly	MURI	---	---	2-8	---	---	---	---
meadow barley	HOBR2	---	---	2-5	---	---	---	---
sedge	CAREX	---	---	2-8	---	---	---	---
antelope bitterbrush	PUTR2	2-5	---	---	2-5	2-5	2-5	2-5
basin big sagebrush	ARTRT	---	10-20	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	---	15-25	15-25	15-25	15-25
Range site number		025XY017NV	025XY027NV	025XY006NV	025XY017NV	025XY017NV	025XY017NV	025XY017NV
Potential production (lb/acre):								
Favorable years		900	1300	2000	900	900	900	900
Normal years		700	900	1300	700	700	700	700
Unfavorable years		400	500	800	400	400	400	400

210--Soonaker-Bulake association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Soonaker	Bulake	Inclusion 1	Inclusion 2
Idaho fescue	FEID	40-60	30-50	40-60	---
Nevada bluegrass	PONE3	2-8	---	2-8	5-10
basin wildrye	ELCI2	2-8	---	2-8	60-70
bluebunch wheatgrass	AGSP	5-15	15-30	5-15	---
bluegrass	POA++	---	2-10	---	---
mat muhly	MURI	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	2-8
antelope bitterbrush	PUTR2	---	2-5	---	---
basin big sagebrush	ARTRT	10-20	---	10-20	5-10
low sagebrush	ARAR8	---	15-25	---	---
Range site number		025XY027NV	025XY017NV	025XY027NV	025XY003NV
Potential production (lb/acre):					
Favorable years		1300	900	1300	4500
Normal years		900	700	900	3500
Unfavorable years		500	400	500	2000

220--Cavanaugh-Rugar-McIvey association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Cavanaugh	Rugar	McIvey	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	15-30	30-40	---	5-15	---
Nevada bluegrass	PONE3	---	---	2-5	40-60	---	---
alpine timothy	PHAL2	---	---	---	20-40	---	---
basin wildrye	ELCI2	---	---	2-10	2-8	---	---
bluebunch wheatgrass	AGSP	15-30	---	15-30	---	2-10	---
bluegrass	POA++	2-10	---	---	---	---	---
bulbous oniongrass	MEBU	---	2-8	---	---	---	---
mat muhly	MURI	---	---	---	2-8	---	---
meadow barley	HOBR2	---	---	---	2-5	---	---
mountain brome	BRCA5	---	10-20	---	---	---	---
sedge	CAREX	---	---	---	2-8	---	---
slender wheatgrass	AGTR	---	2-8	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---
lupine	LUPIN	---	10-15	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---
wyethia	WYETH	---	20-30	---	---	---	---
Saskatoon serviceberry	AMAL2	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	---	5-10	---	2-8	---
low sagebrush	ARAR8	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	2-5	---
serviceberry	AMELA	---	---	---	---	40-50	---
snowberry	SYMPH	---	---	---	---	2-8	---
Range site number		025XY017NV	025XY047NV	025XY012NV	025XY006NV	025XY046NV	none
Potential production (lb/acre):							
Favorable years		900	2000	1400	2000	1800	
Normal years		700	1500	1000	1300	1300	
Unfavorable years		400	1000	700	800	900	

221--Cavanaugh-Quarz-Alyan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Cavanaugh	Quarz	Alyan	Inclusion 1	Inclusion 2
Idaho fescue	FEID	30-50	2-5	40-60	---	15-30
Nevada bluegrass	PONE3	---	2-5	2-8	---	---
Thurber needlegrass	STTH2	---	2-8	---	---	2-5
basin wildrye	ELCI2	---	5-10	2-8	---	---
bluebunch wheatgrass	AGSP	15-30	50-60	5-15	---	10-20
bluegrass	POA++	2-10	---	---	---	---
antelope bitterbrush	PUTR2	2-5	2-10	---	---	20-40
basin big sagebrush	ARTRT	---	---	10-20	---	---
low sagebrush	ARAR8	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	---	---	5-10
Range site number		025XY017NV	025XY009NV	025XY027NV	0250X027NV	025XY007NV
Potential production (lb/acre):						
Favorable years		900	1300	1300		2300
Normal years		700	900	900		1400
Unfavorable years		400	700	500		900

233--Bioya-Bilbo-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bioya	Bilbo	Chiara	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	15-30	---	---	---
Sandberg bluegrass	POSE	2-5	---	2-5	---	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	5-15	15-25	---	15-25	15-25	15-25
basin wildrye	ELCI2	---	2-5	---	2-8	---	---	---
bluebunch wheatgrass	AGSP	25-40	60-80	25-40	---	25-40	25-40	25-40
bottlebrush squirreltail	SIHY	---	---	---	5-10	---	---	---
Wyoming big sagebrush	ARTRW	15-25	5-15	15-25	15-30	15-25	15-25	15-25
antelope bitterbrush	PUTR2	---	1-5	---	2-8	---	---	---
black sagebrush	ARARN	---	---	---	10-20	---	---	---
spiny hopsage	GRSP	---	---	---	2-5	---	---	---
Range site number		025XY019NV	025XY015NV	025XY019NV	025XY025NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	1000	800	500	800	800	800
Normal years		600	700	600	350	600	600	600
Unfavorable years		400	500	400	200	400	400	400

234--Bioya-Shabliss-Puett association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bioya	Shabliss	Puett	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	15-30	---	---	---	---
Thurber needlegrass	STTH2	40-50	40-50	---	---	40-50	---	40-50
basin wildrye	ELCI2	---	---	2-8	---	---	55-65	---
bluebunch wheatgrass	AGSP	2-10	2-10	---	---	2-10	---	2-10
bottlebrush squirreltail	SIHY	---	---	5-10	---	---	---	---
creeping wildrye	ELTR3	---	---	---	---	---	5-15	---
western wheatgrass	AGSM	---	---	---	---	---	5-15	---
globemallow	SPHAE	1-3	1-3	---	---	1-3	---	1-3
Wyoming big sagebrush	ARTRW	25-35	25-35	15-30	---	25-35	---	25-35
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	10-15	---
black greasewood	SAVE4	---	---	---	---	---	2-8	---
black sagebrush	ARARN	---	---	10-20	---	---	---	---
spiny hopsage	GRSP	2-5	2-5	2-5	---	2-5	---	2-5
Range site number		024XY005NV	024XY005NV	025XY025NV	none	024XY005NV	024XY006NV	024XY005NV
Potential production (lb/acre):								
Favorable years		800	800	500		800	1500	800
Normal years		600	600	350		600	1100	600
Unfavorable years		400	400	200		400	600	400

235--Bioya-Trunk-Alley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Bioya	Trunk	Alley	Inclusion 1
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):					
Favorable years		800	800	800	800
Normal years		600	600	600	600
Unfavorable years		400	400	400	400

236--Bioya-Wieland-Kleckner association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bioya	Wieland	Kleckner	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	---	10-20	---
Letterman needlegrass	STLE4	---	---	---	---	---	5-10	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	10-20	15-25	15-25	---	15-25
basin wildrye	ELCI2	---	---	2-8	---	---	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	20-35	25-40	25-40	10-20	25-40
bluegrass	POA++	---	---	2-10	---	---	2-8	---
Wyoming big sagebrush	ARTRW	15-25	15-25	---	15-25	15-25	---	15-25
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	10-20	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	15-25	---
mountain snowberry	SYOR2	---	---	---	---	---	2-8	---
curlleaf mountainmahogany	CELE3	---	---	---	---	---	30-50	---
Range site number		025XY019NV	025XY019NV	025XY014NV	025XY019NV	025XY019NV	025XY031NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	1000	800	800	1300	800
Normal years		600	600	800	600	600	900	600
Unfavorable years		400	400	600	400	400	600	400

241--Wickahoney-Deunah-Petan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Wickahoney	Deunah	Petan	Inclusion 1
Idaho fescue	FEID	30-50	30-50	---	30-50
Sandberg bluegrass	POSE	---	---	2-10	---
Thurber needlegrass	STTH2	---	---	10-20	---
Webber ricegrass	STWE	---	---	5-10	---
bluebunch wheatgrass	AGSP	15-30	15-30	20-30	15-30
bluegrass	POA++	2-10	2-10	---	2-10
balsamroot	BALSA	---	---	2-5	---
antelope bitterbrush	PUTR2	2-5	2-5	---	2-5
low sagebrush	ARAR8	15-25	15-25	25-35	15-25
Range site number		025XY017NV	025XY017NV	025XY022NV	025XY017NV
Potential production (lb/acre):					
Favorable years		900	900	600	900
Normal years		700	700	400	700
Unfavorable years		400	400	250	400

270--Pernty, steep-Loncan-Pernty association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Pernty	Loncan	Pernty	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-40	30-40	30-40	---	---	---
Nevada bluegrass	PONE3	2-5	2-5	2-5	---	---	40-60
alpine timothy	PHAL2	---	---	---	---	---	20-40
basin wildrye	ELCI2	2-10	2-10	2-10	---	---	2-8
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	2-5	2-5	2-5	---	---	---
tapertip hawksbeard	CRAC2	2-5	2-5	2-5	---	---	---
antelope bitterbrush	PUTR2	5-10	5-10	5-10	---	---	---
mountain big sagebrush	ARVA2	10-20	10-20	10-20	---	---	---
Range site number		025XY012NV	025XY012NV	025XY012NV	none	none	025XY006NV
Potential production (lb/acre):							
Favorable years		1400	1400	1400			2000
Normal years		1000	1000	1000			1300
Unfavorable years		700	700	700			800

280--Humboldt silty clay loam, occasionally flooded

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Humboldt	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	---	---	5-15	5-15
alkali sacaton	SPAI	5-25	5-25	---	---
basin wildrye	ELCI2	50-60	50-60	---	---
creeping wildrye	ELTR3	---	---	---	---
inland saltgrass	DISPS2	---	---	2-5	2-5
mat muhly	MURI	---	---	2-5	2-5
sedge	CAREX	---	---	2-10	2-10
wildrye	ELYMU	---	---	60-80	60-80
black greasewood	SAVE4	5-15	5-15	---	---
rubber rabbitbrush	CHNA2	2-5	2-5	---	---
willow	SALIX	---	---	5-10	5-10
Range site number		024XY007NV	024XY007NV	025XY001NV	025XY001NV
Potential production (lb/acre):					
Favorable years		1900	1900	3500	3500
Normal years		1400	1400	2500	2500
Unfavorable years		800	800	1800	1800

308--Akler-Pattani-Cotant association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Akler	Pattani	Cotant	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	---	30-50	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10	5-10
Sandberg bluegrass	POSE	2-8	---	---	2-8	---	---	---
Thurber needlegrass	STTH2	15-30	5-15	---	15-30	10-20	---	---
Webber ricegrass	STWE	2-8	---	---	2-8	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	30-50	---	---	2-8	---	60-70
bluebunch wheatgrass	AGSP	20-40	5-15	15-30	20-40	20-35	---	---
bluegrass	POA++	---	---	2-10	---	2-10	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
sedge	CAREX	---	---	---	---	---	5-10	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	---	---	2-5	---	2-8	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
big sagebrush	ARTR2	---	10-20	---	---	10-20	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
sagebrush	ARTEM	20-30	---	---	20-30	---	---	---
Range site number		025XY018NV	025XY013NV	025XY017NV	025XY018NV	025XY014NV	025XY005NV	025XY003NV
Potential production (lb/acre):								
Favorable years		800	1000	900	800	1000	3000	4500
Normal years		600	800	700	600	800	1700	3500
Unfavorable years		400	500	400	400	600	1000	2000

309--Akler-Susie Creek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Akler	Susie Creek	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---
Idaho fescue	FEID	---	---	---	40-60	15-25
Nevada bluegrass	PONE3	---	---	5-10	2-8	---
Sandberg bluegrass	POSE	2-8	---	---	---	2-8
Thurber needlegrass	STTH2	15-30	10-20	---	---	2-8
Webber ricegrass	STWE	2-8	---	---	---	---
basin wildrye	ELCI2	---	2-8	60-70	2-8	---
bluebunch wheatgrass	AGSP	20-40	20-35	---	5-15	10-20
bluegrass	POA++	---	2-10	---	---	---
mat muhly	MURI	---	---	2-8	---	---
streambank wheatgrass	AGDAR	---	---	2-8	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	---
antelope bitterbrush	PUTR2	---	2-8	---	---	5-10
basin big sagebrush	ARTRT	---	---	5-10	10-20	---
big sagebrush	ARTR2	---	10-20	---	---	---
early sagebrush	ARLO9	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	25-35
mountain big sagebrush	ARVA2	---	---	---	---	---
sagebrush	ARTEM	20-30	---	---	---	---
Range site number		025XY018NV	025XY014NV	025XY003NV	025XY027NV	025XY051NV
Potential production (lb/acre):						
Favorable years		800	1000	4500	1300	500
Normal years		600	800	3500	900	300
Unfavorable years		400	600	2000	500	200

457--Donna-Stampede-Short Creek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Donna	Stampede	Short Creek	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	2-5	---
Nevada bluegrass	PONE3	---	---	---	---	2-5	5-10
Sandberg bluegrass	POSE	2-8	---	---	2-8	---	---
Thurber needlegrass	STTH2	15-30	10-20	5-15	15-30	2-8	---
Webber ricegrass	STWE	2-8	---	---	2-8	---	---
basin wildrye	ELCI2	---	2-8	2-5	---	5-10	60-70
bluebunch wheatgrass	AGSP	20-40	20-35	60-80	20-40	50-60	---
bluegrass	POA++	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8
Wyoming big sagebrush	ARTRW	---	---	5-15	---	---	---
antelope bitterbrush	PUTR2	---	2-8	1-5	---	2-10	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
big sagebrush	ARTR2	---	10-20	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	5-15	---
sagebrush	ARTEM	20-30	---	---	20-30	---	---
Range site number		025XY018NV	025XY014NV	025XY015NV	025XY018NV	025XY009NV	025XY003NV
Potential production (lb/acre):							
Favorable years		800	1000	1000	800	1300	4500
Normal years		600	800	700	600	900	3500
Unfavorable years		400	600	500	400	700	2000

458--Donna-Stampede association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Donna	Stampede	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---
Sandberg bluegrass	POSE	2-8	---	---	---
Thurber needlegrass	STTH2	15-30	10-20	5-15	10-20
Webber ricegrass	STWE	2-8	---	---	---
basin wildrye	ELCI2	---	2-8	2-5	2-8
bluebunch wheatgrass	AGSP	20-40	20-35	60-80	20-35
bluegrass	POA++	---	2-10	---	2-10
Wyoming big sagebrush	ARTRW	---	---	5-15	---
antelope bitterbrush	PUTR2	---	2-8	1-5	2-8
basin big sagebrush	ARTRT	---	---	---	---
big sagebrush	ARTR2	---	10-20	---	10-20
early sagebrush	ARLO9	---	---	---	---
low sagebrush	ARAR8	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---
sagebrush	ARTEM	20-30	---	---	---
Range site number		025XY018NV	025XY014NV	025XY015NV	025XY014NV
Potential production (lb/acre):					
Favorable years		800	1000	1000	1000
Normal years		600	800	700	800
Unfavorable years		400	600	500	600

464--Stampede silt loam, 2 to 8 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Stampede	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---
Nevada bluegrass	PONE3	---	5-10	5-10	---	---
Sandberg bluegrass	POSE	---	---	---	---	2-8
Thurber needlegrass	STTH2	10-20	---	---	5-15	15-30
Webber ricegrass	STWE	---	---	---	---	2-8
alpine timothy	PHAL2	---	---	5-10	---	---
basin wildrye	ELCI2	2-8	60-70	---	2-5	---
bluebunch wheatgrass	AGSP	20-35	---	---	60-80	20-40
bluegrass	POA++	2-10	---	---	---	---
mat muhly	MURI	---	2-8	---	---	---
sedge	CAREX	---	---	5-10	---	---
streambank wheatgrass	AGDAR	---	2-8	---	---	---
tufted hairgrass	DECE	---	---	30-60	---	---
Sierra clover	TRWO	---	---	2-5	---	---
cinquefoil	POTEN	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	5-15	---
antelope bitterbrush	PUTR2	2-8	---	---	1-5	---
basin big sagebrush	ARTRT	---	5-10	---	---	---
big sagebrush	ARTR2	10-20	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---
sagebrush	ARTEM	---	---	---	---	20-30
Range site number		025XY014NV	025XY003NV	025XY005NV	025XY015NV	025XY018NV
Potential production (lb/acre):						
Favorable years		1000	4500	3000	1000	800
Normal years		800	3500	1700	700	600
Unfavorable years		600	2000	1000	500	400

570--Sumine-Cleavage-Hapgood association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Cleavage	Hapgood	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	2-8	---	---	---
Idaho fescue	FEID	2-5	5-30	2-10	---	---	---	---
Letterman needlegrass	STLE4	---	---	---	2-5	---	---	40-60
Nevada bluegrass	PONE3	2-5	---	2-5	---	5-10	5-10	---
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	5-10	---
basin wildrye	ELCI2	5-10	---	---	---	---	---	---
bluebunch wheatgrass	AGSP	50-60	---	2-5	---	---	---	---
bluegrass	POA++	---	5-15	---	---	---	---	---
mountain brome	BRCA5	---	---	5-15	5-10	---	---	---
sedge	CAREX	---	---	---	---	5-10	5-10	---
slender wheatgrass	AGTR	---	---	5-15	5-10	---	---	---
spike-fescue	LEKI2	---	---	2-10	---	---	---	---
tufted hairgrass	DECE	---	---	---	---	30-60	30-60	---
Sierra clover	TRWO	---	---	---	---	2-5	2-5	---
cinquefoil	POTEN	---	---	---	---	2-5	2-5	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
tailcup lupine	LUCA	---	---	---	---	---	---	20-40
Utah serviceberry	AMUT	---	---	1-5	---	---	---	---
antelope bitterbrush	PUTR2	2-10	---	1-5	---	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	---	1-5	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	5-15	---	---	---	---
quaking aspen	POTR5	---	---	---	50-60	---	---	---
sagebrush	ARTEM	---	30-35	---	---	---	---	---
snowberry	SYMPH	---	---	2-15	---	---	---	---
willow	SALIX	---	---	---	1-8	---	---	---

Range site number	025XY009NV	025XY024NV	025XY004NV	025XY002NV	025XY005NV	025XY005NV	025XY028NV
Potential production (lb/acre):							
Favorable years	1300	400	2800	1800	3000	3000	1700
Normal years	900	275	1800	1300	1700	1700	1400
Unfavorable years	700	150	1200	900	1000	1000	1100

571--Sumine-Tusel-Gando association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Tusel	Gando	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	5-10	---	---	---	---	---
Idaho fescue	FEID	2-5	50-65	5-30	---	X	5-30	---
Nevada bluegrass	PONE3	2-5	---	---	---	---	---	---
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
basin wildrye	ELCI2	5-10	---	---	---	---	---	---
bluebunch wheatgrass	AGSP	50-60	2-5	---	---	---	---	---
bluegrass	POA++	---	---	5-15	---	---	5-15	---
horsemint giant hyssop	AGUR	---	---	---	---	X	---	---
mountain brome	BRCA5	---	---	---	---	X	---	---
slender wheatgrass	AGTR	---	---	---	---	X	---	---
goldenweed	HAPLO2	---	---	2-5	---	---	2-5	---
groundsel	SENEC	---	---	---	---	X	---	---
Utah serviceberry	AMUT	---	---	---	---	X	---	---
antelope bitterbrush	PUTR2	2-10	---	---	---	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	2-8	---	---	---	---	---
sagebrush	ARTEM	---	---	30-35	---	---	30-35	---
snowberry	SYMPH	---	---	---	---	X	---	---
quaking aspen	POTRT	---	---	---	---	X	---	---
Range site number		025XY009NV	025XY010NV	025XY024NV	none	025XY065NV	025XY024NV	none
Potential production (lb/acre):								
Favorable years		1300	1200	400		800	400	
Normal years		900	800	275		600	275	
Unfavorable years		700	600	150		400	150	

572--Sumine-Reluctan-Cleavage association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Reluctan	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	2-5	30-40	30-50	30-40	30-50	5-30	---
Nevada bluegrass	PONE3	2-5	2-5	---	2-5	---	---	---
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
basin wildrye	ELCI2	5-10	2-10	---	2-10	---	---	---
bluebunch wheatgrass	AGSP	50-60	15-30	15-30	15-30	15-30	---	---
bluegrass	POA++	---	---	2-10	---	2-10	5-15	---
arrowleaf balsamroot	BASA3	---	2-5	---	2-5	---	---	---
goldenweed	HAPLO2	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	2-5	---	2-5	---	---	---
antelope bitterbrush	PUTR2	2-10	5-10	2-5	5-10	2-5	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	15-25	---	---
mountain big sagebrush	ARVA2	5-15	10-20	---	10-20	---	---	---
sagebrush	ARTEM	---	---	---	---	---	30-35	---
Range site number		025XY009NV	025XY012NV	025XY017NV	025XY012NV	025XY017NV	025XY024NV	none
Potential production (lb/acre):								
Favorable years		1300	1400	900	1400	900	400	
Normal years		900	1000	700	1000	700	275	
Unfavorable years		700	700	400	700	400	150	

576--Sumine-Hapgood-Cleavage association, very gravelly

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Hapgood	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	---	---	---	---
Idaho fescue	FEID	2-5	2-10	30-50	5-30	---	2-10	5-15
Letterman needlegrass	STLE4	---	---	---	---	---	2-5	---
Nevada bluegrass	PONE3	2-5	2-5	---	---	5-10	2-5	---
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
basin wildrye	ELCI2	5-10	---	---	---	60-70	5-15	---
bluebunch wheatgrass	AGSP	50-60	2-5	15-30	---	---	30-50	2-10
bluegrass	POA++	---	---	2-10	5-15	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
mountain brome	BRCA5	---	5-15	---	---	---	20-40	---
slender wheatgrass	AGTR	---	5-15	---	---	---	---	---
spike-fescue	LEKI2	---	2-10	---	---	---	2-5	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---	---
goldenweed	HAPLO2	---	---	---	2-5	---	---	---
Saskatoon serviceberry	AMAL2	---	---	---	---	---	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
antelope bitterbrush	PUTR2	2-10	1-5	2-5	---	---	5-10	2-8
basin big sagebrush	ARTRT	---	---	---	---	5-10	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	1-5	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	5-15	5-15	---	---	---	5-15	2-5
sagebrush	ARTEM	---	---	---	30-35	---	---	---
serviceberry	AMELA	---	---	---	---	---	---	40-50
snowberry	SYMPH	---	2-15	---	---	---	---	2-8

Range site number	025XY009NV	025XY004NV	025XY017NV	025XY024NV	025XY003NV	025XY016NV	025XY046NV
Potential production (lb/acre):							
Favorable years	1300	2800	900	400	4500	2000	1800
Normal years	900	1800	700	275	3500	1400	1300
Unfavorable years	700	1200	400	150	2000	1000	900

577--Sumine-Hapgood-Chen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Hapgood	Chen	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	---	---	---	---
Idaho fescue	FEID	2-5	2-10	30-50	30-40	---	5-15	---
Nevada bluegrass	PONE3	2-5	2-5	---	2-5	5-10	---	---
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
basin wildrye	ELCI2	5-10	---	---	2-10	60-70	2-8	---
bluebunch wheatgrass	AGSP	50-60	2-5	15-30	15-30	---	15-25	---
bluegrass	POA++	---	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
mountain brome	BRCA5	---	5-15	---	---	---	5-10	---
slender wheatgrass	AGTR	---	5-15	---	---	---	---	---
spike-fescue	LEKI2	---	2-10	---	---	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	2-8	---
antelope bitterbrush	PUTR2	2-10	1-5	2-5	5-10	---	2-10	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---	---
common chokecherry	PRVI	---	1-5	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	5-15	5-15	---	10-20	---	10-20	---
snowberry	SYMPH	---	2-15	---	---	---	---	---

Range site number	025XY009NV	025XY004NV	025XY017NV	025XY012NV	025XY003NV	025XY042NV	none
Potential production (lb/acre):							
Favorable years	1300	2800	900	1400	4500	700	
Normal years	900	1800	700	1000	3500	500	
Unfavorable years	700	1200	400	700	2000	300	

578--Sumine-Tusel-Hapgood association, very steep

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Tusel	Hapgood	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	---	---	---	---
Cusick bluegrass	POCU3	---	5-10	---	---	---	---	---
Idaho fescue	FEID	2-5	50-65	2-10	5-30	30-50	---	2-10
Letterman needlegrass	STLE4	---	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	2-5	---	2-5	---	---	5-10	2-5
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
basin wildrye	ELCI2	5-10	---	---	---	---	---	5-15
bluebunch wheatgrass	AGSP	50-60	2-5	2-5	---	15-30	---	30-50
bluegrass	POA++	---	---	---	5-15	2-10	---	---
mountain brome	BRCA5	---	---	5-15	---	---	---	20-40
sedge	CAREX	---	---	---	---	---	5-10	---
slender wheatgrass	AGTR	---	---	5-15	---	---	---	---
spike-fescue	LEKI2	---	---	2-10	---	---	---	2-5
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
goldenweed	HAPLO2	---	---	---	2-5	---	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---	---
antelope bitterbrush	PUTR2	2-10	---	1-5	---	2-5	---	5-10
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	---	1-5	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	15-25	---	---
mountain big sagebrush	ARVA2	5-15	2-8	5-15	---	---	---	5-15
sagebrush	ARTEM	---	---	---	30-35	---	---	---
snowberry	SYMPH	---	---	2-15	---	---	---	---

Range site number	025XY009NV	025XY010NV	025XY004NV	025XY024NV	025XY017NV	025XY005NV	025XY016NV
Potential production (lb/acre):							
Favorable years	1300	1200	2800	400	900	3000	2000
Normal years	900	800	1800	275	700	1700	1400
Unfavorable years	700	600	1200	150	400	1000	1000

579--Sumine-Pernty-Tusel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Pernty	Tusel	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	---	---	---	---
Idaho fescue	FEID	2-5	5-15	2-10	5-30	---	---	---
Nevada bluegrass	PONE3	2-5	---	2-5	---	---	5-10	5-10
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
basin wildrye	ELCI2	5-10	---	---	---	---	---	60-70
bluebunch wheatgrass	AGSP	50-60	2-10	2-5	---	---	---	---
bluegrass	POA++	---	---	---	5-15	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
mountain brome	BRCA5	---	---	5-15	---	---	---	---
sedge	CAREX	---	---	---	---	---	5-10	---
slender wheatgrass	AGTR	---	---	5-15	---	---	---	---
spike-fescue	LEKI2	---	---	2-10	---	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
goldenweed	HAPLO2	---	---	---	2-5	---	---	---
Saskatoon serviceberry	AMAL2	---	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---	---
antelope bitterbrush	PUTR2	2-10	2-8	1-5	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	---	1-5	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	2-5	5-15	---	---	---	---
sagebrush	ARTEM	---	---	---	30-35	---	---	---
serviceberry	AMELA	---	40-50	---	---	---	---	---
snowberry	SYMPH	---	2-8	2-15	---	---	---	---

Range site number	025XY009NV	025XY046NV	025XY004NV	025XY024NV	none	025XY005NV	025XY003NV
Potential production (lb/acre):							
Favorable years	1300	1800	2800	400		3000	4500
Normal years	900	1300	1800	275		1700	3500
Unfavorable years	700	900	1200	150		1000	2000

580--Sumine-Pie Creek-Reluctan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Sumine	Pie Creek	Reluctan	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	2-5	---	30-40	30-40	---	30-50
Nevada bluegrass	PONE3	2-5	---	2-5	2-5	40-60	---
Sandberg bluegrass	POSE	---	2-8	---	---	---	---
Thurber needlegrass	STTH2	2-8	15-30	---	---	---	---
Webber ricegrass	STWE	---	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	20-40	---
basin wildrye	ELCI2	5-10	---	2-10	2-10	2-8	---
bluebunch wheatgrass	AGSP	50-60	20-40	15-30	15-30	---	15-30
bluegrass	POA++	---	---	---	---	---	2-10
mat muhly	MURI	---	---	---	---	2-8	---
meadow barley	HOBR2	---	---	---	---	2-5	---
sedge	CAREX	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	2-5	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	2-5	---	---
antelope bitterbrush	PUTR2	2-10	---	5-10	5-10	---	2-5
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	15-25
mountain big sagebrush	ARVA2	5-15	---	10-20	10-20	---	---
sagebrush	ARTEM	---	20-30	---	---	---	---
Range site number		025XY009NV	025XY018NV	025XY012NV	025XY012NV	025XY006NV	025XY017NV
Potential production (lb/acre):							
Favorable years		1300	800	1400	1400	2000	900
Normal years		900	600	1000	1000	1300	700
Unfavorable years		700	400	700	700	800	400

581--Sumine-Hapgood-Cleavage association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Hapgood	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	2-5	---	---	---
Idaho fescue	FEID	2-5	2-10	5-30	2-10	---	20-30	30-40
Nevada bluegrass	PONE3	2-5	2-5	---	2-5	40-60	---	2-5
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	20-40	---	---
basin wildrye	ELCI2	5-10	---	---	---	2-8	40-60	2-10
big bluegrass	POAM	---	---	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	50-60	2-5	---	2-5	---	---	15-30
bluegrass	POA++	---	---	5-15	---	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
meadow barley	HOBR2	---	---	---	---	2-5	---	---
mountain brome	BRCA5	---	5-15	---	5-15	---	2-10	---
sedge	CAREX	---	---	---	---	2-8	---	---
slender wheatgrass	AGTR	---	5-15	---	5-15	---	---	---
spike-fescue	LEKI2	---	2-10	---	2-10	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	2-5
goldenweed	HAPLO2	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Utah serviceberry	AMUT	---	1-5	---	1-5	---	---	---
antelope bitterbrush	PUTR2	2-10	1-5	---	1-5	---	---	5-10
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	1-5	---	1-5	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	5-15	---	5-15	---	2-5	10-20
sagebrush	ARTEM	---	---	30-35	---	---	---	---
snowberry	SYMPH	---	2-15	---	2-15	---	---	---
Range site number		025XY009NV	025XY004NV	025XY024NV	025XY004NV	025XY006NV	025XY029NV	025XY012NV
Potential production (lb/acre):								
Favorable years		1300	2800	400	2800	2000	2000	1400
Normal years		900	1800	275	1800	1300	1700	1000
Unfavorable years		700	1200	150	1200	800	1300	700

582--Sumine-Tusel-Cleavage association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Sumine	Tusel	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	---	---	---	---
Idaho fescue	FEID	2-5	2-10	30-50	30-40	2-10	5-30	---
Letterman needlegrass	STLE4	---	---	---	---	2-5	---	---
Nevada bluegrass	PONE3	2-5	2-5	---	2-5	2-5	---	5-10
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
basin wildrye	ELCI2	5-10	---	---	2-10	5-15	---	60-70
bluebunch wheatgrass	AGSP	50-60	2-5	15-30	15-30	30-50	---	---
bluegrass	POA++	---	---	2-10	---	---	5-15	---
mat muhly	MURI	---	---	---	---	---	---	2-8
mountain brome	BRCA5	---	5-15	---	---	20-40	---	---
slender wheatgrass	AGTR	---	5-15	---	---	---	---	---
spike-fescue	LEKI2	---	2-10	---	---	2-5	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
goldenweed	HAPLO2	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
antelope bitterbrush	PUTR2	2-10	1-5	2-5	5-10	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	1-5	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	5-15	5-15	---	10-20	5-15	---	---
sagebrush	ARTEM	---	---	---	---	---	30-35	---
snowberry	SYMPH	---	2-15	---	---	---	---	---

Range site number	025XY009NV	025XY004NV	025XY017NV	025XY012NV	025XY016NV	025XY024NV	025XY003NV
Potential production (lb/acre):							
Favorable years	1300	2800	900	1400	2000	400	4500
Normal years	900	1800	700	1000	1400	275	3500
Unfavorable years	700	1200	400	700	1000	150	2000

626--Soughe, cobbly-Vanwyper-Soughe association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Soughe	Vanwyper	Soughe	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	---	---	5-15	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Sandberg bluegrass	POSE	2-5	---	2-5	---	2-8	---
Thurber needlegrass	STTH2	15-25	5-15	15-25	40-50	15-25	---
basin wildrye	ELCI2	---	2-5	---	---	---	60-70
bluebunch wheatgrass	AGSP	25-40	60-80	25-40	2-10	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	---
mat muhly	MURI	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8
globemallow	SPHAE	---	---	---	1-3	1-2	---
Wyoming big sagebrush	ARTRW	15-25	5-15	15-25	25-35	20-35	---
antelope bitterbrush	PUTR2	---	1-5	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
spiny hopsage	GRSP	---	---	---	2-5	5-20	---
Range site number		025XY019NV	025XY015NV	025XY019NV	024XY005NV	024XY020NV	025XY003NV
Potential production (lb/acre):							
Favorable years		800	1000	800	800	700	4500
Normal years		600	700	600	600	450	3500
Unfavorable years		400	500	400	400	300	2000

690--Welch, drained-Welch association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Welch	Welch	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	5-10	5-10	5-10	40-60	5-10
alpine timothy	PHAL2	---	5-10	---	20-40	---
basin wildrye	ELCI2	60-70	---	60-70	2-8	60-70
mat muhly	MURI	2-8	---	2-8	2-8	2-8
meadow barley	HOBR2	---	---	---	2-5	---
sedge	CAREX	---	5-10	---	2-8	---
streambank wheatgrass	AGDAR	2-8	---	2-8	---	2-8
tufted hairgrass	DECE	---	30-60	---	---	---
Sierra clover	TRWO	---	2-5	---	---	---
cinquefoil	POTEN	---	2-5	---	---	---
basin big sagebrush	ARTRT	5-10	---	5-10	---	5-10
Range site number		025XY003NV	025XY005NV	025XY003NV	025XY006NV	025XY003NV
Potential production (lb/acre):						
Favorable years		4500	3000	4500	2000	4500
Normal years		3500	1700	3500	1300	3500
Unfavorable years		2000	1000	2000	800	2000

920--Bullump-Gando-Tusel association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bullump	Gando	Tusel	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	---	2-8	---
Cusick bluegrass	POCU3	---	---	5-10	---	---	---	---
Idaho fescue	FEID	2-10	5-30	50-65	X	---	---	---
Letterman needlegrass	STLE4	2-5	---	---	---	---	2-5	---
Nevada bluegrass	PONE3	2-5	---	---	---	---	---	5-10
basin wildrye	ELCI2	5-15	---	---	---	---	---	60-70
bluebunch wheatgrass	AGSP	30-50	---	2-5	---	---	---	---
bluegrass	POA++	---	5-15	---	---	---	---	---
horsemint giant hyssop	AGUR	---	---	---	X	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
mountain brome	BRCA5	20-40	---	---	X	---	5-10	---
slender wheatgrass	AGTR	---	---	---	X	---	5-10	---
spike-fescue	LEKI2	2-5	---	---	---	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
groundsel	SENEC	---	---	---	X	---	---	---
Utah serviceberry	AMUT	---	---	---	X	---	---	---
antelope bitterbrush	PUTR2	5-10	---	---	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
black sagebrush	ARARN	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	2-8	---	---	---	---
quaking aspen	POTR5	---	---	---	---	---	50-60	---
sagebrush	ARTEM	---	30-35	---	---	---	---	---
snowberry	SYMPH	---	---	---	X	---	---	---
willow	SALIX	---	---	---	---	---	1-8	---
quaking aspen	POTRT	---	---	---	X	---	---	---
Range site number		**025XY016NV**	**025XY024NV**	**025XY010NV**	**025XY065NV**	**none**	**025XY002NV**	**025XY003NV**
Potential production (lb/acre):								
Favorable years		2000	400	1200	800		1800	4500
Normal years		1400	275	800	600		1300	3500
Unfavorable years		1000	150	600	400		900	2000

921--Bullump-Hackwood-Cleavage association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bullump	Hackwood	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	2-5	2-5	2-8	---
Idaho fescue	FEID	2-10	X	5-30	2-10	2-10	---	---
Letterman needlegrass	STLE4	2-5	---	---	---	---	2-5	40-60
Nevada bluegrass	PONE3	2-5	---	---	2-5	2-5	---	---
basin wildrye	ELCI2	5-15	---	---	---	---	---	---
bluebunch wheatgrass	AGSP	30-50	---	---	2-5	2-5	---	---
bluegrass	POA++	---	---	5-15	---	---	---	---
horsemint giant hyssop	AGUR	---	X	---	---	---	---	---
mountain brome	BRCA5	20-40	X	---	5-15	5-15	5-10	---
slender wheatgrass	AGTR	---	X	---	5-15	5-15	5-10	---
spike-fescue	LEKI2	2-5	---	---	2-10	2-10	---	---
goldenweed	HAPLO2	---	---	2-5	---	---	---	---
groundsel	SENEC	---	X	---	---	---	---	---
tailcup lupine	LUCA	---	---	---	---	---	---	20-40
Utah serviceberry	AMUT	---	X	---	1-5	1-5	---	---
antelope bitterbrush	PUTR2	5-10	---	---	1-5	1-5	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	---	---	1-5	1-5	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	---	5-15	5-15	---	---
quaking aspen	POTR5	---	---	---	---	---	50-60	---
sagebrush	ARTEM	---	---	30-35	---	---	---	---
snowberry	SYMPH	---	X	---	2-15	2-15	---	---
willow	SALIX	---	---	---	---	---	1-8	---
quaking aspen	POTRT	---	X	---	---	---	---	---

Range site number	025XY016NV	025XY065NV	025XY024NV	025XY004NV	025XY004NV	025XY002NV	025XY028NV
Potential production (lb/acre):							
Favorable years	2000	800	400	2800	2800	1800	1700
Normal years	1400	600	275	1800	1800	1300	1400
Unfavorable years	1000	400	150	1200	1200	900	1100

922--Bullump-Cleavage-Hapgood association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bullump	Cleavage	Hapgood	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	2-8	2-5	---	---
Cusick bluegrass	POCU3	---	---	---	---	---	---	5-15
Idaho fescue	FEID	2-10	5-30	2-10	---	2-10	X	30-60
Letterman needlegrass	STLE4	2-5	---	---	2-5	---	---	---
Nevada bluegrass	PONE3	2-5	---	2-5	---	2-5	---	---
basin wildrye	ELCI2	5-15	---	---	---	---	---	---
bluebunch wheatgrass	AGSP	30-50	---	2-5	---	2-5	---	2-10
bluegrass	POA++	---	5-15	---	---	---	---	---
horsemint giant hyssop	AGUR	---	---	---	---	---	X	---
mountain brome	BRCA5	20-40	---	5-15	5-10	5-15	X	---
slender wheatgrass	AGTR	---	---	5-15	5-10	5-15	X	---
spike-fescue	LEKI2	2-5	---	2-10	---	2-10	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
groundsel	SENEC	---	---	---	---	---	X	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Utah serviceberry	AMUT	---	---	1-5	---	1-5	X	---
antelope bitterbrush	PUTR2	5-10	---	1-5	---	1-5	---	---
black sagebrush	ARARN	---	---	---	---	---	---	25-35
common chokecherry	PRVI	---	---	1-5	---	1-5	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	5-15	---	5-15	---	---
quaking aspen	POTR5	---	---	---	50-60	---	---	---
sagebrush	ARTEM	---	30-35	---	---	---	---	---
snowberry	SYMPH	---	---	2-15	---	2-15	X	---
willow	SALIX	---	---	---	1-8	---	---	---
quaking aspen	POTRT	---	---	---	---	---	X	---

Range site number	025XY016NV	025XY024NV	025XY004NV	025XY002NV	025XY004NV	025XY065NV	024XY042NV
Potential production (lb/acre):							
Favorable years	2000	400	2800	1800	2800	800	1000
Normal years	1400	275	1800	1300	1800	600	800
Unfavorable years	1000	150	1200	900	1200	400	500

1130--Clementine silt loam, drained, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Clementine	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	5-10	---	---
Sandberg bluegrass	POSE	---	2-5	2-5
Thurber needlegrass	STTH2	---	15-25	15-25
basin wildrye	ELCI2	60-70	---	---
bluebunch wheatgrass	AGSP	---	25-40	25-40
mat muhly	MURI	2-8	---	---
streambank wheatgrass	AGDAR	2-8	---	---
Wyoming big sagebrush	ARTRW	---	15-25	15-25
basin big sagebrush	ARTRT	5-10	---	---
Range site number		025XY003NV	025XY019NV	025XY019NV
Potential production (lb/acre):				
Favorable years		4500	800	800
Normal years		3500	600	600
Unfavorable years		2000	400	400

1131--Clementine, drained-Clementine, gently sloping-Clementine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Clementine	Clementine	Clementine	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	5-10	5-10	5-10	---	5-15
Sandberg bluegrass	POSE	---	---	---	2-5	---
Thurber needlegrass	STTH2	---	---	---	15-25	---
alpine timothy	PHAL2	---	---	5-10	---	---
basin wildrye	ELCI2	60-70	60-70	---	---	---
bluebunch wheatgrass	AGSP	---	---	---	25-40	---
creeping wildrye	ELTR3	---	---	---	---	---
inland saltgrass	DISPS2	---	---	---	---	2-5
mat muhly	MURI	2-8	2-8	---	---	2-5
sedge	CAREX	---	---	5-10	---	2-10
streambank wheatgrass	AGDAR	2-8	2-8	---	---	---
tufted hairgrass	DECE	---	---	30-60	---	---
wildrye	ELYMU	---	---	---	---	60-80
Sierra clover	TRWO	---	---	2-5	---	---
cinquefoil	POTEN	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	15-25	---
basin big sagebrush	ARTRT	5-10	5-10	---	---	---
willow	SALIX	---	---	---	---	5-10
Range site number		025XY003NV	025XY003NV	025XY005NV	025XY019NV	025XY001NV
Potential production (lb/acre):						
Favorable years		4500	4500	3000	800	3500
Normal years		3500	3500	1700	600	2500
Unfavorable years		2000	2000	1000	400	1800

1135--Clementine-Clurde association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Clementine	Clurde	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	5-10	---	---	---	5-10
Sandberg bluegrass	POSE	---	2-5	2-5	---	---
Thurber needlegrass	STTH2	---	15-25	15-25	---	---
basin wildrye	ELCI2	60-70	---	---	55-65	60-70
bluebunch wheatgrass	AGSP	---	25-40	25-40	---	---
creeping wildrye	ELTR3	---	---	---	5-15	---
mat muhly	MURI	2-8	---	---	---	2-8
streambank wheatgrass	AGDAR	2-8	---	---	---	2-8
western wheatgrass	AGSM	---	---	---	5-15	---
Wyoming big sagebrush	ARTRW	---	15-25	15-25	---	---
basin big sagebrush	ARTRT	5-10	---	---	10-15	5-10
black greasewood	SAVE4	---	---	---	2-8	---
Range site number		025XY003NV	025XY019NV	025XY019NV	024XY006NV	025XY003NV
Potential production (lb/acre):						
Favorable years		4500	800	800	1500	4500
Normal years		3500	600	600	1100	3500
Unfavorable years		2000	400	400	600	2000

1150--Clurde-Wieland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Clurde	Wieland	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	10-20	15-25	---
alpine timothy	PHAL2	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	---	---	2-8	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	20-35	25-40	---
bluegrass	POA++	---	---	---	2-10	---	---
sedge	CAREX	---	---	---	---	---	5-10
tufted hairgrass	DECE	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	15-25	---
antelope bitterbrush	PUTR2	---	---	---	2-8	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY014NV	025XY019NV	025XY005NV
Potential production (lb/acre):							
Favorable years		800	800	800	1000	800	3000
Normal years		600	600	600	800	600	1700
Unfavorable years		400	400	400	600	400	1000

1155--Clurde very fine sandy loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Clurde	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	---	15-25
basin wildrye	ELCI2	---	---	---	55-65	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	---	25-40
creeping wildrye	ELTR3	---	---	---	5-15	---
western wheatgrass	AGSM	---	---	---	5-15	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	15-25
basin big sagebrush	ARTRT	---	---	---	10-15	---
black greasewood	SAVE4	---	---	---	2-8	---
Range site number		025XY019NV	025XY019NV	025XY019NV	024XY006NV	025XY019NV
Potential production (lb/acre):						
Favorable years		800	800	800	1500	800
Normal years		600	600	600	1100	600
Unfavorable years		400	400	400	600	400

1156--Clurde-Kortty association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Clurde	Kortty	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	5-15	---	---	---	5-15
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	---	15-25	15-25	15-25	---
bluebunch wheatgrass	AGSP	25-40	---	25-40	25-40	25-40	---
bottlebrush squirreltail	SIHY	---	5-10	---	---	---	5-10
Wyoming big sagebrush	ARTRW	15-25	---	15-25	15-25	15-25	---
bud sagebrush	ARSP5	---	20-30	---	---	---	20-30
shadscale	ATCO	---	30-40	---	---	---	30-40
spiny hopsage	GRSP	---	2-5	---	---	---	2-5
winterfat	KULA5	---	2-5	---	---	---	2-5
Range site number		025XY019NV	024XY002NV	025XY019NV	025XY019NV	025XY019NV	024XY002NV
Potential production (lb/acre):							
Favorable years		800	750	800	800	800	750
Normal years		600	450	600	600	600	450
Unfavorable years		400	300	400	400	400	300

1157--Clurde-Zevadez-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Clurde	Zevadez	Chiara	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	2-10
Webber ricegrass	STWE	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	70-80
sedge	CAREX	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY050NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	800
Normal years		600	600	600	600	600
Unfavorable years		400	400	400	400	400

1190--Cherry Spring-Enko association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		CHERRY SPRIN	Enko	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	---	---	---	5-10
Sandberg bluegrass	POSE	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	---
basin wildrye	ELCI2	---	---	---	60-70
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	---
mat muhly	MURI	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	2-8
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---
basin big sagebrush	ARTRT	---	---	---	5-10
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY003NV
Potential production (lb/acre):					
Favorable years		800	800	800	4500
Normal years		600	600	600	3500
Unfavorable years		400	400	400	2000

1191--Cherry Spring-Wieland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		CHERRY SPRIN	Wieland	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):					
Favorable years		800	800	800	800
Normal years		600	600	600	600
Unfavorable years		400	400	400	400

1193--Cherry Spring-Hunnton-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		CHERRY SPRIN	Hunnton	Chiara	Inclusion 1
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):					
Favorable years		800	800	800	800
Normal years		600	600	600	600
Unfavorable years		400	400	400	400

1210--Skull Creek-Shabliss-Puett association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Skull Creek	Shabliss	Puett	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	15-30	---	---	---	30-40
Nevada bluegrass	PONE3	---	---	---	---	5-10	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	---	---	---	15-25	---
basin wildrye	ELCI2	---	---	2-8	---	60-70	---	2-8
bluebunch wheatgrass	AGSP	25-40	25-40	---	---	---	25-40	---
bottlebrush squirreltail	SIHY	---	---	5-10	---	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
needleandthread	STCO4	---	---	---	---	---	---	5-15
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---	---
thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
canaigre	RUHY	---	---	---	---	---	---	1-3
lemon scurfpea	PSLA	---	---	---	---	---	---	1-3
tufted eveningprimrose	OECE2	---	---	---	---	---	---	1-3
Wyoming big sagebrush	ARTRW	15-25	15-25	15-30	---	---	15-25	---
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---	25-30
black sagebrush	ARARN	---	---	10-20	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	---	2-8
spiny hopsage	GRSP	---	---	2-5	---	---	---	2-8
Range site number		025XY019NV	025XY019NV	025XY025NV	none	025XY003NV	025XY019NV	024XY001NV
Potential production (lb/acre):								
Favorable years		800	800	500		4500	800	800
Normal years		600	600	350		3500	600	500
Unfavorable years		400	400	200		2000	400	300

1220--Hunnton, strongly sloping-Hunnton-Fulstone association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Hunnton	Hunnton	Fulstone	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-8	2-5	2-8
Thurber needlegrass	STTH2	15-25	15-25	15-30	15-25	15-30
Webber ricegrass	STWE	---	---	2-8	---	2-8
bluebunch wheatgrass	AGSP	25-40	25-40	20-40	25-40	20-40
Wyoming big sagebrush	ARTRW	15-25	15-25	---	15-25	---
early sagebrush	ARLO9	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---
sagebrush	ARTEM	---	---	20-30	---	20-30
Range site number		025XY019NV	025XY019NV	025XY018NV	025XY019NV	025XY018NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	800
Normal years		600	600	600	600	600
Unfavorable years		400	400	400	400	400

1221--Hunnton, moderately steep-Hunnton-Fulstone association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Hunnton	Hunnton	Fulstone	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	---	---	---	15-30
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Sandberg bluegrass	POSE	2-5	2-5	2-8	2-5	---	---
Thurber needlegrass	STTH2	15-25	15-25	15-30	15-25	---	---
Webber ricegrass	STWE	---	---	2-8	---	---	---
basin wildrye	ELCI2	---	---	---	---	60-70	2-8
bluebunch wheatgrass	AGSP	25-40	25-40	20-40	25-40	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	5-10
mat muhly	MURI	---	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---
Wyoming big sagebrush	ARTRW	15-25	15-25	---	15-25	---	15-30
antelope bitterbrush	PUTR2	---	---	---	---	---	2-8
basin big sagebrush	ARTRT	---	---	---	---	5-10	---
black sagebrush	ARARN	---	---	---	---	---	10-20
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
sagebrush	ARTEM	---	---	20-30	---	---	---
spiny hopsage	GRSP	---	---	---	---	---	2-5
Range site number		025XY019NV	025XY019NV	025XY018NV	025XY019NV	025XY003NV	025XY025NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	4500	500
Normal years		600	600	600	600	3500	350
Unfavorable years		400	400	400	400	2000	200

1223--Hunnton-Shabliss-Puett association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Hunnton	Shabliss	Puett	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	15-30	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	5-10
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-5	---	---
Thurber needlegrass	STTH2	15-25	15-25	---	---	15-25	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	---	2-8	55-65	---	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	---	---	25-40	---	---
bottlebrush squirreltail	SIHY	---	---	5-10	---	---	---	---
creeping wildrye	ELTR3	---	---	---	5-15	---	---	---
sedge	CAREX	---	---	---	---	---	---	5-10
tufted hairgrass	DECE	---	---	---	---	---	---	30-60
western wheatgrass	AGSM	---	---	---	5-15	---	---	---
Sierra clover	TRWO	---	---	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	15-25	15-25	15-30	---	15-25	---	---
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	10-15	---	---	---
black greasewood	SAVE4	---	---	---	2-8	---	---	---
black sagebrush	ARARN	---	---	10-20	---	---	---	---
spiny hopsage	GRSP	---	---	2-5	---	---	---	---
Range site number		025XY019NV	025XY019NV	025XY025NV	024XY006NV	025XY019NV	none	025XY005NV
Potential production (lb/acre):								
Favorable years		800	800	500	1500	800		3000
Normal years		600	600	350	1100	600		1700
Unfavorable years		400	400	200	600	400		1000

1224--Hunnton-Trunk-Shabliss association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Hunnton	Trunk	Shabliss	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	5-15	5-15	---	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	---	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	---	---	15-25	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	---	---	25-40	---
bottlebrush squirreltail	SIHY	---	---	---	5-10	5-10	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	---	15-25	---
bud sagebrush	ARSP5	---	---	---	20-30	20-30	---	---
shadscale	ATCO	---	---	---	30-40	30-40	---	---
spiny hopsage	GRSP	---	---	---	2-5	2-5	---	---
winterfat	EULA5	---	---	---	2-5	2-5	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	024XY002NV	024XY002NV	025XY019NV	none
Potential production (lb/acre):								
Favorable years		800	800	800	750	750	800	
Normal years		600	600	600	450	450	600	
Unfavorable years		400	400	400	300	300	400	

1226--Hunnton-Wieland-Clementine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Hunnton	Wieland	Clementine	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	---	---	5-10	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	---	15-25	15-25	---
basin wildrye	ELCI2	---	---	60-70	---	---	55-65
bluebunch wheatgrass	AGSP	25-40	25-40	---	25-40	25-40	---
creeping wildrye	ELTR3	---	---	---	---	---	5-15
mat muhly	MURI	---	---	2-8	---	---	---
streambank wheatgrass	AGDAR	---	---	2-8	---	---	---
western wheatgrass	AGSM	---	---	---	---	---	5-15
Wyoming big sagebrush	ARTRW	15-25	15-25	---	15-25	15-25	---
basin big sagebrush	ARTRT	---	---	5-10	---	---	10-15
black greasewood	SAVE4	---	---	---	---	---	2-8
Range site number		025XY019NV	025XY019NV	025XY003NV	025XY019NV	025XY019NV	024XY006NV
Potential production (lb/acre):							
Favorable years		800	800	4500	800	800	1500
Normal years		600	600	3500	600	600	1100
Unfavorable years		400	400	2000	400	400	600

1227--Hunnton-Chiara-Bilbo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Hunnton	Chiara	Bilbo	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Indian ricegrass	OREY	---	---	---	---	15-30	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	---	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	5-15	15-25	---	10-20	15-25
basin wildrye	ELCI2	---	---	2-5	---	2-8	2-8	---
bluebunch wheatgrass	AGSP	25-40	25-40	60-80	25-40	---	20-35	25-40
bluegrass	POA++	---	---	---	---	---	2-10	---
bottlebrush squirreltail	SIHY	---	---	---	---	5-10	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	5-15	15-25	15-30	---	15-25
antelope bitterbrush	PUTR2	---	---	1-5	---	2-8	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	10-20	---
black sagebrush	ARARN	---	---	---	---	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
spiny hopsage	GRSP	---	---	---	---	2-5	---	---
Range site number		025XY019NV	025XY019NV	025XY015NV	025XY019NV	025XY025NV	025XY014NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	1000	800	500	1000	800
Normal years		600	600	700	600	350	800	600
Unfavorable years		400	400	500	400	200	600	400

1228--Hunnton-Hunnton, moderately sloping association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Hunnton	Hunnton	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	10-20	5-15	15-25
basin wildrye	ELCI2	---	---	---	2-8	2-5	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	20-35	60-80	25-40
bluegrass	POA++	---	---	---	2-10	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	5-15	15-25
antelope bitterbrush	PUTR2	---	---	---	2-8	1-5	---
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY014NV	025XY015NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	1000	1000	800
Normal years		600	600	600	800	700	600
Unfavorable years		400	400	400	600	500	400

1229--Hunnton-Chiara-Wieland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Hunnton	Chiara	Wieland	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	---	---	40-60
Nevada bluegrass	PONE3	---	---	---	---	---	---	2-8
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	10-20	15-25	---
basin wildrye	ELCI2	---	---	---	---	2-8	---	2-8
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	20-35	25-40	5-15
bluegrass	POA++	---	---	---	---	2-10	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---	15-25	---
antelope bitterbrush	PUTR2	---	---	---	---	2-8	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	10-20
big sagebrush	ARTR2	---	---	---	---	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY014NV	025XY019NV	025XY027NV
Potential production (lb/acre):								
Favorable years		800	800	800	800	1000	800	1300
Normal years		600	600	600	600	800	600	900
Unfavorable years		400	400	400	400	600	400	500

1230--Fulstone-Hunnton association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Fulstone	Hunnton	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	5-10	---
Sandberg bluegrass	POSE	2-8	2-5	---	---	---
Thurber needlegrass	STTH2	15-30	15-25	5-15	---	10-20
Webber ricegrass	STWE	2-8	---	---	---	---
basin wildrye	ELCI2	---	---	2-5	60-70	2-8
bluebunch wheatgrass	AGSP	20-40	25-40	60-80	---	20-35
bluegrass	POA++	---	---	---	---	2-10
mat muhly	MURI	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	2-8	---
Wyoming big sagebrush	ARTRW	---	15-25	5-15	---	---
antelope bitterbrush	PUTR2	---	---	1-5	---	2-8
basin big sagebrush	ARTRT	---	---	---	5-10	---
big sagebrush	ARTR2	---	---	---	---	10-20
early sagebrush	ARLO9	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---
sagebrush	ARTEM	20-30	---	---	---	---
Range site number		025XY018NV	025XY019NV	025XY015NV	025XY003NV	025XY014NV
Potential production (lb/acre):						
Favorable years		800	800	1000	4500	1000
Normal years		600	600	700	3500	800
Unfavorable years		400	400	500	2000	600

1231--Fulstone-Fulstone, moderately steep-Hunnton association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Fulstone	Fulstone	Hunnton	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	---	---	---	---	30-50
Nevada bluegrass	PONE3	---	---	---	5-10	5-10	---
Sandberg bluegrass	POSE	2-8	2-8	2-5	---	---	---
Thurber needlegrass	STTH2	15-30	15-30	15-25	---	---	---
Webber ricegrass	STWE	2-8	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	---	---	60-70	---	---
bluebunch wheatgrass	AGSP	20-40	20-40	25-40	---	---	15-30
bluegrass	POA++	---	---	---	---	---	2-10
mat muhly	MURI	---	---	---	2-8	---	---
sedge	CAREX	---	---	---	---	5-10	---
streambank wheatgrass	AGDAR	---	---	---	2-8	---	---
tufted hairgrass	DECE	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	15-25	---	---	---
antelope bitterbrush	PUTR2	---	---	---	---	---	2-5
basin big sagebrush	ARTRT	---	---	---	5-10	---	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	15-25
sagebrush	ARTEM	20-30	20-30	---	---	---	---
Range site number		025XY018NV	025XY018NV	025XY019NV	025XY003NV	025XY005NV	025XY017NV
Potential production (lb/acre):							
Favorable years		800	800	800	4500	3000	900
Normal years		600	600	600	3500	1700	700
Unfavorable years		400	400	400	2000	1000	400

1232--Fulstone-Fulstone, cobbly loam-Wieland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Fulstone	Fulstone	Wieland	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	---	---	---	---	5-10	5-10
Sandberg bluegrass	POSE	2-8	2-8	2-5	---	---	---
Thurber needlegrass	STTH2	15-30	15-30	15-25	5-15	---	---
Webber ricegrass	STWE	2-8	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	---	---	2-5	60-70	---
bluebunch wheatgrass	AGSP	20-40	20-40	25-40	60-80	---	---
mat muhly	MURI	---	---	---	---	2-8	---
sedge	CAREX	---	---	---	---	---	5-10
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---
tufted hairgrass	DECE	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	15-25	5-15	---	---
antelope bitterbrush	PUTR2	---	---	---	1-5	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
sagebrush	ARTEM	20-30	20-30	---	---	---	---
Range site number		025XY018NV	025XY018NV	025XY019NV	025XY015NV	025XY003NV	025XY005NV
Potential production (lb/acre):							
Favorable years		800	800	800	1000	4500	3000
Normal years		600	600	600	700	3500	1700
Unfavorable years		400	400	400	500	2000	1000

1241--Enko-Shabliss-Orovada association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Enko	Shabliss	Orovada	Inclusion 1
Indian ricegrass	ORHY	15-25	15-25	5-15	30-40
Sandberg bluegrass	POSE	---	---	2-8	---
Thurber needlegrass	STTH2	---	---	15-25	---
basin wildrye	ELCI2	---	---	---	2-8
bottlebrush squirreltail	SIHY	2-8	2-8	2-5	---
needleandthread	STCO4	---	---	---	5-15
thickspike wheatgrass	AGDA	---	---	---	5-10
canaigre	RUHY	---	---	---	1-3
globemallow	SPHAE	---	---	1-2	---
lemon scurfpea	PSLA	---	---	---	1-3
tufted eveningprimrose	OECE2	---	---	---	1-3
Wyoming big sagebrush	ARTRW	---	---	20-35	---
basin big sagebrush	ARTRT	---	---	---	25-30
bud sagebrush	ARSP5	2-5	2-5	---	---
fourwing saltbush	ATCA2	---	---	---	2-8
spiny hopsage	GRSP	---	---	5-20	2-8
winterfat	EULA5	60-70	60-70	---	---
Range site number		024XY004NV	024XY004NV	024XY020NV	024XY001NV
Potential production (lb/acre):					
Favorable years		500	500	700	800
Normal years		350	350	450	500
Unfavorable years		200	200	300	300

1242--Enko-Enko, strongly sloping association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Enko	Enko	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):					
Favorable years		800	800	800	800
Normal years		600	600	600	600
Unfavorable years		400	400	400	400

1260--Kleckner-Upville-Fulstone association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Kleckner	Upville	Fulstone	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	5-10	---	---
Sandberg bluegrass	POSE	---	---	2-8	---	2-5	2-5
Thurber needlegrass	STTH2	10-20	10-20	15-30	---	15-25	15-25
Webber ricegrass	STWE	---	---	2-8	---	---	---
alpine timothy	PHAL2	---	---	---	5-10	---	---
basin wildrye	ELCI2	2-8	2-8	---	---	---	---
bluebunch wheatgrass	AGSP	20-35	20-35	20-40	---	25-40	25-40
bluegrass	POA++	2-10	2-10	---	---	---	---
sedge	CAREX	---	---	---	5-10	---	---
tufted hairgrass	DECE	---	---	---	30-60	---	---
Sierra clover	TRWO	---	---	---	2-5	---	---
cinquefoil	POTEN	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	15-25	15-25
antelope bitterbrush	PUTR2	2-8	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	10-20	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
sagebrush	ARTEM	---	---	20-30	---	---	---
Range site number		025XY014NV	025XY014NV	025XY018NV	025XY005NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		1000	1000	800	3000	800	800
Normal years		800	800	600	1700	600	600
Unfavorable years		600	600	400	1000	400	400

1261--Kleckner-Heechee association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Kleckner	Heechee	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	---	---	---
Idaho fescue	FEID	---	15-30	---	---
Nevada bluegrass	PONE3	---	---	---	40-60
Sandberg bluegrass	POSE	---	---	2-8	---
Thurber needlegrass	STTH2	10-20	2-5	15-30	---
Webber ricegrass	STWE	---	---	2-8	---
alpine timothy	PHAL2	---	---	---	20-40
basin wildrye	ELCI2	2-8	---	---	2-8
bluebunch wheatgrass	AGSP	20-35	10-20	20-40	---
bluegrass	POA++	2-10	---	---	---
mat muhly	MURI	---	---	---	2-8
meadow barley	HOBR2	---	---	---	2-5
sedge	CAREX	---	---	---	2-8
Wyoming big sagebrush	ARTRW	---	---	---	---
antelope bitterbrush	PUTR2	2-8	20-40	---	---
basin big sagebrush	ARTRT	---	---	---	---
big sagebrush	ARTR2	10-20	---	---	---
early sagebrush	ARLO9	---	---	---	---
low sagebrush	ARAR8	---	---	---	---
mountain big sagebrush	ARVA2	---	5-10	---	---
sagebrush	ARTEM	---	---	20-30	---
Range site number		025XY014NV	025XY007NV	025XY018NV	025XY006NV
Potential production (lb/acre):					
Favorable years		1000	2300	800	2000
Normal years		800	1400	600	1300
Unfavorable years		600	900	400	800

1290--Tweba very fine sandy loam, drained, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Tweba	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	5-10	---	---
Sandberg bluegrass	POSE	---	2-5	---
Thurber needlegrass	STTH2	---	15-25	---
basin wildrye	ELCI2	60-70	---	15-20
bluebunch wheatgrass	AGSP	---	25-40	---
bottlebrush squirreltail	SIHY	---	---	2-10
inland saltgrass	DISPS2	---	---	2-8
mat muhly	MURI	2-8	---	---
streambank wheatgrass	AGDAR	2-8	---	---
Wyoming big sagebrush	ARTRW	---	15-25	---
basin big sagebrush	ARTRT	5-10	---	---
black greasewood	SAVE4	---	---	50-65
Range site number		025XY003NV	025XY019NV	024XY008NV
Potential production (lb/acre):				
Favorable years		4500	800	700
Normal years		3500	600	450
Unfavorable years		2000	400	300

1350--Shabliss-Hunnton-Bioya association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Shabliss	Hunnton	Bioya	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	---	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	---	---	55-65	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	---	---	---
creeping wildrye	ELTR3	---	---	---	5-15	---	---
sedge	CAREX	---	---	---	---	5-10	---
tufted hairgrass	DECE	---	---	---	---	30-60	---
western wheatgrass	AGSM	---	---	---	5-15	---	---
Sierra clover	TRWO	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	---	---
basin big sagebrush	ARTRT	---	---	---	10-15	---	---
black greasewood	SAVE4	---	---	---	2-8	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	024XY006NV	025XY005NV	none
Potential production (lb/acre):							
Favorable years		800	800	800	1500	3000	
Normal years		600	600	600	1100	1700	
Unfavorable years		400	400	400	600	1000	

1351--Shabliss-Bartome association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Shabliss	Bartome	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

1352--Shabliss-Skull Creek-Puett association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Shabliss	Skull Creek	Puett	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	15-30	---	---	30-40
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---
Thurber needlegrass	STTH2	15-25	15-25	---	---	---	---
basin wildrye	ELCI2	---	---	2-8	---	55-65	2-8
bluebunch wheatgrass	AGSP	25-40	25-40	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	5-10	---	---	---
creeping wildrye	ELTR3	---	---	---	---	5-15	---
needleandthread	STCO4	---	---	---	---	---	5-15
thickspike wheatgrass	AGDA	---	---	---	---	---	5-10
western wheatgrass	AGSM	---	---	---	---	5-15	---
canaigre	RUHY	---	---	---	---	---	1-3
lemon scurfpea	PSLA	---	---	---	---	---	1-3
tufted eveningprimrose	OECE2	---	---	---	---	---	1-3
Wyoming big sagebrush	ARTRW	15-25	15-25	15-30	---	---	---
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	10-15	25-30
black greasewood	SAVE4	---	---	---	---	2-8	---
black sagebrush	ARARN	---	---	10-20	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	2-8
spiny hopsage	GRSP	---	---	2-5	---	---	2-8
Range site number		025XY019NV	025XY019NV	025XY025NV	none	024XY006NV	024XY001NV
Potential production (lb/acre):							
Favorable years		800	800	500		1500	800
Normal years		600	600	350		1100	500
Unfavorable years		400	400	200		600	300

1360--Orovada very fine sandy loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Orovada	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	5-15	---	---
Sandberg bluegrass	POSE	2-8	---	---
Thurber needlegrass	STTH2	15-25	40-50	40-50
bluebunch wheatgrass	AGSP	---	2-10	2-10
bottlebrush squirreltail	SIHY	2-5	---	---
globemallow	SPHAE	1-2	1-3	1-3
Wyoming big sagebrush	ARTRW	20-35	25-35	25-35
spiny hopsage	GRSP	5-20	2-5	2-5
Range site number		024XY020NV	024XY005NV	024XY005NV
Potential production (lb/acre):				
Favorable years		700	800	800
Normal years		450	600	600
Unfavorable years		300	400	400

1362--Orovada-Clurde-Wieland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Orovada	Clurde	Wieland	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	---	---	---	5-15	---	5-15
Sandberg bluegrass	POSE	2-8	---	---	---	---	---	---
Thurber needlegrass	STTH2	15-25	40-50	40-50	40-50	---	---	---
basin wildrye	ELCI2	---	---	---	---	---	55-65	---
bluebunch wheatgrass	AGSP	---	2-10	2-10	2-10	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	5-10	---	5-10
creeping wildrye	ELTR3	---	---	---	---	---	5-15	---
western wheatgrass	AGSM	---	---	---	---	---	5-15	---
globemallow	SPHAE	1-2	1-3	1-3	1-3	---	---	---
Wyoming big sagebrush	ARTRW	20-35	25-35	25-35	25-35	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	10-15	---
black greasewood	SAVE4	---	---	---	---	---	2-8	---
bud sagebrush	ARSP5	---	---	---	---	20-30	---	20-30
shadscale	ATCO	---	---	---	---	30-40	---	30-40
spiny hopsage	GRSP	5-20	2-5	2-5	2-5	2-5	---	2-5
winterfat	EULA5	---	---	---	---	2-5	---	2-5
Range site number		024XY020NV	024XY005NV	024XY005NV	024XY005NV	024XY002NV	024XY006NV	024XY002NV
Potential production (lb/acre):								
Favorable years		700	800	800	800	750	1500	750
Normal years		450	600	600	600	450	1100	450
Unfavorable years		300	400	400	400	300	600	300

1363--Orovada-Tweba-Weso association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Orovada	Tweba	Weso	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	5-15	---	5-15	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10
Sandberg bluegrass	POSE	2-8	---	---	---	---
Thurber needlegrass	STTH2	15-25	---	---	40-50	---
basin wildrye	ELCI2	---	55-65	---	---	60-70
bluebunch wheatgrass	AGSP	---	---	---	2-10	---
bottlebrush squirreltail	SIHY	2-5	---	5-10	---	---
creeping wildrye	ELTR3	---	5-15	---	---	---
mat muhly	MURI	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	2-8
western wheatgrass	AGSM	---	5-15	---	---	---
globemallow	SPHAE	1-2	---	---	1-3	---
Wyoming big sagebrush	ARTRW	20-35	---	---	25-35	---
basin big sagebrush	ARTRT	---	10-15	---	---	5-10
black greasewood	SAVE4	---	2-8	---	---	---
bud sagebrush	ARSP5	---	---	20-30	---	---
shadscale	ATCO	---	---	30-40	---	---
spiny hopsage	GRSP	5-20	---	2-5	2-5	---
winterfat	KULA5	---	---	2-5	---	---
Range site number		024XY020NV	024XY006NV	024XY002NV	024XY005NV	025XY003NV
Potential production (lb/acre):						
Favorable years		700	1500	750	800	4500
Normal years		450	1100	450	600	3500
Unfavorable years		300	600	300	400	2000

1530--Creemon-Placeritos association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Creemon	Placeritos	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	2-5	---	5-15	---
Sandberg bluegrass	POSE	---	---	---	2-8	---
Thurber needlegrass	STTH2	---	---	40-50	15-25	---
basin wildrye	ELCI2	---	5-20	---	---	5-15
bluebunch wheatgrass	AGSP	---	---	2-10	---	---
bottlebrush squirreltail	SIHY	5-10	2-5	---	2-5	---
inland saltgrass	DISPS2	---	---	---	---	5-10
globemallow	SPHAE	---	1-2	1-3	1-2	---
thelypody	THELY	---	2-4	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	20-35	---
basin big sagebrush	ARTRT	---	---	---	---	---
big sagebrush	ARTR2	---	10-25	---	---	---
black greasewood	SAVE4	15-30	20-30	---	---	60-75
bud sagebrush	ARSP5	2-8	---	---	---	---
seepweed	SUAED	2-8	---	---	---	---
shadscale	ATCO	30-50	---	---	---	---
spiny hopsage	GRSP	---	5-15	2-5	5-20	---
Range site number		024XY003NV	024XY022NV	024XY005NV	024XY020NV	024XY011NV
Potential production (lb/acre):						
Favorable years		600	800	800	700	500
Normal years		450	600	600	450	350
Unfavorable years		300	350	400	300	200

1572--Weso-Orovada-Shabliss association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Weso	Orovada	Shabliss	Inclusion 1
Indian ricegrass	ORHY	5-15	5-15	---	30-40
Sandberg bluegrass	POSE	---	2-8	---	---
Thurber needlegrass	STTH2	---	15-25	40-50	---
basin wildrye	ELCI2	---	---	---	2-8
bluebunch wheatgrass	AGSP	---	---	2-10	---
bottlebrush squirreltail	SIHY	5-10	2-5	---	---
needleandthread	STCO4	---	---	---	5-15
thickspike wheatgrass	AGDA	---	---	---	5-10
canaigre	RUHY	---	---	---	1-3
globemallow	SPHAE	---	1-2	1-3	---
lemon scurfpea	PSLA	---	---	---	1-3
tufted eveningprimrose	OECE2	---	---	---	1-3
Wyoming big sagebrush	ARTRW	---	20-35	25-35	---
basin big sagebrush	ARTRT	---	---	---	25-30
bud sagebrush	ARSP5	20-30	---	---	---
fourwing saltbush	ATCA2	---	---	---	2-8
shadscale	ATCO	30-40	---	---	---
spiny hopsage	GRSP	2-5	5-20	2-5	2-8
winterfat	EULA5	2-5	---	---	---
Range site number		024XY002NV	024XY020NV	024XY005NV	024XY001NV
Potential production (lb/acre):					
Favorable years		750	700	800	800
Normal years		450	450	600	500
Unfavorable years		300	300	400	300

1573--Wesco-Orovada-Tweba association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Wesco	Orovada	Tweba	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	15-25	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	2-5	2-5
Thurber needlegrass	STTH2	---	---	---	---	---	15-25	15-25
basin wildrye	ELCI2	---	---	55-65	5-15	60-70	---	---
bluebunch wheatgrass	AGSP	---	---	---	---	---	25-40	25-40
bottlebrush squirreltail	SIHY	5-10	2-8	---	---	---	---	---
creeping wildrye	ELTR3	---	---	5-15	---	---	---	---
inland saltgrass	DISPS2	---	---	---	5-10	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---	---
western wheatgrass	AGSM	---	---	5-15	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	15-25	15-25
basin big sagebrush	ARTRT	---	---	10-15	---	5-10	---	---
black greasewood	SAVE4	---	---	2-8	60-75	---	---	---
bud sagebrush	ARSP5	20-30	2-5	---	---	---	---	---
shadscale	ATCO	30-40	---	---	---	---	---	---
spiny hopsage	GRSP	2-5	---	---	---	---	---	---
winterfat	EULA5	2-5	60-70	---	---	---	---	---
Range site number		024XY002NV	024XY004NV	024XY006NV	024XY011NV	025XY003NV	025XY019NV	025XY019NV
Potential production (lb/acre):								
Favorable years		750	500	1500	500	4500	800	800
Normal years		450	350	1100	350	3500	600	600
Unfavorable years		300	200	600	200	2000	400	400

1617--Cleavage-Hapgood-Tweener association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cleavage	Hapgood	Tweener	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	---	---	---	---
Idaho fescue	FEID	5-30	2-10	15-30	---	5-30	30-50	30-40
Nevada bluegrass	PONE3	---	2-5	---	5-10	---	---	2-5
Thurber needlegrass	STTH2	---	---	2-5	---	---	---	---
basin wildrye	ELCI2	---	---	---	60-70	---	---	2-10
bluebunch wheatgrass	AGSP	---	2-5	10-20	---	---	15-30	15-30
bluegrass	POA++	5-15	---	---	---	5-15	2-10	---
mat muhly	MURI	---	---	---	2-8	---	---	---
mountain brome	BRCA5	---	5-15	---	---	---	---	---
slender wheatgrass	AGTR	---	5-15	---	---	---	---	---
spike-fescue	LEKI2	---	2-10	---	---	---	---	---
streambank wheatgrass	AGDAR	---	---	---	2-8	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	2-5
goldenweed	HAPLO2	2-5	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
antelope bitterbrush	PUTR2	---	1-5	20-40	---	---	2-5	5-10
basin big sagebrush	ARTRT	---	---	---	5-10	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	1-5	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	15-25	---
mountain big sagebrush	ARVA2	---	5-15	5-10	---	---	---	10-20
sagebrush	ARTEM	30-35	---	---	---	30-35	---	---
snowberry	SYMPH	---	2-15	---	---	---	---	---

Range site number	025XY024NV	025XY004NV	025XY007NV	025XY003NV	025XY024NV	025XY017NV	025XY012NV
Potential production (lb/acre):							
Favorable years	400	2800	2300	4500	400	900	1400
Normal years	275	1800	1400	3500	275	700	1000
Unfavorable years	150	1200	900	2000	150	400	700

1618--Cleavage-Sumine-Pequop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cleavage	Sumine	Pequop	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	2-5	30-40	15-30	40-60	30-40	---
Nevada bluegrass	PONE3	---	2-5	2-5	---	2-8	2-5	40-60
Thurber needlegrass	STTH2	---	2-8	---	2-5	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	---	5-10	2-10	---	2-8	2-10	2-8
bluebunch wheatgrass	AGSP	15-30	50-60	15-30	10-20	5-15	15-30	---
bluegrass	POA++	2-10	---	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	2-5	---
antelope bitterbrush	PUTR2	2-5	2-10	5-10	20-40	---	5-10	---
basin big sagebrush	ARTRT	---	---	---	---	10-20	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	10-20	5-10	---	10-20	---
Range site number		025XY017NV	025XY009NV	025XY012NV	025XY007NV	025XY027NV	025XY012NV	025XY006NV
Potential production (lb/acre):								
Favorable years		900	1300	1400	2300	1300	1400	2000
Normal years		700	900	1000	1400	900	1000	1300
Unfavorable years		400	700	700	900	500	700	800

1619--Cleavage-Tusk-Sumine association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cleavage	Tusk	Sumine	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	5-30	20-30	2-5	30-50	30-50	X	---
Nevada bluegrass	PONE3	---	---	2-5	---	---	---	---
Thurber needlegrass	STTH2	---	---	2-8	---	---	---	---
basin wildrye	ELCI2	---	40-60	5-10	---	---	---	---
big bluegrass	POAM	---	2-8	---	---	---	---	---
bluebunch wheatgrass	AGSP	---	---	50-60	15-30	15-30	---	---
bluegrass	POA++	5-15	---	---	2-10	2-10	---	---
horsemint giant hyssop	AGUR	---	---	---	---	---	X	---
mountain brome	BRCA5	---	2-10	---	---	---	X	---
slender wheatgrass	AGTR	---	---	---	---	---	X	---
goldenweed	HAPLO2	2-5	---	---	---	---	---	---
groundsel	SENEC	---	---	---	---	---	X	---
Utah serviceberry	AMUT	---	---	---	---	---	X	---
antelope bitterbrush	PUTR2	---	---	2-10	2-5	2-5	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	15-25	15-25	---	---
mountain big sagebrush	ARVA2	---	2-5	5-15	---	---	---	---
sagebrush	ARTEM	30-35	---	---	---	---	---	---
snowberry	SYMPH	---	---	---	---	---	X	---
quaking aspen	POTRT	---	---	---	---	---	X	---
Range site number		025XY024NV	025XY029NV	025XY009NV	025XY017NV	025XY017NV	025XY065NV	none
Potential production (lb/acre):								
Favorable years		400	2000	1300	900	900	800	
Normal years		275	1700	900	700	700	600	
Unfavorable years		150	1300	700	400	400	400	

1621--Cleavage-Graley-Cleavage, moderately steep association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cleavage	Graley	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	5-10	---	---	---
Idaho fescue	FEID	30-50	30-40	5-30	50-65	---	---	2-5
Nevada bluegrass	PONE3	---	2-5	---	---	---	5-10	2-5
Thurber needlegrass	STTH2	---	---	---	---	---	---	2-8
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	2-10	---	---	---	---	5-10
bluebunch wheatgrass	AGSP	15-30	15-30	---	2-5	---	---	50-60
bluegrass	POA++	2-10	---	5-15	---	---	---	---
sedge	CAREX	---	---	---	---	---	5-10	---
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
goldenweed	HAPLO2	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	---	---	---	---	2-10
black sagebrush	ARARN	---	---	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	2-8	---	---	5-15
sagebrush	ARTEM	---	---	30-35	---	---	---	---
Range site number		025XY017NV	025XY012NV	025XY024NV	025XY010NV	none	025XY005NV	025XY009NV
Potential production (lb/acre):								
Favorable years		900	1400	400	1200		3000	1300
Normal years		700	1000	275	800		1700	900
Unfavorable years		400	700	150	600		1000	700

1622--Cleavage-Sumine-Hapgood association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cleavage	Sumine	Hapgood	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	---	2-5	---	---
Cusick bluegrass	POCU3	---	---	---	---	---	5-10	---
Idaho fescue	FEID	5-30	2-5	2-10	5-30	2-10	50-65	20-30
Nevada bluegrass	PONE3	---	2-5	2-5	---	2-5	---	---
Thurber needlegrass	STTE2	---	2-8	---	---	---	---	---
basin wildrye	ELCI2	---	5-10	---	---	---	---	40-60
big bluegrass	POAM	---	---	---	---	---	---	2-8
bluebunch wheatgrass	AGSP	---	50-60	2-5	---	2-5	2-5	---
bluegrass	POA++	5-15	---	---	5-15	---	---	---
mountain brome	BRCA5	---	---	5-15	---	5-15	---	2-10
slender wheatgrass	AGTR	---	---	5-15	---	5-15	---	---
spike-fescue	LEKI2	---	---	2-10	---	2-10	---	---
goldenweed	HAPLO2	2-5	---	---	2-5	---	---	---
Utah serviceberry	AMUT	---	---	1-5	---	1-5	---	---
antelope bitterbrush	PUTR2	---	2-10	1-5	---	1-5	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	---	1-5	---	1-5	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	5-15	---	5-15	2-8	2-5
sagebrush	ARTEM	30-35	---	---	30-35	---	---	---
snowberry	SYMPH	---	---	2-15	---	2-15	---	---

Range site number	025XY024NV	025XY009NV	025XY004NV	025XY024NV	025XY004NV	025XY010NV	025XY029NV
Potential production (lb/acre):							
Favorable years	400	1300	2800	400	2800	1200	2000
Normal years	275	900	1800	275	1800	800	1700
Unfavorable years	150	700	1200	150	1200	600	1300

1623--Cleavage-Hapgood-Sumine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cleavage	Hapgood	Sumine	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	---	---	---	---
Idaho fescue	FEID	5-30	2-10	2-5	30-40	30-50	---	40-60
Nevada bluegrass	PONE3	---	2-5	2-5	2-5	---	5-10	2-8
Thurber needlegrass	STTH2	---	---	2-8	---	---	---	---
basin wildrye	ELCI2	---	---	5-10	2-10	---	60-70	2-8
bluebunch wheatgrass	AGSP	---	2-5	50-60	15-30	15-30	---	5-15
bluegrass	POA++	5-15	---	---	---	2-10	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
mountain brome	BRCA5	---	5-15	---	---	---	---	---
slender wheatgrass	AGTR	---	5-15	---	---	---	---	---
spike-fescue	LEKI2	---	2-10	---	---	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
goldenweed	HAPLO2	2-5	---	---	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
antelope bitterbrush	PUTR2	---	1-5	2-10	5-10	2-5	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	10-20
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	1-5	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	15-25	---	---
mountain big sagebrush	ARVA2	---	5-15	5-15	10-20	---	---	---
sagebrush	ARTEM	30-35	---	---	---	---	---	---
snowberry	SYMPH	---	2-15	---	---	---	---	---

Range site number	025XY024NV	025XY004NV	025XY009NV	025XY012NV	025XY017NV	025XY003NV	025XY027NV
Potential production (lb/acre):							
Favorable years	400	2800	1300	1400	900	4500	1300
Normal years	275	1800	900	1000	700	3500	900
Unfavorable years	150	1200	700	700	400	2000	500

1625--Cleavage-Ninemile-Sumine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cleavage	Ninemile	Sumine	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	30-50	2-5	---	30-40	40-60	20-30
Nevada bluegrass	PONE3	---	---	2-5	40-60	2-5	2-8	---
Thurber needlegrass	STTH2	---	---	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	20-40	---	---	---
basin wildrye	ELCI2	---	---	5-10	2-8	2-10	2-8	40-60
big bluegrass	POAM	---	---	---	---	---	---	2-8
bluebunch wheatgrass	AGSP	15-30	15-30	50-60	---	15-30	5-15	---
bluegrass	POA++	2-10	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	2-8	---	---	---
meadow barley	HOBR2	---	---	---	2-5	---	---	---
mountain brome	BRCA5	---	---	---	---	---	---	2-10
sedge	CAREX	---	---	---	2-8	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	2-5	2-5	2-10	---	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	10-20	---
low sagebrush	ARAR8	15-25	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	5-15	---	10-20	---	2-5

Range site number	025XY017NV	025XY017NV	025XY009NV	025XY006NV	025XY012NV	025XY027NV	025XY029NV
Potential production (lb/acre):							
Favorable years	900	900	1300	2000	1400	1300	2000
Normal years	700	700	900	1300	1000	900	1700
Unfavorable years	400	400	700	800	700	500	1300

1626--Cleavage-Carstump-Chen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Cleavage	Carstump	Chen	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	---	---	---	---
Idaho fescue	FEID	30-50	---	30-50	---	30-40
Nevada bluegrass	PONE3	---	---	---	---	2-5
Thurber needlegrass	STTH2	---	10-20	---	---	---
basin wildrye	ELCI2	---	2-8	---	---	2-10
bluebunch wheatgrass	AGSP	15-30	20-35	15-30	---	15-30
bluegrass	POA++	2-10	2-10	2-10	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	2-8	2-5	---	5-10
basin big sagebrush	ARTRT	---	---	---	---	---
big sagebrush	ARTR2	---	10-20	---	---	---
low sagebrush	ARAR8	15-25	---	15-25	---	---
mountain big sagebrush	ARVA2	---	---	---	---	10-20
Range site number		025XY017NV	025XY014NV	025XY017NV	none	025XY012NV
Potential production (lb/acre):						
Favorable years		900	1000	900		1400
Normal years		700	800	700		1000
Unfavorable years		400	600	400		700

1628--Cleavage-Chen-Reluctan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cleavage	Chen	Reluctan	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	30-50	30-50	30-40	---	---	---	---
Nevada bluegrass	PONE3	---	---	2-5	---	---	5-10	---
Thurber needlegrass	STTH2	---	---	---	10-20	10-20	---	---
basin wildrye	ELCI2	---	---	2-10	2-8	2-8	60-70	---
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	20-35	20-35	---	---
bluegrass	POA++	2-10	2-10	---	2-10	2-10	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	2-5	5-10	2-8	2-8	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	---	---	10-20	10-20	---	---
low sagebrush	ARAR8	15-25	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	---	---	---
Range site number		025XY017NV	025XY017NV	025XY012NV	025XY014NV	025XY014NV	025XY003NV	none
Potential production (lb/acre):								
Favorable years		900	900	1400	1000	1000	4500	
Normal years		700	700	1000	800	800	3500	
Unfavorable years		400	400	700	600	600	2000	

1640--Tusk-Cleavage-Hackwood association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Tusk	Cleavage	Hackwood	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	2-5	---	---	---	---	---	---
Idaho fescue	FEID	2-10	5-30	X	---	2-5	---	30-40
Nevada bluegrass	PONE3	2-5	---	---	---	2-5	5-10	2-5
Thurber needlegrass	STTH2	---	---	---	---	2-8	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	---	---	---	5-10	---	2-10
bluebunch wheatgrass	AGSP	2-5	---	---	---	50-60	---	15-30
bluegrass	POA++	---	5-15	---	---	---	---	---
horsemint giant hyssop	AGUR	---	---	X	---	---	---	---
mountain brome	BRCA5	5-15	---	X	---	---	---	---
sedge	CAREX	---	---	---	---	---	5-10	---
slender wheatgrass	AGTR	5-15	---	X	---	---	---	---
spike-fescue	LEKI2	2-10	---	---	---	---	---	---
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	---	2-5	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
groundsel	SENEC	---	---	X	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	---	2-5
Utah serviceberry	AMUT	1-5	---	X	---	---	---	---
antelope bitterbrush	PUTR2	1-5	---	---	---	2-10	---	5-10
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	1-5	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	---	---	5-15	---	10-20
sagebrush	ARTEM	---	30-35	---	---	---	---	---
snowberry	SYMPH	2-15	---	X	---	---	---	---
quaking aspen	POTRT	---	---	X	---	---	---	---
Range site number		025XY004NV	025XY024NV	025XY065NV	none	025XY009NV	025XY005NV	025XY012NV
Potential production (lb/acre):								
Favorable years		2800	400	800		1300	3000	1400
Normal years		1800	275	600		900	1700	1000
Unfavorable years		1200	150	400		700	1000	700

1650--Ninemile-Tusk-Ninemile, steep association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Ninemile	Tusk	Ninemile	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	---	---	---	---
Cusick bluegrass	POCU3	---	---	---	5-10	---	---	---
Idaho fescue	FEID	30-50	2-10	30-50	50-65	---	30-40	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	2-5	40-60
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	---	---	---	---	---	2-10	2-8
bluebunch wheatgrass	AGSP	15-30	2-5	15-30	2-5	---	15-30	---
bluegrass	POA++	2-10	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
mountain brome	BRCA5	---	5-15	---	---	---	---	---
sedge	CAREX	---	---	---	---	---	---	2-8
slender wheatgrass	AGTR	---	5-15	---	---	---	---	---
spike-fescue	LEKI2	---	2-10	---	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	1-5	2-5	---	---	5-10	---
common chokecherry	PRVI	---	1-5	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	---	2-8	---	10-20	---
snowberry	SYMPH	---	2-15	---	---	---	---	---
Range site number		025XY017NV	025XY004NV	025XY017NV	025XY010NV	none	025XY012NV	025XY006NV
Potential production (lb/acre):								
Favorable years		900	2800	900	1200		1400	2000
Normal years		700	1800	700	800		1000	1300
Unfavorable years		400	1200	400	600		700	800

1651--Ninemile-Reluctan-Ninemile, moderately steep association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Ninemile	Reluctan	Ninemile	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	---	---	5-10	---
Idaho fescue	FEID	30-50	30-40	30-50	---	---	50-65	2-5
Nevada bluegrass	PONE3	---	2-5	---	---	40-60	---	2-5
Thurber needlegrass	STTH2	---	---	---	---	---	---	2-8
alpine timothy	PHAL2	---	---	---	---	20-40	---	---
basin wildrye	ELCI2	---	2-10	---	---	2-8	---	5-10
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	---	---	2-5	50-60
bluegrass	POA++	2-10	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
meadow barley	HOBR2	---	---	---	---	2-5	---	---
sedge	CAREX	---	---	---	---	2-8	---	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	2-5	---	---	---	2-10
low sagebrush	ARAR8	15-25	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	---	2-8	5-15
Range site number		025XY017NV	025XY012NV	025XY017NV	none	025XY006NV	025XY010NV	025XY009NV
Potential production (lb/acre):								
Favorable years		900	1400	900		2000	1200	1300
Normal years		700	1000	700		1300	800	900
Unfavorable years		400	700	400		800	600	700

1652--Ninemile, steep-Graley-Ninemile association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Ninemile	Graley	Ninemile	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	---	---	5-10	---
Idaho fescue	FEID	30-50	30-40	30-50	---	---	50-65	2-5
Nevada bluegrass	PONE3	---	2-5	---	---	5-10	---	2-5
Thurber needlegrass	STTH2	---	---	---	---	---	---	2-8
alpine timothy	PHAL2	---	---	---	---	5-10	---	---
basin wildrye	ELCI2	---	2-10	---	---	---	---	5-10
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	---	---	2-5	50-60
bluegrass	POA++	2-10	---	2-10	---	---	---	---
sedge	CAREX	---	---	---	---	5-10	---	---
tufted hairgrass	DECE	---	---	---	---	30-60	---	---
Sierra clover	TRWO	---	---	---	---	2-5	---	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	2-5	---	---	---	2-10
low sagebrush	ARAR8	15-25	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	---	2-8	5-15
Range site number		025XY017NV	025XY012NV	025XY017NV	none	025XY005NV	025XY010NV	025XY009NV
Potential production (lb/acre):								
Favorable years		900	1400	900		3000	1200	1300
Normal years		700	1000	700		1700	800	900
Unfavorable years		400	700	400		1000	600	700

1653--Ninemile-Reluctan-Graley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Ninemile	Reluctan	Graley	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	30-40	30-40	---	---	---
Nevada bluegrass	PONE3	---	2-5	2-5	---	5-10	40-60
alpine timothy	PHAL2	---	---	---	---	5-10	20-40
basin wildrye	ELCI2	---	2-10	2-10	---	---	2-8
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	---	---	---
bluegrass	POA++	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	5-10	2-8
tufted hairgrass	DECE	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	2-5	2-5	---	---	---
cinquefoil	POTEN	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	2-5	2-5	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	5-10	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	10-20	---	---	---
Range site number		025XY017NV	025XY012NV	025XY012NV	none	025XY005NV	025XY006NV
Potential production (lb/acre):							
Favorable years		900	1400	1400		3000	2000
Normal years		700	1000	1000		1700	1300
Unfavorable years		400	700	700		1000	800

1655--Ninemile-Thwoop-Pequop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Ninemile	Thwoop	Pequop	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	30-50	---	30-40	---	---	---	5-15
Nevada bluegrass	PONE3	---	---	2-5	---	---	---	---
Thurber needlegrass	STTH2	---	10-20	---	10-20	10-20	---	---
basin wildrye	ELCI2	---	2-8	2-10	2-8	2-8	---	---
bluebunch wheatgrass	AGSP	15-30	20-35	15-30	20-35	20-35	---	2-10
bluegrass	POA++	2-10	2-10	---	2-10	2-10	---	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
Saskatoon serviceberry	AMAL2	---	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	2-8	5-10	2-8	2-8	---	2-8
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	---	10-20	---	10-20	10-20	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	---	---	2-5
serviceberry	AMELA	---	---	---	---	---	---	40-50
snowberry	SYMPH	---	---	---	---	---	---	2-8
Range site number		025XY017NV	025XY014NV	025XY012NV	025XY014NV	025XY014NV	none	025XY046NV
Potential production (lb/acre):								
Favorable years		900	1000	1400	1000	1000		1800
Normal years		700	800	1000	800	800		1300
Unfavorable years		400	600	700	600	600		900

1656--Ninemile-Pequop-Gumble association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Ninemile	Pequop	Gumble	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	30-40	---	30-40	---	---
Nevada bluegrass	PONE3	---	2-5	---	2-5	---	5-10
Sandberg bluegrass	POSE	---	---	---	---	2-8	---
Thurber needlegrass	STTH2	---	---	5-15	---	15-30	---
Webber ricegrass	STWE	---	---	---	---	2-8	---
basin wildrye	ELCI2	---	2-10	2-5	2-10	---	60-70
bluebunch wheatgrass	AGSP	15-30	15-30	60-80	15-30	20-40	---
bluegrass	POA++	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	2-5	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	5-15	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	1-5	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	10-20	---	---
sagebrush	ARTEM	---	---	---	---	20-30	---
Range site number		025XY017NV	025XY012NV	025XY015NV	025XY012NV	025XY018NV	025XY003NV
Potential production (lb/acre):							
Favorable years		900	1400	1000	1400	800	4500
Normal years		700	1000	700	1000	600	3500
Unfavorable years		400	700	500	700	400	2000

1657--Ninemile-Alyan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Ninemile	Alyan	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	30-50	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	40-60
Sandberg bluegrass	POSE	---	---	2-5	2-8	---	---
Thurber needlegrass	STTH2	---	10-20	15-25	15-30	---	---
Webber ricegrass	STWE	---	---	---	2-8	---	---
alpine timothy	PHAL2	---	---	---	---	---	20-40
basin wildrye	ELCI2	---	2-8	---	---	60-70	2-8
bluebunch wheatgrass	AGSP	15-30	20-35	25-40	20-40	---	---
bluegrass	POA++	2-10	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	2-8	2-8
meadow barley	HOBR2	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---
Wyoming big sagebrush	ARTRW	---	---	15-25	---	---	---
antelope bitterbrush	PUTR2	2-5	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	10-20	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
sagebrush	ARTEM	---	---	---	20-30	---	---
Range site number		025XY017NV	025XY014NV	025XY019NV	025XY018NV	025XY003NV	025XY006NV
Potential production (lb/acre):							
Favorable years		900	1000	800	800	4500	2000
Normal years		700	800	600	600	3500	1300
Unfavorable years		400	600	400	400	2000	800

1658--Ninemile-Vanwyper-Ninemile, moderately steep association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Ninemile	Vanwyper	Ninemile	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	30-50	---	30-50	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---
Thurber needlegrass	STTH2	---	5-15	---	10-20	---	---
basin wildrye	ELCI2	---	2-5	---	2-8	---	---
bluebunch wheatgrass	AGSP	15-30	60-80	15-30	20-35	---	---
bluegrass	POA++	2-10	---	2-10	2-10	---	---
Wyoming big sagebrush	ARTRW	---	5-15	---	---	---	---
antelope bitterbrush	PUTR2	2-5	1-5	2-5	2-8	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	10-20	---	---
low sagebrush	ARAR8	15-25	---	15-25	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY017NV	025XY015NV	025XY017NV	025XY014NV	none	none
Potential production (lb/acre):							
Favorable years		900	1000	900	1000		
Normal years		700	700	700	800		
Unfavorable years		400	500	400	600		

1659--Ninemile-Carstump association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Ninemile	Carstump	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	30-50	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---
Thurber needlegrass	STTH2	---	10-20	10-20	5-15	---	---
basin wildrye	ELCI2	---	2-8	2-8	2-5	---	---
bluebunch wheatgrass	AGSP	15-30	20-35	20-35	60-80	---	---
bluegrass	POA++	2-10	2-10	2-10	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	5-15	---	---
antelope bitterbrush	PUTR2	2-5	2-8	2-8	1-5	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	---	10-20	10-20	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY017NV	025XY014NV	025XY014NV	025XY015NV	none	none
Potential production (lb/acre):							
Favorable years		900	1000	1000	1000		
Normal years		700	800	800	700		
Unfavorable years		400	600	600	500		

1660--Susie Creek-Pie Creek-Pattani association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Susie Creek	Pie Creek	Pattani	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	---	---	---	---
Idaho fescue	FEID	---	---	---	30-40	---
Nevada bluegrass	PONE3	---	---	---	2-5	---
Sandberg bluegrass	POSE	---	2-8	---	---	---
Thurber needlegrass	STTH2	10-20	15-30	5-15	---	5-15
Webber ricegrass	STWE	---	2-8	---	---	---
basin wildrye	ELCI2	2-8	---	30-50	2-10	2-5
bluebunch wheatgrass	AGSP	20-35	20-40	5-15	15-30	60-80
bluegrass	POA++	2-10	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	5-15
antelope bitterbrush	PUTR2	2-8	---	---	5-10	1-5
basin big sagebrush	ARTRT	---	---	---	---	---
big sagebrush	ARTR2	10-20	---	10-20	---	---
early sagebrush	ARLO9	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	10-20	---
sagebrush	ARTEM	---	20-30	---	---	---
Range site number		025XY014NV	025XY018NV	025XY013NV	025XY012NV	025XY015NV
Potential production (lb/acre):						
Favorable years		1000	800	1000	1400	1000
Normal years		800	600	800	1000	700
Unfavorable years		600	400	500	700	500

1671--Linkup-Carstump-Linkup, very cobbly loam association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Linkup	Carstump	Linkup	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	5-10	---	5-10	40-60
Sandberg bluegrass	POSE	2-8	---	2-8	---	---	---	---
Thurber needlegrass	STTH2	15-30	10-20	15-30	---	---	---	---
Webber ricegrass	STWE	2-8	---	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10	20-40
basin wildrye	ELCI2	---	2-8	---	60-70	---	---	2-8
bluebunch wheatgrass	AGSP	20-40	20-35	20-40	---	---	---	---
bluegrass	POA++	---	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	2-8	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	---	5-10	2-8
streambank wheatgrass	AGDAR	---	---	---	2-8	---	---	---
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	---	2-8	---	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	5-10	---	---	---
big sagebrush	ARTR2	---	10-20	---	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
sagebrush	ARTEM	20-30	---	20-30	---	---	---	---
Range site number		025XY018NV	025XY014NV	025XY018NV	025XY003NV	none	025XY005NV	025XY006NV
Potential production (lb/acre):								
Favorable years		800	1000	800	4500		3000	2000
Normal years		600	800	600	3500		1700	1300
Unfavorable years		400	600	400	2000		1000	800

1672--Linkup, steep-Carstump-Linkup association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Linkup	Carstump	Linkup	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	---	30-40	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	2-5	5-10
Sandberg bluegrass	POSE	2-8	---	2-8	---	---	---	---
Thurber needlegrass	STTH2	15-30	10-20	15-30	---	---	---	---
Webber ricegrass	STWE	2-8	---	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	---	---
basin wildrye	ELCI2	---	2-8	---	---	---	2-10	60-70
bluebunch wheatgrass	AGSP	20-40	20-35	20-40	---	---	15-30	---
bluegrass	POA++	---	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
sedge	CAREX	---	---	---	---	5-10	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
tufted hairgrass	DECE	---	---	---	---	30-60	---	---
Sierra clover	TRWO	---	---	---	---	2-5	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	---	2-8	---	---	---	5-10	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
big sagebrush	ARTR2	---	10-20	---	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	10-20	---
sagebrush	ARTEM	20-30	---	20-30	---	---	---	---
Range site number		025XY018NV	025XY014NV	025XY018NV	none	025XY005NV	025XY012NV	025XY003NV
Potential production (lb/acre):								
Favorable years		800	1000	800		3000	1400	4500
Normal years		600	800	600		1700	1000	3500
Unfavorable years		400	600	400		1000	700	2000

1673--Linkup-Quarz-Alyan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Linkup	Quarz	Alyan	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	2-5	30-40	30-40	---	---
Nevada bluegrass	PONE3	---	2-5	2-5	2-5	---	5-10
Sandberg bluegrass	POSE	2-8	---	---	---	---	---
Thurber needlegrass	STTH2	15-30	2-8	---	---	---	---
Webber ricegrass	STWE	2-8	---	---	---	---	---
basin wildrye	ELCI2	---	5-10	2-10	2-10	---	60-70
bluebunch wheatgrass	AGSP	20-40	50-60	15-30	15-30	---	---
mat muhly	MURI	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	---	2-5	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	2-5	---	---
antelope bitterbrush	PUTR2	---	2-10	5-10	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	10-20	10-20	---	---
sagebrush	ARTEM	20-30	---	---	---	---	---
Range site number		025XY018NV	025XY009NV	025XY012NV	025XY012NV	none	025XY003NV
Potential production (lb/acre):							
Favorable years		800	1300	1400	1400		4500
Normal years		600	900	1000	1000		3500
Unfavorable years		400	700	700	700		2000

1675--Linkup-Snowmore-Ratsow association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Linkup	Snowmore	Ratsow	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-8	2-5	---	2-8	2-5	---	---
Thurber needlegrass	STTH2	15-30	15-25	10-20	15-30	15-25	---	---
Webber ricegrass	STWE	2-8	---	---	2-8	---	---	---
basin wildrye	ELCI2	---	---	2-8	---	---	---	---
bluebunch wheatgrass	AGSP	20-40	25-40	20-35	20-40	25-40	---	---
bluegrass	POA++	---	---	2-10	---	---	---	---
Wyoming big sagebrush	ARTRW	---	15-25	---	---	15-25	---	---
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	10-20	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
sagebrush	ARTEM	20-30	---	---	20-30	---	---	---
Range site number		025XY018NV	025XY019NV	025XY014NV	025XY018NV	025XY019NV	none	none
Potential production (lb/acre):								
Favorable years		800	800	1000	800	800		
Normal years		600	600	800	600	600		
Unfavorable years		400	400	600	400	400		

1676--Linkup-Quarz association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Linkup	Quarz	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10
Sandberg bluegrass	POSE	2-8	---	---	---	---
Thurber needlegrass	STTH2	15-30	10-20	5-15	---	---
Webber ricegrass	STWE	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10
basin wildrye	ELCI2	---	2-8	2-5	---	---
bluebunch wheatgrass	AGSP	20-40	20-35	60-80	---	---
bluegrass	POA++	---	2-10	---	---	---
sedge	CAREX	---	---	---	---	5-10
tufted hairgrass	DECE	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	5-15	---	---
antelope bitterbrush	PUTR2	---	2-8	1-5	---	---
basin big sagebrush	ARTRT	---	---	---	---	---
big sagebrush	ARTR2	---	10-20	---	---	---
early sagebrush	ARLO9	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---
sagebrush	ARTEM	20-30	---	---	---	---
Range site number		025XY018NV	025XY014NV	025XY015NV	none	025XY005NV
Potential production (lb/acre):						
Favorable years		800	1000	1000		3000
Normal years		600	800	700		1700
Unfavorable years		400	600	500		1000

1680--Carstump-Reluctan-Ninemile association, hilly

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Carstump	Reluctan	Ninemile	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Cusick bluegrass	POCU3	---	---	---	---	5-10	---	---
Idaho fescue	FEID	---	30-40	30-50	---	50-65	5-30	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	---	5-10
Thurber needlegrass	STTH2	10-20	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	5-10
basin wildrye	ELCI2	2-8	2-10	---	---	---	---	---
bluebunch wheatgrass	AGSP	20-35	15-30	15-30	---	2-5	---	---
bluegrass	POA++	2-10	---	2-10	---	---	5-15	---
sedge	CAREX	---	---	---	---	---	---	5-10
tufted hairgrass	DECE	---	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	---	2-5
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	---	2-5
goldenweed	HAPLO2	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	5-10	2-5	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	---	---	---	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	2-8	---	---
sagebrush	ARTEM	---	---	---	---	---	30-35	---
Range site number		025XY014NV	025XY012NV	025XY017NV	none	025XY010NV	025XY024NV	025XY005NV
Potential production (lb/acre):								
Favorable years		1000	1400	900		1200	400	3000
Normal years		800	1000	700		800	275	1700
Unfavorable years		600	700	400		600	150	1000

1685--Carstump-Ninemile-Graley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Carstump	Ninemile	Graley	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	30-50	30-40	---	---	---	---
Nevada bluegrass	PONE3	---	---	2-5	---	5-10	40-60	5-10
Thurber needlegrass	STTH2	10-20	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	20-40	---
basin wildrye	ELCI2	2-8	---	2-10	---	---	2-8	60-70
bluebunch wheatgrass	AGSP	20-35	15-30	15-30	---	---	---	---
bluegrass	POA++	2-10	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	2-8
meadow barley	HOBR2	---	---	---	---	---	2-5	---
sedge	CAREX	---	---	---	---	5-10	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
tufted hairgrass	DECE	---	---	---	---	30-60	---	---
Sierra clover	TRWO	---	---	---	---	2-5	---	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
cinquefoil	POTEN	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	2-5	5-10	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
big sagebrush	ARTR2	10-20	---	---	---	---	---	---
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	---	---	---
Range site number		025XY014NV	025XY017NV	025XY012NV	none	025XY005NV	025XY006NV	025XY003NV
Potential production (lb/acre):								
Favorable years		1000	900	1400		3000	2000	4500
Normal years		800	700	1000		1700	1300	3500
Unfavorable years		600	400	700		1000	800	2000

1686--Carstump-Reluctan-Ninemile association, steep

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Carstump	Reluctan	Ninemile	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Cusick bluegrass	POCU3	---	---	---	---	5-10	---	---
Idaho fescue	FEID	---	30-40	30-50	---	50-65	---	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	5-10	5-10
Thurber needlegrass	STTH2	10-20	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	5-10
basin wildrye	ELCI2	2-8	2-10	---	---	---	60-70	---
bluebunch wheatgrass	AGSP	20-35	15-30	15-30	---	2-5	---	---
bluegrass	POA++	2-10	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
sedge	CAREX	---	---	---	---	---	---	5-10
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
tufted hairgrass	DECE	---	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	---	2-5
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	5-10	2-5	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
big sagebrush	ARTR2	10-20	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	2-8	---	---
Range site number		025XY014NV	025XY012NV	025XY017NV	none	025XY010NV	025XY003NV	025XY005NV
Potential production (lb/acre):								
Favorable years		1000	1400	900		1200	4500	3000
Normal years		800	1000	700		800	3500	1700
Unfavorable years		600	700	400		600	2000	1000

1687--Carstump, cobbly loam-Linkup-Carstump association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Carstump	Linkup	Carstump	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	30-40	---	---
Nevada bluegrass	PONE3	---	---	---	---	2-5	5-10	---
Sandberg bluegrass	POSE	---	2-8	---	---	---	---	---
Thurber needlegrass	STTH2	10-20	15-30	10-20	---	---	---	---
Webber ricegrass	STWE	---	2-8	---	---	---	---	---
basin wildrye	ELCI2	2-8	---	2-8	---	2-10	60-70	---
bluebunch wheatgrass	AGSP	20-35	20-40	20-35	---	15-30	---	---
bluegrass	POA++	2-10	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	---	2-8	---	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
big sagebrush	ARTR2	10-20	---	10-20	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	10-20	---	---
sagebrush	ARTEM	---	20-30	---	---	---	---	---
Range site number		025XY014NV	025XY018NV	025XY014NV	none	025XY012NV	025XY003NV	none
Potential production (lb/acre):								
Favorable years		1000	800	1000		1400	4500	
Normal years		800	600	800		1000	3500	
Unfavorable years		600	400	600		700	2000	

1691--Pequop-Rock outcrop-Rubble land association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Pequop	Rock outcrop	Rubble land	Inclusion 1
Idaho fescue	FEID	30-40	---	---	30-40
Nevada bluegrass	PONE3	2-5	---	---	2-5
basin wildrye	ELCI2	2-10	---	---	2-10
bluebunch wheatgrass	AGSP	15-30	---	---	15-30
arrowleaf balsamroot	BASA3	2-5	---	---	2-5
tapertip hawksbeard	CRAC2	2-5	---	---	2-5
antelope bitterbrush	PUTR2	5-10	---	---	5-10
mountain big sagebrush	ARVA2	10-20	---	---	10-20
Range site number		025XY012NV	none	none	025XY012NV
Potential production (lb/acre):					
Favorable years		1400			1400
Normal years		1000			1000
Unfavorable years		700			700

1700--Cotant-Quarz-Ninemile association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Cotant	Quarz	Ninemile	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	---	---	2-5
Idaho fescue	FEID	30-50	2-5	30-50	---	30-40	---	2-10
Nevada bluegrass	PONE3	---	2-5	---	40-60	2-5	5-10	2-5
Thurber needlegrass	STTH2	---	2-8	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	20-40	---	---	---
basin wildrye	ELCI2	---	5-10	---	2-8	2-10	60-70	---
bluebunch wheatgrass	AGSP	15-30	50-60	15-30	---	15-30	---	2-5
bluegrass	POA++	2-10	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	2-8	---	2-8	---
meadow barley	HOBR2	---	---	---	2-5	---	---	---
mountain brome	BRCA5	---	---	---	---	---	---	5-15
sedge	CAREX	---	---	---	2-8	---	---	---
slender wheatgrass	AGTR	---	---	---	---	---	---	5-15
spike-fescue	LEKI2	---	---	---	---	---	---	2-10
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---	1-5
antelope bitterbrush	PUTR2	2-5	2-10	2-5	---	5-10	---	1-5
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
common chokecherry	PRVI	---	---	---	---	---	---	1-5
low sagebrush	ARAR8	15-25	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	---	---	10-20	---	5-15
snowberry	SYMPH	---	---	---	---	---	---	2-15

Range site number	025XY017NV	025XY009NV	025XY017NV	025XY006NV	025XY012NV	025XY003NV	025XY004NV
Potential production (lb/acre):							
Favorable years	900	1300	900	2000	1400	4500	2800
Normal years	700	900	700	1300	1000	3500	1800
Unfavorable years	400	700	400	800	700	2000	1200

1702--Cotant-McIvey-Blitzen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Cotant	McIvey	Blitzen	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	30-50	30-40	2-5	---	---	---
Nevada bluegrass	PONE3	---	2-5	2-5	---	---	---
Sandberg bluegrass	POSE	---	---	---	2-8	---	---
Thurber needlegrass	STTH2	---	---	2-8	15-30	10-20	10-20
Webber ricegrass	STWE	---	---	---	2-8	---	---
basin wildrye	ELCI2	---	2-10	5-10	---	2-8	2-8
bluebunch wheatgrass	AGSP	15-30	15-30	50-60	20-40	20-35	20-35
bluegrass	POA++	2-10	---	---	---	2-10	2-10
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	2-10	---	2-8	2-8
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	---	10-20	10-20
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	5-15	---	---	---
sagebrush	ARTEM	---	---	---	20-30	---	---
Range site number		025XY017NV	025XY012NV	025XY009NV	025XY018NV	025XY014NV	025XY014NV
Potential production (lb/acre):							
Favorable years		900	1400	1300	800	1000	1000
Normal years		700	1000	900	600	800	800
Unfavorable years		400	700	700	400	600	600

1703--Cotant-Lerrow-Bullump association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Cotant	Lerrow	Bullump	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	2-5	2-10	30-40	40-60	---
Letterman needlegrass	STLE4	---	---	2-5	---	---	---
Nevada bluegrass	PONE3	---	2-5	2-5	2-5	2-8	---
Thurber needlegrass	STTH2	---	2-8	---	---	---	---
basin wildrye	ELCI2	---	5-10	5-15	2-10	2-8	---
bluebunch wheatgrass	AGSP	15-30	50-60	30-50	15-30	5-15	---
bluegrass	POA++	2-10	---	---	---	---	---
mountain brome	BRCA5	---	---	20-40	---	---	---
spike-fescue	LEKI2	---	---	2-5	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	2-5	2-10	5-10	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	10-20	---
low sagebrush	ARAR8	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	5-15	10-20	---	---
Range site number		025XY017NV	025XY009NV	025XY016NV	025XY012NV	025XY027NV	none
Potential production (lb/acre):							
Favorable years		900	1300	2000	1400	1300	
Normal years		700	900	1400	1000	900	
Unfavorable years		400	700	1000	700	500	

1711--Reluctan-Ninemile-Cleavage association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Reluctan	Ninemile	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-40	30-50	5-30	X	---	---	---
Nevada bluegrass	PONE3	2-5	---	---	---	5-10	5-10	40-60
alpine timothy	PHAL2	---	---	---	---	---	5-10	20-40
basin wildrye	ELCI2	2-10	---	---	---	60-70	---	2-8
bluebunch wheatgrass	AGSP	15-30	15-30	---	---	---	---	---
bluegrass	POA++	---	2-10	5-15	---	---	---	---
horsemint giant hyssop	AGUR	---	---	---	X	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
mountain brome	BRCA5	---	---	---	X	---	---	---
sedge	CAREX	---	---	---	---	---	5-10	2-8
slender wheatgrass	AGTR	---	---	---	X	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---	---
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
goldenweed	HAPLO2	---	---	2-5	---	---	---	---
groundsel	SENEC	---	---	---	X	---	---	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	X	---	---	---
antelope bitterbrush	PUTR2	5-10	2-5	---	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	10-20	---	---	---	---	---	---
sagebrush	ARTEM	---	---	30-35	---	---	---	---
snowberry	SYMPH	---	---	---	X	---	---	---
quaking aspen	POTRT	---	---	---	X	---	---	---

Range site number	025XY012NV	025XY017NV	025XY024NV	025XY065NV	025XY003NV	025XY005NV	025XY006NV
Potential production (lb/acre):							
Favorable years	1400	900	400	800	4500	3000	2000
Normal years	1000	700	275	600	3500	1700	1300
Unfavorable years	700	400	150	400	2000	1000	800

1712--Reluctan-Sumine-Cleavage association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Reluctan	Sumine	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	2-5	---	---	---
Cusick bluegrass	POCU3	---	---	---	---	---	5-10	---
Idaho fescue	FEID	30-40	2-5	30-50	2-10	15-30	50-65	---
Nevada bluegrass	PONE3	2-5	2-5	---	2-5	---	---	5-10
Thurber needlegrass	STTH2	---	2-8	---	---	2-5	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	5-10
basin wildrye	ELCI2	2-10	5-10	---	---	---	---	---
bluebunch wheatgrass	AGSP	15-30	50-60	15-30	2-5	10-20	2-5	---
bluegrass	POA++	---	---	2-10	---	---	---	---
mountain brome	BRCA5	---	---	---	5-15	---	---	---
sedge	CAREX	---	---	---	---	---	---	5-10
slender wheatgrass	AGTR	---	---	---	5-15	---	---	---
spike-fescue	LEKI2	---	---	---	2-10	---	---	---
tufted hairgrass	DECE	---	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	---	2-5
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---	---
antelope bitterbrush	PUTR2	5-10	2-10	2-5	1-5	20-40	---	---
common chokecherry	PRVI	---	---	---	1-5	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	10-20	5-15	---	5-15	5-10	2-8	---
snowberry	SYMPH	---	---	---	2-15	---	---	---

Range site number	025XY012NV	025XY009NV	025XY017NV	025XY004NV	025XY007NV	025XY010NV	025XY005NV
Potential production (lb/acre):							
Favorable years	1400	1300	900	2800	2300	1200	3000
Normal years	1000	900	700	1800	1400	800	1700
Unfavorable years	700	700	400	1200	900	600	1000

1713--Reluctan-Erakatak-Rugar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Reluctan	Erakatak	Rugar	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	---	2-5	---
Idaho fescue	FEID	30-40	2-10	15-30	---	40-60	2-10	2-5
Letterman needlegrass	STLE4	---	2-5	---	---	---	---	---
Nevada bluegrass	PONE3	2-5	2-5	---	40-60	2-8	2-5	2-5
Thurber needlegrass	STTH2	---	---	---	---	---	---	2-8
alpine timothy	PHAL2	---	---	---	20-40	---	---	---
basin wildrye	ELCI2	2-10	5-15	---	2-8	2-8	---	5-10
bluebunch wheatgrass	AGSP	15-30	30-50	---	---	5-15	2-5	50-60
bulbous oniongrass	MEBU	---	---	2-8	---	---	---	---
mat muhly	MURI	---	---	---	2-8	---	---	---
meadow barley	HOBR2	---	---	---	2-5	---	---	---
mountain brome	BRCA5	---	20-40	10-20	---	---	5-15	---
sedge	CAREX	---	---	---	2-8	---	---	---
slender wheatgrass	AGTR	---	---	2-8	---	---	5-15	---
spike-fescue	LEKI2	---	2-5	---	---	---	2-10	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---	---
lupine	LUPIN	---	---	10-15	---	---	---	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
wyethia	WYETH	---	---	20-30	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	1-5	---
antelope bitterbrush	PUTR2	5-10	5-10	---	---	---	1-5	2-10
basin big sagebrush	ARTRT	---	---	---	---	10-20	---	---
common chokecherry	PRVI	---	---	---	---	---	1-5	---
mountain big sagebrush	ARVA2	10-20	5-15	---	---	---	5-15	5-15
snowberry	SYMPH	---	---	---	---	---	2-15	---

Range site number	025XY012NV	025XY016NV	025XY047NV	025XY006NV	025XY027NV	025XY004NV	025XY009NV
Potential production (lb/acre):							
Favorable years	1400	2000	2000	2000	1300	2800	1300
Normal years	1000	1400	1500	1300	900	1800	900
Unfavorable years	700	1000	1000	800	500	1200	700

1720--Quarz-Alyan-Ninemile association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Quarz	Alyan	Ninemile	Inclusion 1
Idaho fescue	FEID	2-5	30-40	30-50	---
Nevada bluegrass	PONE3	2-5	2-5	---	---
Thurber needlegrass	STTH2	2-8	---	---	---
basin wildrye	ELCI2	5-10	2-10	---	---
bluebunch wheatgrass	AGSP	50-60	15-30	15-30	---
bluegrass	POA++	---	---	2-10	---
arrowleaf balsamroot	BASA3	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---
antelope bitterbrush	PUTR2	2-10	5-10	2-5	---
low sagebrush	ARAR8	---	---	15-25	---
mountain big sagebrush	ARVA2	5-15	10-20	---	---
Range site number		025XY009NV	025XY012NV	025XY017NV	none
Potential production (lb/acre):					
Favorable years		1300	1400	900	
Normal years		900	1000	700	
Unfavorable years		700	700	400	

1725--Quarz-Cleavage-Loncan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Quarz	Cleavage	Loncan	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	2-5	5-30	30-40	---	30-40	---
Nevada bluegrass	PONE3	2-5	---	2-5	---	2-5	40-60
Thurber needlegrass	STTH2	2-8	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	20-40
basin wildrye	ELCI2	5-10	---	2-10	---	2-10	2-8
bluebunch wheatgrass	AGSP	50-60	---	15-30	---	15-30	---
bluegrass	POA++	---	5-15	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	---	2-5	---	2-5	---
goldenweed	HAPLO2	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	2-5	---
antelope bitterbrush	PUTR2	2-10	---	5-10	---	5-10	---
black sagebrush	ARARN	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	10-20	---	10-20	---
sagebrush	ARTEM	---	30-35	---	---	---	---
Range site number		025XY009NV	025XY024NV	025XY012NV	none	025XY012NV	025XY006NV
Potential production (lb/acre):							
Favorable years		1300	400	1400		1400	2000
Normal years		900	275	1000		1000	1300
Unfavorable years		700	150	700		700	800

1726--Quarz-Ninemile-Pequop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Quarz	Ninemile	Pequop	Inclusion 1	Inclusion 2
Cusick bluegrass	POCU3	---	---	---	---	5-10
Idaho fescue	FEID	2-5	30-50	30-40	---	50-65
Nevada bluegrass	PONE3	2-5	---	2-5	---	---
Thurber needlegrass	STTH2	2-8	---	---	---	---
basin wildrye	ELCI2	5-10	---	2-10	---	---
bluebunch wheatgrass	AGSP	50-60	15-30	15-30	---	2-5
bluegrass	POA++	---	2-10	---	---	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---
antelope bitterbrush	PUTR2	2-10	2-5	5-10	---	---
low sagebrush	ARAR8	---	15-25	---	---	---
mountain big sagebrush	ARVA2	5-15	---	10-20	---	2-8
Range site number		025XY009NV	025XY017NV	025XY012NV	none	025XY010NV
Potential production (lb/acre):						
Favorable years		1300	900	1400		1200
Normal years		900	700	1000		800
Unfavorable years		700	400	700		600

1730--Graley-Erakatak-Chen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Graley	Erakatak	Chen	Inclusion 1	Inclusion 2
Columbia needlegrass	STNE3	---	---	---	2-5	---
Idaho fescue	FEID	30-40	2-10	30-50	2-10	30-50
Letterman needlegrass	STLE4	---	2-5	---	---	---
Nevada bluegrass	PONE3	2-5	2-5	---	2-5	---
basin wildrye	ELCI2	2-10	5-15	---	---	---
bluebunch wheatgrass	AGSP	15-30	30-50	15-30	2-5	15-30
bluegrass	POA++	---	---	2-10	---	2-10
mountain brome	BRCA5	---	20-40	---	5-15	---
slender wheatgrass	AGTR	---	---	---	5-15	---
spike-fescue	LEKI2	---	2-5	---	2-10	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---
antelope bitterbrush	PUTR2	5-10	5-10	2-5	1-5	2-5
common chokecherry	PRVI	---	---	---	1-5	---
low sagebrush	ARAR8	---	---	15-25	---	15-25
mountain big sagebrush	ARVA2	10-20	5-15	---	5-15	---
snowberry	SYMPH	---	---	---	2-15	---
Range site number		025XY012NV	025XY016NV	025XY017NV	025XY004NV	025XY017NV
Potential production (lb/acre):						
Favorable years		1400	2000	900	2800	900
Normal years		1000	1400	700	1800	700
Unfavorable years		700	1000	400	1200	400

1732--Graley-Quarz-Ninemile association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Graley	Quarz	Ninemile	Inclusion 1	Inclusion 2	Inclusion 3
Cusick bluegrass	POCU3	---	---	---	---	5-10	---
Idaho fescue	FEID	30-40	2-5	30-50	---	50-65	5-30
Nevada bluegrass	PONE3	2-5	2-5	---	---	---	---
Thurber needlegrass	STTH2	---	2-8	---	---	---	---
basin wildrye	ELCI2	2-10	5-10	---	---	---	---
bluebunch wheatgrass	AGSP	15-30	50-60	15-30	---	2-5	---
bluegrass	POA++	---	---	2-10	---	---	5-15
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---
goldenweed	HAPLO2	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---
antelope bitterbrush	PUTR2	5-10	2-10	2-5	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---
mountain big sagebrush	ARVA2	10-20	5-15	---	---	2-8	---
sagebrush	ARTEM	---	---	---	---	---	30-35
Range site number		025XY012NV	025XY009NV	025XY017NV	none	025XY010NV	025XY024NV
Potential production (lb/acre):							
Favorable years		1400	1300	900		1200	400
Normal years		1000	900	700		800	275
Unfavorable years		700	700	400		600	150

1733--Graley-Loncan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Graley	Loncan	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-40	30-40	2-5	30-50	---
Nevada bluegrass	PONE3	2-5	2-5	2-5	---	---
Thurber needlegrass	STTH2	---	---	2-8	---	---
basin wildrye	ELCI2	2-10	2-10	5-10	---	---
bluebunch wheatgrass	AGSP	15-30	15-30	50-60	15-30	---
bluegrass	POA++	---	---	---	2-10	---
arrowleaf balsamroot	BASA3	2-5	2-5	---	---	---
tapertip hawksbeard	CRAC2	2-5	2-5	---	---	---
antelope bitterbrush	PUTR2	5-10	5-10	2-10	2-5	---
low sagebrush	ARAR8	---	---	---	15-25	---
mountain big sagebrush	ARVA2	10-20	10-20	5-15	---	---
Range site number		025XY012NV	025XY012NV	025XY009NV	025XY017NV	none
Potential production (lb/acre):						
Favorable years		1400	1400	1300	900	
Normal years		1000	1000	900	700	
Unfavorable years		700	700	700	400	

1740--Erakatak-Cleavage-Hackwood association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Erakatak	Cleavage	Hackwood	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	2-5	---	---
Idaho fescue	FEID	2-10	5-30	X	2-5	2-10	40-60	---
Letterman needlegrass	STLE4	2-5	---	---	---	---	---	---
Nevada bluegrass	PONE3	2-5	---	---	2-5	2-5	2-8	40-60
Thurber needlegrass	STTH2	---	---	---	2-8	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	5-15	---	---	5-10	---	2-8	2-8
bluebunch wheatgrass	AGSP	30-50	---	---	50-60	2-5	5-15	---
bluegrass	POA++	---	5-15	---	---	---	---	---
horsemint giant hyssop	AGUR	---	---	X	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
mountain brome	BRCA5	20-40	---	X	---	5-15	---	---
sedge	CAREX	---	---	---	---	---	---	2-8
slender wheatgrass	AGTR	---	---	X	---	5-15	---	---
spike-fescue	LEKI2	2-5	---	---	---	2-10	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
groundsel	SENEC	---	---	X	---	---	---	---
Utah serviceberry	AMUT	---	---	X	---	1-5	---	---
antelope bitterbrush	PUTR2	5-10	---	---	2-10	1-5	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	10-20	---
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	---	---	---	1-5	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	---	5-15	5-15	---	---
sagebrush	ARTEM	---	30-35	---	---	---	---	---
snowberry	SYMPH	---	---	X	---	2-15	---	---
quaking aspen	POTRT	---	---	X	---	---	---	---

Range site number	025XY016NV	025XY024NV	025XY065NV	025XY009NV	025XY004NV	025XY027NV	025XY006NV
Potential production (lb/acre):							
Favorable years	2000	400	800	1300	2800	1300	2000
Normal years	1400	275	600	900	1800	900	1300
Unfavorable years	1000	150	400	700	1200	500	800

1741--Erakatak-Chen-Tusk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Erakatak	Chen	Tusk	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	---	---	---	---
Idaho fescue	FEID	2-10	30-50	2-10	30-40	30-40	---	---
Letterman needlegrass	STLE4	2-5	---	---	---	---	---	---
Nevada bluegrass	PONE3	2-5	---	2-5	2-5	2-5	5-10	40-60
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	5-15	---	---	2-10	2-10	60-70	2-8
bluebunch wheatgrass	AGSP	30-50	15-30	2-5	15-30	15-30	---	---
bluegrass	POA++	---	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
mountain brome	BRCA5	20-40	---	5-15	---	---	---	---
sedge	CAREX	---	---	---	---	---	---	2-8
slender wheatgrass	AGTR	---	---	5-15	---	---	---	---
spike-fescue	LEKI2	2-5	---	2-10	---	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	2-5	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---	---
antelope bitterbrush	PUTR2	5-10	2-5	1-5	5-10	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
common chokecherry	PRVI	---	---	1-5	---	---	---	---
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	5-15	10-20	10-20	---	---
snowberry	SYMPH	---	---	2-15	---	---	---	---

Range site number	025XY016NV	025XY017NV	025XY004NV	025XY012NV	025XY012NV	025XY003NV	025XY006NV
Potential production (lb/acre):							
Favorable years	2000	900	2800	1400	1400	4500	2000
Normal years	1400	700	1800	1000	1000	3500	1300
Unfavorable years	1000	400	1200	700	700	2000	800

1742--Erakatak-Rugar-Tusel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Erakatak	Rugar	Tusel	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	---	---	---	---
Cusick bluegrass	POCU3	---	---	---	---	---	5-10	---
Idaho fescue	FEID	2-10	15-30	2-10	5-15	30-40	50-65	40-60
Letterman needlegrass	STLE4	2-5	---	---	---	---	---	---
Nevada bluegrass	PONE3	2-5	---	2-5	---	2-5	---	2-8
basin wildrye	ELCI2	5-15	---	---	---	2-10	---	2-8
bluebunch wheatgrass	AGSP	30-50	---	2-5	2-10	15-30	2-5	5-15
bulbous oniongrass	MEBU	---	2-8	---	---	---	---	---
mountain brome	BRCA5	20-40	10-20	5-15	---	---	---	---
slender wheatgrass	AGTR	---	2-8	5-15	---	---	---	---
spike-fescue	LEKI2	2-5	---	2-10	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---	---
lupine	LUPIN	---	10-15	---	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---	---
wyethia	WYETH	---	20-30	---	---	---	---	---
Saskatoon serviceberry	AMAL2	---	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---	---
antelope bitterbrush	PUTR2	5-10	---	1-5	2-8	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	10-20
common chokecherry	PRVI	---	---	1-5	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	5-15	2-5	10-20	2-8	---
serviceberry	AMELA	---	---	---	40-50	---	---	---
snowberry	SYMPH	---	---	2-15	2-8	---	---	---

Range site number	025XY016NV	025XY047NV	025XY004NV	025XY046NV	025XY012NV	025XY010NV	025XY027NV
Potential production (lb/acre):							
Favorable years	2000	2000	2800	1800	1400	1200	1300
Normal years	1400	1500	1800	1300	1000	800	900
Unfavorable years	1000	1000	1200	900	700	600	500

1744--Erakatak-Graley-Tusel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Erakatak	Graley	Tusel	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	---	---	---	---
Cusick bluegrass	POCU3	---	---	---	---	---	---	5-15
Idaho fescue	FEID	2-10	30-40	2-10	2-5	5-15	15-30	30-60
Letterman needlegrass	STLE4	2-5	---	---	---	---	---	---
Nevada bluegrass	PONE3	2-5	2-5	2-5	2-5	---	---	---
Thurber needlegrass	STTH2	---	---	---	2-8	---	---	---
basin wildrye	ELCI2	5-15	2-10	---	5-10	---	---	---
bluebunch wheatgrass	AGSP	30-50	15-30	2-5	50-60	2-10	---	2-10
bulbous oniongrass	MEBU	---	---	---	---	---	2-8	---
mountain brome	BRCA5	20-40	---	5-15	---	---	10-20	---
slender wheatgrass	AGTR	---	---	5-15	---	---	2-8	---
spike-fescue	LEKI2	2-5	---	2-10	---	---	---	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
lupine	LUPIN	---	---	---	---	---	10-15	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	2-5
wyethia	WYETH	---	---	---	---	---	20-30	---
Saskatoon serviceberry	AMAL2	---	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---	---
antelope bitterbrush	PUTR2	5-10	5-10	1-5	2-10	2-8	---	---
black sagebrush	ARARN	---	---	---	---	---	---	25-35
common chokecherry	PRVI	---	---	1-5	---	---	---	---
mountain big sagebrush	ARVA2	5-15	10-20	5-15	5-15	2-5	---	---
serviceberry	AMELA	---	---	---	---	40-50	---	---
snowberry	SYMPH	---	---	2-15	---	2-8	---	---

Range site number	025XY016NV	025XY012NV	025XY004NV	025XY009NV	025XY046NV	025XY047NV	024XY042NV
Potential production (lb/acre):							
Favorable years	2000	1400	2800	1300	1800	2000	1000
Normal years	1400	1000	1800	900	1300	1500	800
Unfavorable years	1000	700	1200	700	900	1000	500

1746--Booford-Cotant-Blitzen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Booford	Cotant	Blitzen	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	2-5	---	---	---
Cusick bluegrass	POCU3	---	---	---	---	5-10	---	---
Idaho fescue	FEID	30-40	30-50	2-5	2-10	50-65	5-15	---
Nevada bluegrass	PONE3	2-5	---	2-5	2-5	---	---	5-10
Thurber needlegrass	STTH2	---	---	2-8	---	---	---	---
basin wildrye	ELCI2	2-10	---	5-10	---	---	---	60-70
bluebunch wheatgrass	AGSP	15-30	15-30	50-60	2-5	2-5	2-10	---
bluegrass	POA++	---	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
mountain brome	BRCA5	---	---	---	5-15	---	---	---
slender wheatgrass	AGTR	---	---	---	5-15	---	---	---
spike-fescue	LEKI2	---	---	---	2-10	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
Saskatoon serviceberry	AMAL2	---	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---	---
antelope bitterbrush	PUTR2	5-10	2-5	2-10	1-5	---	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
common chokecherry	PRVI	---	---	---	1-5	---	---	---
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	10-20	---	5-15	5-15	2-8	2-5	---
serviceberry	AMELA	---	---	---	---	---	40-50	---
snowberry	SYMPH	---	---	---	2-15	---	2-8	---

Range site number	025XY012NV	025XY017NV	025XY009NV	025XY004NV	025XY010NV	025XY046NV	025XY003NV
Potential production (lb/acre):							
Favorable years	1400	900	1300	2800	1200	1800	4500
Normal years	1000	700	900	1800	800	1300	3500
Unfavorable years	700	400	700	1200	600	900	2000

1800--Bregar, moderately steep-Bregar-Carstump association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Bregar	Bregar	Carstump	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	5-10
Sandberg bluegrass	POSE	2-8	2-8	---	---	---	---
Thurber needlegrass	STTH2	15-30	15-30	10-20	---	---	---
Webber ricegrass	STWE	2-8	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	---	2-8	---	60-70	---
bluebunch wheatgrass	AGSP	20-40	20-40	20-35	---	---	---
bluegrass	POA++	---	---	2-10	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---
sedge	CAREX	---	---	---	---	---	5-10
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---
tufted hairgrass	DECE	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	---	10-20	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
sagebrush	ARTEM	20-30	20-30	---	---	---	---
Range site number		025XY018NV	025XY018NV	025XY014NV	none	025XY003NV	025XY005NV
Potential production (lb/acre):							
Favorable years		800	800	1000		4500	3000
Normal years		600	600	800		3500	1700
Unfavorable years		400	400	600		2000	1000

1802--Bregar-Ninemile-Pequop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bregar	Ninemile	Pequop	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	15-25	30-50	30-40	---	2-5	---	15-30
Nevada bluegrass	PONE3	---	---	2-5	---	2-5	5-10	---
Sandberg bluegrass	POSE	2-8	---	---	---	---	---	---
Thurber needlegrass	STTH2	2-8	---	---	---	2-8	---	2-5
basin wildrye	ELCI2	---	---	2-10	---	5-10	60-70	---
bluebunch wheatgrass	AGSP	10-20	15-30	15-30	---	50-60	---	10-20
bluegrass	POA++	---	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---	---	---
antelope bitterbrush	PUTR2	5-10	2-5	5-10	---	2-10	---	20-40
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
low sagebrush	ARAR8	25-35	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	5-15	---	5-10
Range site number		025XY051NV	025XY017NV	025XY012NV	none	025XY009NV	025XY003NV	025XY007NV
Potential production (lb/acre):								
Favorable years		500	900	1400		1300	4500	2300
Normal years		300	700	1000		900	3500	1400
Unfavorable years		200	400	700		700	2000	900

1803--Bregar-Sumine-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Bregar	Sumine	Rock outcrop	Inclusion 1	Inclusion 2
Idaho fescue	FEID	15-25	2-5	---	30-40	30-50
Nevada bluegrass	PONE3	---	2-5	---	2-5	---
Sandberg bluegrass	POSE	2-8	---	---	---	---
Thurber needlegrass	STTH2	2-8	2-8	---	---	---
basin wildrye	ELCI2	---	5-10	---	2-10	---
bluebunch wheatgrass	AGSP	10-20	50-60	---	15-30	15-30
bluegrass	POA++	---	---	---	---	2-10
arrowleaf balsamroot	BASA3	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---
antelope bitterbrush	PUTR2	5-10	2-10	---	5-10	2-5
low sagebrush	ARAR8	25-35	---	---	---	15-25
mountain big sagebrush	ARVA2	---	5-15	---	10-20	---
Range site number		025XY051NV	025XY009NV	none	025XY012NV	025XY017NV
Potential production (lb/acre):						
Favorable years		500	1300		1400	900
Normal years		300	900		1000	700
Unfavorable years		200	700		700	400

1805--Bregar-Deseed-Linkup association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bregar	Deseed	Linkup	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-10	---	2-8	---	2-8	---	---
Thurber needlegrass	STTH2	10-20	10-20	15-30	10-20	15-30	---	10-20
Webber ricegrass	STWE	5-10	---	2-8	---	2-8	---	---
basin wildrye	ELCI2	---	2-8	---	2-8	---	---	2-8
bluebunch wheatgrass	AGSP	20-30	20-35	20-40	20-35	20-40	---	20-35
bluegrass	POA++	---	2-10	---	2-10	---	---	2-10
balsamroot	BALSA	2-5	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	---	2-8	---	2-8	---	---	2-8
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	---	10-20	---	10-20	---	---	10-20
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	25-35	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
sagebrush	ARTEM	---	---	20-30	---	20-30	---	---
Range site number		025XY022NV	025XY014NV	025XY018NV	025XY014NV	025XY018NV	none	025XY014NV
Potential production (lb/acre):								
Favorable years		600	1000	800	1000	800		1000
Normal years		400	800	600	800	600		800
Unfavorable years		250	600	400	600	400		600

1810--Shively-Ninemile-Hackwood association

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Shively	Ninemile	Hackwood	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	2-5	2-8	---
Cusick bluegrass	POCU3	5-10	---	---	---	---	---	---
Idaho fescue	FEID	50-65	30-50	X	---	2-10	---	---
Letterman needlegrass	STLE4	---	---	---	---	---	2-5	---
Nevada bluegrass	PONE3	---	---	---	---	2-5	---	---
bluebunch wheatgrass	AGSP	2-5	15-30	---	---	2-5	---	---
bluegrass	POA++	---	2-10	---	---	---	---	---
horsemint giant hyssop	AGUR	---	---	X	---	---	---	---
mountain brome	BRCA5	---	---	X	---	5-15	5-10	---
slender wheatgrass	AGTR	---	---	X	---	5-15	5-10	---
spike-fescue	LEKI2	---	---	---	---	2-10	---	---
groundsel	SENEC	---	---	X	---	---	---	---
Utah serviceberry	AMUT	---	---	X	---	1-5	---	---
antelope bitterbrush	PUTR2	---	2-5	---	---	1-5	---	---
common chokecherry	PRVI	---	---	---	---	1-5	---	---
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	2-8	---	---	---	5-15	---	---
quaking aspen	POTR5	---	---	---	---	---	50-60	---
snowberry	SYMPH	---	---	X	---	2-15	---	---
willow	SALIX	---	---	---	---	---	1-8	---
quaking aspen	POTRT	---	---	X	---	---	---	---
Range site number		025XY010NV	025XY017NV	025XY065NV	none	025XY004NV	025XY002NV	none
Potential production (lb/acre):								
Favorable years		1200	900	800		2800	1800	
Normal years		800	700	600		1800	1300	
Unfavorable years		600	400	400		1200	900	

1830--Vanwyper, steep-Alyan-Vanwyper association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Vanwyper	Alyan	Vanwyper	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	30-50	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Sandberg bluegrass	POSE	2-5	---	2-5	---	---	---
Thurber needlegrass	STTH2	15-25	10-20	15-25	---	---	5-15
basin wildrye	ELCI2	---	2-8	---	---	60-70	2-5
bluebunch wheatgrass	AGSP	25-40	20-35	25-40	15-30	---	60-80
bluegrass	POA++	---	2-10	---	2-10	---	---
mat muhly	MURI	---	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---
Wyoming big sagebrush	ARTRW	15-25	---	15-25	---	---	5-15
antelope bitterbrush	PUTR2	---	2-8	---	2-5	---	1-5
basin big sagebrush	ARTRT	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	10-20	---	---	---	---
low sagebrush	ARAR8	---	---	---	15-25	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---

Range site number	025XY019NV	025XY014NV	025XY019NV	025XY017NV	025XY003NV	025XY015NV
Potential production (lb/acre):						
Favorable years	800	1000	800	900	4500	1000
Normal years	600	800	600	700	3500	700
Unfavorable years	400	600	400	400	2000	500

1831--Vanwyper, moderately steep-Trunk-Vanwyper association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Vanwyper	Trunk	Vanwyper	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	---	---	30-50	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	---	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	---	---	---	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	15-30	---	---	25-40
bluegrass	POA++	---	---	---	2-10	---	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	---	---	15-25
antelope bitterbrush	PUTR2	---	---	---	2-5	---	---	---
low sagebrush	ARAR8	---	---	---	15-25	---	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY017NV	none	none	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	800	900			800
Normal years		600	600	600	700			600
Unfavorable years		400	400	400	400			400

1832--Vanwyper-Trunk-Trunk, steep association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Vanwyper	Trunk	Trunk	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	---	---	---	30-40	10-20	---
Indian ricegrass	ORHY	---	---	---	---	---	---	5-15
Letterman needlegrass	STLE4	---	---	---	---	---	5-10	---
Nevada bluegrass	PONE3	---	---	---	---	2-5	---	---
Sandberg bluegrass	POSE	---	2-5	2-5	---	---	---	---
Thurber needlegrass	STTH2	5-15	15-25	15-25	---	---	---	---
basin wildrye	ELCI2	2-5	---	---	---	2-10	---	---
bluebunch wheatgrass	AGSP	60-80	25-40	25-40	---	15-30	10-20	---
bluegrass	POA++	---	---	---	---	---	2-8	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	---	5-10
arrowleaf balsamroot	BASA3	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	5-15	15-25	15-25	---	---	---	---
antelope bitterbrush	PUTR2	1-5	---	---	---	5-10	---	---
bud sagebrush	ARSP5	---	---	---	---	---	---	20-30
mountain big sagebrush	ARVA2	---	---	---	---	10-20	15-25	---
mountain snowberry	SYOR2	---	---	---	---	---	2-8	---
shadscale	ATCO	---	---	---	---	---	---	30-40
spiny hopsage	GRSP	---	---	---	---	---	---	2-5
winterfat	EULA5	---	---	---	---	---	---	2-5
curlleaf mountainmahogany	CELE3	---	---	---	---	---	30-50	---
Range site number		025XY015NV	025XY019NV	025XY019NV	none	025XY012NV	025XY031NV	024XY002NV
Potential production (lb/acre):								
Favorable years		1000	800	800		1400	1300	750
Normal years		700	600	600		1000	900	450
Unfavorable years		500	400	400		700	600	300

1833--Vanwyper-Rock outcrop-Trunk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Vanwyper	Rock outcrop	Trunk	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	---	---	30-40	---	---
Nevada bluegrass	PONE3	---	---	---	2-5	5-10	---
Sandberg bluegrass	POSE	---	---	2-5	---	---	---
Thurber needlegrass	STTH2	5-15	---	15-25	---	---	---
basin wildrye	ELCI2	2-5	---	---	2-10	60-70	---
bluebunch wheatgrass	AGSP	60-80	---	25-40	15-30	---	---
mat muhly	MURI	---	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	5-15	---	15-25	---	---	---
antelope bitterbrush	PUTR2	1-5	---	---	5-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---
mountain big sagebrush	ARVA2	---	---	---	10-20	---	---
Range site number		025XY015NV	none	025XY019NV	025XY012NV	025XY003NV	none
Potential production (lb/acre):							
Favorable years		1000		800	1400	4500	
Normal years		700		600	1000	3500	
Unfavorable years		500		400	700	2000	

1852--Gumble-Tuffo-Hunnton association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Gumble	Tuffo	Hunnton	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	5-15
basin wildrye	ELCI2	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	60-80
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	5-15
antelope bitterbrush	PUTR2	---	---	---	---	1-5
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY015NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	1000
Normal years		600	600	600	600	700
Unfavorable years		400	400	400	400	500

1853--Gumble-Tuffo-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Gumble	Tuffo	Rock outcrop	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	---	---	---	40-60	---
Nevada bluegrass	PONE3	---	---	---	---	2-8	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	2-5
Thurber needlegrass	STTH2	5-15	5-15	---	15-25	---	15-25
basin wildrye	ELCI2	2-5	2-5	---	---	2-8	---
bluebunch wheatgrass	AGSP	60-80	60-80	---	25-40	5-15	25-40
Wyoming big sagebrush	ARTRW	5-15	5-15	---	15-25	---	15-25
antelope bitterbrush	PUTR2	1-5	1-5	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	10-20	---
Range site number		025XY015NV	025XY015NV	none	025XY019NV	025XY027NV	025XY019NV
Potential production (lb/acre):							
Favorable years		1000	1000		800	1300	800
Normal years		700	700		600	900	600
Unfavorable years		500	500		400	500	400

1854--Gumble-Chen association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Gumble	Chen	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	30-50	2-5	---	---	---
Indian ricegrass	OREY	---	---	---	---	---	15-30
Nevada bluegrass	PONE3	---	---	2-5	---	5-10	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	---
Thurber needlegrass	STTH2	5-15	---	2-8	15-25	---	---
basin wildrye	ELCI2	2-5	---	5-10	---	60-70	5-10
bluebunch wheatgrass	AGSP	60-80	15-30	50-60	25-40	---	---
bluegrass	POA++	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---
needleandthread	STCO4	---	---	---	---	---	30-40
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---
Wyoming big sagebrush	ARTRW	5-15	---	---	15-25	---	---
antelope bitterbrush	PUTR2	1-5	2-5	2-10	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	---	---	---	---	15-25
low sagebrush	ARAR8	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	---	5-15	---	---	---
spiny hopsage	GRSP	---	---	---	---	---	1-5

Range site number	025XY015NV	025XY017NV	025XY009NV	025XY019NV	025XY003NV	024XY017NV
Potential production (lb/acre):						
Favorable years	1000	900	1300	800	4500	900
Normal years	700	700	900	600	3500	700
Unfavorable years	500	400	700	400	2000	500

1855--Gumble-Puett Variant-Xeric Torriorthents association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Gumble	Puett Variant	Xeric Torriorthents	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	5-15	5-15	---	2-5	---
Sandberg bluegrass	POSE	---	---	2-8	2-5	---	2-5
Thurber needlegrass	STTH2	5-15	---	15-25	15-25	---	15-25
basin wildrye	ELCI2	2-5	---	---	---	---	---
bluebunch wheatgrass	AGSP	60-80	---	---	25-40	---	25-40
bottlebrush squirreltail	SIHY	---	5-10	2-5	---	2-10	---
desert needlegrass	STSP3	---	---	---	---	2-10	---
globemallow	SPHAE	---	---	1-2	---	---	---
Wyoming big sagebrush	ARTRW	5-15	---	20-35	15-25	---	15-25
antelope bitterbrush	PUTR2	1-5	---	---	---	---	---
bud sagebrush	ARSP5	---	20-30	---	---	15-30	---
shadscale	ATCO	---	30-40	---	---	30-50	---
spiny hopsage	GRSP	---	2-5	5-20	---	---	---
winterfat	EULA5	---	2-5	---	---	---	---

Range site number	025XY015NV	024XY002NV	024XY020NV	025XY019NV	024XY025NV	025XY019NV
Potential production (lb/acre):						
Favorable years	1000	750	700	800	250	800
Normal years	700	450	450	600	150	600
Unfavorable years	500	300	300	400	75	400

1870--Chen-Graley-Quarz association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Chen	Graley	Quarz	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	---	---	2-5
Idaho fescue	FEID	30-50	30-40	2-5	30-40	30-40	---	2-10
Nevada bluegrass	PONE3	---	2-5	2-5	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	---	---	2-8	---	---	---	---
basin wildrye	ELCI2	---	2-10	5-10	2-10	2-10	---	---
bluebunch wheatgrass	AGSP	15-30	15-30	50-60	15-30	15-30	---	2-5
bluegrass	POA++	2-10	---	---	---	---	---	---
mountain brome	BRCA5	---	---	---	---	---	---	5-15
slender wheatgrass	AGTR	---	---	---	---	---	---	5-15
spike-fescue	LEKI2	---	---	---	---	---	---	2-10
arrowleaf balsamroot	BASA3	---	2-5	---	2-5	2-5	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	2-5	2-5	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---	1-5
antelope bitterbrush	PUTR2	2-5	5-10	2-10	5-10	5-10	---	1-5
common chokecherry	PRVI	---	---	---	---	---	---	1-5
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	5-15	10-20	10-20	---	5-15
snowberry	SYMPH	---	---	---	---	---	---	2-15
Range site number		025XY017NV	025XY012NV	025XY009NV	025XY012NV	025XY012NV	none	025XY004NV
Potential production (lb/acre):								
Favorable years		900	1400	1300	1400	1400		2800
Normal years		700	1000	900	1000	1000		1800
Unfavorable years		400	700	700	700	700		1200

1871--Chen-Cotant-Graley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Chen	Cotant	Graley	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	30-50	30-40	30-40	---	---
Nevada bluegrass	PONE3	---	---	2-5	2-5	5-10	---
alpine timothy	PHAL2	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	---	2-10	2-10	---	---
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	15-30	---	---
bluegrass	POA++	2-10	2-10	---	---	---	---
sedge	CAREX	---	---	---	---	5-10	---
tufted hairgrass	DECE	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	---	2-5	2-5	---	---
cinquefoil	POTEN	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	2-5	2-5	---	---
antelope bitterbrush	PUTR2	2-5	2-5	5-10	5-10	---	---
low sagebrush	ARAR8	15-25	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	10-20	---	---
Range site number		025XY017NV	025XY017NV	025XY012NV	025XY012NV	025XY005NV	none
Potential production (lb/acre):							
Favorable years		900	900	1400	1400	3000	
Normal years		700	700	1000	1000	1700	
Unfavorable years		400	400	700	700	1000	

1872--Chen-Sumine-Tusel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Chen	Sumine	Tusel	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	---	---	2-5	---
Cusick bluegrass	POCU3	---	---	---	---	---	---	5-10
Idaho fescue	FEID	30-50	2-5	2-10	---	5-30	2-10	50-65
Nevada bluegrass	PONE3	---	2-5	2-5	---	---	2-5	---
Thurber needlegrass	STTH2	---	2-8	---	---	---	---	---
basin wildrye	ELCI2	---	5-10	---	---	---	---	---
bluebunch wheatgrass	AGSP	15-30	50-60	2-5	---	---	2-5	2-5
bluegrass	POA++	2-10	---	---	---	5-15	---	---
mountain brome	BRCA5	---	---	5-15	---	---	5-15	---
slender wheatgrass	AGTR	---	---	5-15	---	---	5-15	---
spike-fescue	LEKI2	---	---	2-10	---	---	2-10	---
goldenweed	HAPLO2	---	---	---	---	2-5	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	1-5	---
antelope bitterbrush	PUTR2	2-5	2-10	1-5	---	---	1-5	---
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	---	1-5	---	---	1-5	---
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	5-15	---	---	5-15	2-8
sagebrush	ARTEM	---	---	---	---	30-35	---	---
snowberry	SYMPH	---	---	2-15	---	---	2-15	---

Range site number	025XY017NV	025XY009NV	025XY004NV	none	025XY024NV	025XY004NV	025XY010NV
Potential production (lb/acre):							
Favorable years	900	1300	2800		400	2800	1200
Normal years	700	900	1800		275	1800	800
Unfavorable years	400	700	1200		150	1200	600

1874--Chen-Quarz-Arcia association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Chen	Quarz	Arcia	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	---	---	2-5
Idaho fescue	FEID	30-50	2-5	30-40	5-30	---	---	2-10
Nevada bluegrass	PONE3	---	2-5	2-5	---	---	---	2-5
Sandberg bluegrass	POSE	---	---	---	---	2-10	---	---
Thurber needlegrass	STTH2	---	2-8	---	---	10-20	---	---
Webber ricegrass	STWE	---	---	---	---	5-10	---	---
basin wildrye	ELCI2	---	5-10	2-10	---	---	---	---
bluebunch wheatgrass	AGSP	15-30	50-60	15-30	---	20-30	---	2-5
bluegrass	POA++	2-10	---	---	5-15	---	---	---
mountain brome	BRCA5	---	---	---	---	---	---	5-15
slender wheatgrass	AGTR	---	---	---	---	---	---	5-15
spike-fescue	LEKI2	---	---	---	---	---	---	2-10
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
balsamroot	BALSA	---	---	---	---	2-5	---	---
goldenweed	HAPLO2	---	---	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---	1-5
antelope bitterbrush	PUTR2	2-5	2-10	5-10	---	---	---	1-5
black sagebrush	ARARN	---	---	---	---	---	---	---
common chokecherry	PRVI	---	---	---	---	---	---	1-5
low sagebrush	ARAR8	15-25	---	---	---	25-35	---	---
mountain big sagebrush	ARVA2	---	5-15	10-20	---	---	---	5-15
sagebrush	ARTEM	---	---	---	30-35	---	---	---
snowberry	SYMPH	---	---	---	---	---	---	2-15

Range site number	025XY017NV	025XY009NV	025XY012NV	025XY024NV	025XY022NV	none	025XY004NV
Potential production (lb/acre):							
Favorable years	900	1300	1400	400	600		2800
Normal years	700	900	1000	275	400		1800
Unfavorable years	400	700	700	150	250		1200

1875--Chen-Bregar-Ramires association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Chen	Bregar	Ramires	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	30-50	---	---	30-50	---	40-60	---
Nevada bluegrass	PONE3	---	---	---	---	---	2-8	5-10
Sandberg bluegrass	POSE	---	2-10	---	---	---	---	---
Thurber needlegrass	STTH2	---	10-20	10-20	---	---	---	---
Webber ricegrass	STWE	---	5-10	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	---	2-8	---	---	2-8	---
bluebunch wheatgrass	AGSP	15-30	20-30	20-35	15-30	---	5-15	---
bluegrass	POA++	2-10	---	2-10	2-10	---	---	---
sedge	CAREX	---	---	---	---	---	---	5-10
tufted hairgrass	DECE	---	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	---	2-5
balsamroot	BALSA	---	2-5	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	---	2-8	2-5	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	10-20	---
big sagebrush	ARTR2	---	---	10-20	---	---	---	---
low sagebrush	ARAR8	15-25	25-35	---	15-25	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
Range site number		025XY017NV	025XY022NV	025XY014NV	025XY017NV	none	025XY027NV	025XY005NV
Potential production (lb/acre):								
Favorable years		900	600	1000	900		1300	3000
Normal years		700	400	800	700		900	1700
Unfavorable years		400	250	600	400		500	1000

1876--Chen-Chen, steep-Arcia association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Chen	Chen	Arcia	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	30-50	30-40	---	---	---	---
Nevada bluegrass	PONE3	---	---	2-5	---	---	5-10	5-10
Sandberg bluegrass	POSE	---	---	---	2-10	---	---	---
Thurber needlegrass	STTH2	---	---	---	10-20	---	---	---
Webber ricegrass	STWE	---	---	---	5-10	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	---	2-10	---	---	---	60-70
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	20-30	---	---	---
bluegrass	POA++	2-10	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
sedge	CAREX	---	---	---	---	---	5-10	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
balsamroot	BALSA	---	---	---	2-5	---	---	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
antelope bitterbrush	PUTR2	2-5	2-5	5-10	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
low sagebrush	ARAR8	15-25	15-25	---	25-35	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	---	---	---

Range site number		025XY017NV	025XY017NV	025XY012NV	025XY022NV	none	025XY005NV	025XY003NV
Potential production (lb/acre):								
Favorable years		900	900	1400	600		3000	4500
Normal years		700	700	1000	400		1700	3500
Unfavorable years		400	400	700	250		1000	2000

1877--Chen-Bregar-Loncan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Chen	Bregar	Loncan	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	15-25	30-40	---	---	5-30
Nevada bluegrass	PONE3	---	---	2-5	---	5-10	---
Sandberg bluegrass	POSE	---	2-8	---	---	---	---
Thurber needlegrass	STTH2	---	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	---	2-10	---	---	---
bluebunch wheatgrass	AGSP	15-30	10-20	15-30	---	---	---
bluegrass	POA++	2-10	---	---	---	---	5-15
sedge	CAREX	---	---	---	---	5-10	---
tufted hairgrass	DECE	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---
cinquefoil	POTEN	---	---	---	---	2-5	---
goldenweed	HAPLO2	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	5-10	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---
low sagebrush	ARAR8	15-25	25-35	---	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	---	---
sagebrush	ARTEM	---	---	---	---	---	30-35
Range site number		025XY017NV	025XY051NV	025XY012NV	none	025XY005NV	025XY024NV
Potential production (lb/acre):							
Favorable years		900	500	1400		3000	400
Normal years		700	300	1000		1700	275
Unfavorable years		400	200	700		1000	150

1880--Chen-Blitzen-Pequop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Chen	Blitzen	Pequop	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	2-5	30-40	---	30-50	---
Nevada bluegrass	PONE3	---	2-5	2-5	---	---	5-10
Thurber needlegrass	STTH2	---	2-8	---	---	---	---
basin wildrye	ELCI2	---	5-10	2-10	---	---	60-70
bluebunch wheatgrass	AGSP	15-30	50-60	15-30	---	15-30	---
bluegrass	POA++	2-10	---	---	---	2-10	---
mat muhly	MURI	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---
antelope bitterbrush	PUTR2	2-5	2-10	5-10	---	2-5	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
low sagebrush	ARAR8	15-25	---	---	---	15-25	---
mountain big sagebrush	ARVA2	---	5-15	10-20	---	---	---
Range site number		025XY017NV	025XY009NV	025XY012NV	none	025XY017NV	025XY003NV
Potential production (lb/acre):							
Favorable years		900	1300	1400		900	4500
Normal years		700	900	1000		700	3500
Unfavorable years		400	700	700		400	2000

1881--Chen-Blitzen-Loncan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Chen	Blitzen	Loncan	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	---	5-10	---	---
Idaho fescue	FEID	30-50	2-5	30-40	---	50-65	---	---
Nevada bluegrass	PONE3	---	2-5	2-5	---	---	5-10	40-60
Thurber needlegrass	STTH2	---	2-8	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	---	5-10	2-10	---	---	60-70	2-8
bluebunch wheatgrass	AGSP	15-30	50-60	15-30	---	2-5	---	---
bluegrass	POA++	2-10	---	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
antelope bitterbrush	PUTR2	2-5	2-10	5-10	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	10-20	---	2-8	---	---
Range site number		025XY017NV	025XY009NV	025XY012NV	none	025XY010NV	025XY003NV	025XY006NV
Potential production (lb/acre):								
Favorable years		900	1300	1400		1200	4500	2000
Normal years		700	900	1000		800	3500	1300
Unfavorable years		400	700	700		600	2000	800

1888--Chen-Pie Creek-Alyan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Chen	Pie Creek	Alyan	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	30-50	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10	5-10
Sandberg bluegrass	POSE	---	2-8	---	---	---	---	---
Thurber needlegrass	STTH2	---	15-30	10-20	10-20	---	---	---
Webber ricegrass	STWE	---	2-8	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	---	2-8	2-8	---	60-70	---
bluebunch wheatgrass	AGSP	15-30	20-40	20-35	20-35	---	---	---
bluegrass	POA++	2-10	---	2-10	2-10	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
sedge	CAREX	---	---	---	---	---	---	5-10
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
tufted hairgrass	DECE	---	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	---	2-8	2-8	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	---	10-20	10-20	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
sagebrush	ARTEM	---	20-30	---	---	---	---	---

Range site number	025XY017NV	025XY018NV	025XY014NV	025XY014NV	none	025XY003NV	025XY005NV
Potential production (lb/acre):							
Favorable years	900	800	1000	1000		4500	3000
Normal years	700	600	800	800		3500	1700
Unfavorable years	400	400	600	600		2000	1000

1889--Chen-Sumine association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Chen	Sumine	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	2-5	30-40	20-30	---	5-30
Nevada bluegrass	PONE3	---	2-5	2-5	---	---	---
Thurber needlegrass	STTH2	---	2-8	---	---	---	---
basin wildrye	ELCI2	---	5-10	2-10	40-60	---	---
big bluegrass	POAM	---	---	---	2-8	---	---
bluebunch wheatgrass	AGSP	15-30	50-60	15-30	---	---	---
bluegrass	POA++	2-10	---	---	---	---	5-15
mountain brome	BRCA5	---	---	---	2-10	---	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---
goldenweed	HAPLO2	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---
antelope bitterbrush	PUTR2	2-5	2-10	5-10	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	10-20	2-5	---	---
sagebrush	ARTEM	---	---	---	---	---	30-35
Range site number		025XY017NV	025XY009NV	025XY012NV	025XY029NV	none	025XY024NV
Potential production (lb/acre):							
Favorable years		900	1300	1400	2000		400
Normal years		700	900	1000	1700		275
Unfavorable years		400	700	700	1300		150

1910--Mahala-Ramires association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Mahala	Ramires	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---
Sandberg bluegrass	POSE	2-8	---	---	2-8	---
Thurber needlegrass	STTH2	15-30	10-20	10-20	15-30	---
Webber ricegrass	STWE	2-8	---	---	2-8	---
basin wildrye	ELCI2	---	2-8	2-8	---	---
bluebunch wheatgrass	AGSP	20-40	20-35	20-35	20-40	---
bluegrass	POA++	---	2-10	2-10	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---
antelope bitterbrush	PUTR2	---	2-8	2-8	---	---
basin big sagebrush	ARTRT	---	---	---	---	---
big sagebrush	ARTR2	---	10-20	10-20	---	---
early sagebrush	ARLO9	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---
sagebrush	ARTEM	20-30	---	---	20-30	---
Range site number		025XY018NV	025XY014NV	025XY014NV	025XY018NV	none
Potential production (lb/acre):						
Favorable years		800	1000	1000	800	
Normal years		600	800	800	600	
Unfavorable years		400	600	600	400	

1920--Lerrow-Chen-Cotant association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Lerrow	Chen	Cotant	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	2-5	30-50	30-50	2-5	40-60	15-30	---
Nevada bluegrass	PONE3	2-5	---	---	2-5	2-8	---	---
Thurber needlegrass	STTH2	2-8	---	---	2-8	---	2-5	---
basin wildrye	ELCI2	5-10	---	---	5-10	2-8	---	---
bluebunch wheatgrass	AGSP	50-60	15-30	15-30	50-60	5-15	10-20	---
bluegrass	POA++	---	2-10	2-10	---	---	---	---
antelope bitterbrush	PUTR2	2-10	2-5	2-5	2-10	---	20-40	---
basin big sagebrush	ARTRT	---	---	---	---	10-20	---	---
low sagebrush	ARAR8	---	15-25	15-25	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	---	5-15	---	5-10	---
Range site number		025XY009NV	025XY017NV	025XY017NV	025XY009NV	025XY027NV	025XY007NV	none
Potential production (lb/acre):								
Favorable years		1300	900	900	1300	1300	2300	
Normal years		900	700	700	900	900	1400	
Unfavorable years		700	400	400	700	500	900	

1921--Lerrow-Quarz-Rugar association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Lerrow	Quarz	Rugar	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	40-60	2-5	15-30	30-50	40-60	30-40	---
Nevada bluegrass	PONE3	2-8	2-5	---	---	2-8	2-5	40-60
Thurber needlegrass	STTH2	---	2-8	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	2-8	5-10	---	---	2-8	2-10	2-8
bluebunch wheatgrass	AGSP	5-15	50-60	---	15-30	5-15	15-30	---
bluegrass	POA++	---	---	---	2-10	---	---	---
bulbous oniongrass	MEBU	---	---	2-8	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
mountain brome	BRCA5	---	---	10-20	---	---	---	---
sedge	CAREX	---	---	---	---	---	---	2-8
slender wheatgrass	AGTR	---	---	2-8	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
lupine	LUPIN	---	---	10-15	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
wyethia	WYETH	---	---	20-30	---	---	---	---
antelope bitterbrush	PUTR2	---	2-10	---	2-5	---	5-10	---
basin big sagebrush	ARTRT	10-20	---	---	---	10-20	---	---
low sagebrush	ARAR8	---	---	---	15-25	---	---	---
mountain big sagebrush	ARVA2	---	5-15	---	---	---	10-20	---

Range site number	025XY027NV	025XY009NV	025XY047NV	025XY017NV	025XY027NV	025XY012NV	025XY006NV
Potential production (lb/acre):							
Favorable years	1300	1300	2000	900	1300	1400	2000
Normal years	900	900	1500	700	900	1000	1300
Unfavorable years	500	700	1000	400	500	700	800

1931--Tweener-Cleavage-Reluctan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Tweener	Cleavage	Reluctan	Inclusion 1	Inclusion 2
Idaho fescue	FEID	15-30	30-50	30-40	---	---
Nevada bluegrass	PONE3	---	---	2-5	5-10	---
Thurber needlegrass	STTH2	2-5	---	---	---	5-15
basin wildrye	ELCI2	---	---	2-10	60-70	2-5
bluebunch wheatgrass	AGSP	10-20	15-30	15-30	---	60-80
bluegrass	POA++	---	2-10	---	---	---
mat muhly	MURI	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	5-15
antelope bitterbrush	PUTR2	20-40	2-5	5-10	---	1-5
basin big sagebrush	ARTRT	---	---	---	5-10	---
low sagebrush	ARAR8	---	15-25	---	---	---
mountain big sagebrush	ARVA2	5-10	---	10-20	---	---
Range site number		025XY007NV	025XY017NV	025XY012NV	025XY003NV	025XY015NV
Potential production (lb/acre):						
Favorable years		2300	900	1400	4500	1000
Normal years		1400	700	1000	3500	700
Unfavorable years		900	400	700	2000	500

1932--Tweener-Sumine-Cleavage association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Tweener	Sumine	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	2-5	---	---	---
Cusick bluegrass	POCU3	---	---	---	---	5-10	---	---
Idaho fescue	FEID	15-30	2-5	30-50	2-10	50-65	---	---
Nevada bluegrass	PONE3	---	2-5	---	2-5	---	5-10	40-60
Thurber needlegrass	STTH2	2-5	2-8	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	---	5-10	---	---	---	60-70	2-8
bluebunch wheatgrass	AGSP	10-20	50-60	15-30	2-5	2-5	---	---
bluegrass	POA++	---	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
mountain brome	BRCA5	---	---	---	5-15	---	---	---
sedge	CAREX	---	---	---	---	---	---	2-8
slender wheatgrass	AGTR	---	---	---	5-15	---	---	---
spike-fescue	LEKI2	---	---	---	2-10	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---	---
antelope bitterbrush	PUTR2	20-40	2-10	2-5	1-5	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
common chokecherry	PRVI	---	---	---	1-5	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	5-10	5-15	---	5-15	2-8	---	---
snowberry	SYMPH	---	---	---	2-15	---	---	---

Range site number	025XY007NV	025XY009NV	025XY017NV	025XY004NV	025XY010NV	025XY003NV	025XY006NV
Potential production (lb/acre):							
Favorable years	2300	1300	900	2800	1200	4500	2000
Normal years	1400	900	700	1800	800	3500	1300
Unfavorable years	900	700	400	1200	600	2000	800

1933--Tweener-Pequop-Cleavage association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Tweener	Pequop	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	15-30	30-40	30-50	---	40-60	15-25	---
Nevada bluegrass	PONE3	---	2-5	---	---	2-8	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	2-8	---
Thurber needlegrass	STTH2	2-5	---	---	5-15	---	2-8	---
basin wildrye	ELCI2	---	2-10	---	2-5	2-8	---	---
bluebunch wheatgrass	AGSP	10-20	15-30	15-30	60-80	5-15	10-20	---
bluegrass	POA++	---	---	2-10	---	---	---	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	5-15	---	---	---
antelope bitterbrush	PUTR2	20-40	5-10	2-5	1-5	---	5-10	---
basin big sagebrush	ARTRT	---	---	---	---	10-20	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	25-35	---
mountain big sagebrush	ARVA2	5-10	10-20	---	---	---	---	---

Range site number	025XY007NV	025XY012NV	025XY017NV	025XY015NV	025XY027NV	025XY051NV	none
Potential production (lb/acre):							
Favorable years	2300	1400	900	1000	1300	500	
Normal years	1400	1000	700	700	900	300	
Unfavorable years	900	700	400	500	500	200	

1950--McIvey-McIvey, very cobbly-Tusel association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		McIvey	McIvey	Tusel	Inclusion 1	Inclusion 2	Inclusion 3
Columbia needlegrass	STNE3	2-5	2-5	2-5	2-8	---	---
Idaho fescue	FEID	2-10	2-10	2-10	---	2-5	15-30
Letterman needlegrass	STLE4	---	---	---	2-5	---	---
Nevada bluegrass	PONE3	2-5	2-5	2-5	---	2-5	---
Thurber needlegrass	STTH2	---	---	---	---	2-8	2-5
basin wildrye	ELCI2	---	---	---	---	5-10	---
bluebunch wheatgrass	AGSP	2-5	2-5	2-5	---	50-60	10-20
mountain brome	BRCA5	5-15	5-15	5-15	5-10	---	---
slender wheatgrass	AGTR	5-15	5-15	5-15	5-10	---	---
spike-fescue	LEKI2	2-10	2-10	2-10	---	---	---
Utah serviceberry	AMUT	1-5	1-5	1-5	---	---	---
antelope bitterbrush	PUTR2	1-5	1-5	1-5	---	2-10	20-40
common chokecherry	PRVI	1-5	1-5	1-5	---	---	---
mountain big sagebrush	ARVA2	5-15	5-15	5-15	---	5-15	5-10
quaking aspen	POTR5	---	---	---	50-60	---	---
snowberry	SYMPH	2-15	2-15	2-15	---	---	---
willow	SALIX	---	---	---	1-8	---	---
Range site number		025XY004NV	025XY004NV	025XY004NV	025XY002NV	025XY009NV	025XY007NV
Potential production (lb/acre):							
Favorable years		2800	2800	2800	1800	1300	2300
Normal years		1800	1800	1800	1300	900	1400
Unfavorable years		1200	1200	1200	900	700	900

1980--Thwoop-Trunk-Pequop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Thwoop	Trunk	Pequop	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	---	30-40	---	30-50	---	---
Nevada bluegrass	PONE3	---	---	2-5	---	---	---	5-10
Sandberg bluegrass	POSE	---	2-5	---	---	---	2-8	---
Thurber needlegrass	STTH2	10-20	15-25	---	---	---	15-30	---
Webber ricegrass	STWE	---	---	---	---	---	2-8	---
basin wildrye	ELCI2	2-8	---	2-10	---	---	---	60-70
bluebunch wheatgrass	AGSP	20-35	25-40	15-30	---	15-30	20-40	---
bluegrass	POA++	2-10	---	---	---	2-10	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	15-25	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	---	5-10	---	2-5	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
big sagebrush	ARTR2	10-20	---	---	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	15-25	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	---	---	---
sagebrush	ARTEM	---	---	---	---	---	20-30	---

Range site number	025XY014NV	025XY019NV	025XY012NV	none	025XY017NV	025XY018NV	025XY003NV
Potential production (lb/acre):							
Favorable years	1000	800	1400		900	800	4500
Normal years	800	600	1000		700	600	3500
Unfavorable years	600	400	700		400	400	2000

2000--Alyan-Cotant-Akler association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Alyan	Cotant	Akler	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-40	30-50	---	---	---	---	---
Nevada bluegrass	PONE3	2-5	---	---	---	---	5-10	5-10
Sandberg bluegrass	POSE	---	---	2-8	---	---	---	---
Thurber needlegrass	STTH2	---	---	15-30	5-15	---	---	---
Webber ricegrass	STWE	---	---	2-8	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
basin wildrye	ELCI2	2-10	---	---	30-50	---	---	60-70
bluebunch wheatgrass	AGSP	15-30	15-30	20-40	5-15	---	---	---
bluegrass	POA++	---	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	2-8
sedge	CAREX	---	---	---	---	---	5-10	---
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
tufted hairgrass	DECE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	5-10	2-5	---	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
big sagebrush	ARTR2	---	---	---	10-20	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	10-20	---	---	---	---	---	---
sagebrush	ARTEM	---	---	20-30	---	---	---	---

Range site number	025XY012NV	025XY017NV	025XY018NV	025XY013NV	none	025XY005NV	025XY003NV
Potential production (lb/acre):							
Favorable years	1400	900	800	1000		3000	4500
Normal years	1000	700	600	800		1700	3500
Unfavorable years	700	400	400	500		1000	2000

2001--Alyan, steep-Bregar-Alyan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Alyan	Bregar	Alyan	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Cusick bluegrass	POCU3	---	---	---	---	5-10	---	---
Idaho fescue	FEID	---	---	---	---	50-65	5-30	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	5-10
Sandberg bluegrass	POSE	---	2-8	---	---	---	---	---
Thurber needlegrass	STTH2	10-20	15-30	10-20	---	---	---	---
Webber ricegrass	STWE	---	2-8	---	---	---	---	---
basin wildrye	ELCI2	2-8	---	2-8	---	---	---	60-70
bluebunch wheatgrass	AGSP	20-35	20-40	20-35	---	2-5	---	---
bluegrass	POA++	2-10	---	2-10	---	---	5-15	---
mat muhly	MURI	---	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	---	2-8
goldenweed	HAPLO2	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	---	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	5-10
big sagebrush	ARTR2	10-20	---	10-20	---	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	2-8	---	---
sagebrush	ARTEM	---	20-30	---	---	---	30-35	---

Range site number	025XY014NV	025XY018NV	025XY014NV	none	025XY010NV	025XY024NV	025XY003NV
Potential production (lb/acre):							
Favorable years	1000	800	1000		1200	400	4500
Normal years	800	600	800		800	275	3500
Unfavorable years	600	400	600		600	150	2000

2002--Alyan, moderately steep-Alyan-Quarz association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Alyan	Alyan	Quarz	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	40-60	40-60	2-5	30-50	---	30-40	---
Nevada bluegrass	PONE3	2-8	2-8	2-5	---	5-10	2-5	---
Thurber needlegrass	STTH2	---	---	2-8	---	---	---	5-15
basin wildrye	ELCI2	2-8	2-8	5-10	---	60-70	2-10	2-5
bluebunch wheatgrass	AGSP	5-15	5-15	50-60	15-30	---	15-30	60-80
bluegrass	POA++	---	---	---	2-10	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	5-15
antelope bitterbrush	PUTR2	---	---	2-10	2-5	---	5-10	1-5
basin big sagebrush	ARTRT	10-20	10-20	---	---	5-10	---	---
low sagebrush	ARAR8	---	---	---	15-25	---	---	---
mountain big sagebrush	ARVA2	---	---	5-15	---	---	10-20	---

Range site number	025XY027NV	025XY027NV	025XY009NV	025XY017NV	025XY003NV	025XY012NV	025XY015NV
Potential production (lb/acre):							
Favorable years	1300	1300	1300	900	4500	1400	1000
Normal years	900	900	900	700	3500	1000	700
Unfavorable years	500	500	700	400	2000	700	500

2003--Alyan-Deepeek-Susie Creek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Alyan	Deepeek	Susie Creek	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	2-5	---	---	---
Thurber needlegrass	STTH2	10-20	15-25	10-20	15-25	5-15	5-15	---
basin wildrye	ELCI2	2-8	---	2-8	---	2-5	2-5	---
bluebunch wheatgrass	AGSP	20-35	25-40	20-35	25-40	60-80	60-80	---
bluegrass	POA++	2-10	---	2-10	---	---	---	---
Wyoming big sagebrush	ARTRW	---	15-25	---	15-25	5-15	5-15	---
antelope bitterbrush	PUTR2	2-8	---	2-8	---	1-5	1-5	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	---	10-20	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
Range site number		025XY014NV	025XY019NV	025XY014NV	025XY019NV	025XY015NV	025XY015NV	none
Potential production (lb/acre):								
Favorable years		1000	800	1000	800	1000	1000	
Normal years		800	600	800	600	700	700	
Unfavorable years		600	400	600	400	500	500	

2004--Alyan, cobbly loam-Ninemile-Alyan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Alyan	Ninemile	Alyan	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	30-40	30-50	---	---	---	---	---
Nevada bluegrass	PONE3	2-5	---	---	---	5-10	5-10	---
Thurber needlegrass	STTH2	---	---	10-20	10-20	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	---	---
basin wildrye	ELCI2	2-10	---	2-8	2-8	---	60-70	---
bluebunch wheatgrass	AGSP	15-30	15-30	20-35	20-35	---	---	---
bluegrass	POA++	---	2-10	2-10	2-10	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
sedge	CAREX	---	---	---	---	5-10	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
tufted hairgrass	DECE	---	---	---	---	30-60	---	---
Sierra clover	TRWO	---	---	---	---	2-5	---	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	5-10	2-5	2-8	2-8	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	---	10-20	10-20	---	---	---
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	10-20	---	---	---	---	---	---

Range site number	025XY012NV	025XY017NV	025XY014NV	025XY014NV	025XY005NV	025XY003NV	none
Potential production (lb/acre):							
Favorable years	1400	900	1000	1000	3000	4500	
Normal years	1000	700	800	800	1700	3500	
Unfavorable years	700	400	600	600	1000	2000	

2005--Alyan-Graley-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Alyan	Graley	Rock outcrop	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	---	---	---	---
Idaho fescue	FEID	---	30-40	---	---	---
Indian ricegrass	ORHY	---	---	---	15-30	---
Nevada bluegrass	PONE3	---	2-5	---	---	5-10
Thurber needlegrass	STTH2	10-20	---	---	---	---
basin wildrye	ELCI2	2-8	2-10	---	2-8	60-70
bluebunch wheatgrass	AGSP	20-35	15-30	---	---	---
bluegrass	POA++	2-10	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	5-10	---
mat muhly	MURI	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	15-30	---
antelope bitterbrush	PUTR2	2-8	5-10	---	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	5-10
big sagebrush	ARTR2	10-20	---	---	---	---
black sagebrush	ARARN	---	---	---	10-20	---
mountain big sagebrush	ARVA2	---	10-20	---	---	---
spiny hopsage	GRSP	---	---	---	2-5	---
Range site number		025XY014NV	025XY012NV	none	025XY025NV	025XY003NV
Potential production (lb/acre):						
Favorable years		1000	1400		500	4500
Normal years		800	1000		350	3500
Unfavorable years		600	700		200	2000

2171--Deseed-Reluctan-Cleavage association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Deseed	Reluctan	Cleavage	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	30-40	30-50	30-50	---	---	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	---	---
Thurber needlegrass	STTH2	10-20	---	---	---	10-20	---	---
basin wildrye	ELCI2	2-8	2-10	---	---	2-8	---	---
bluebunch wheatgrass	AGSP	20-35	15-30	15-30	15-30	20-35	---	---
bluegrass	POA++	2-10	---	2-10	2-10	2-10	---	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	5-10	2-5	2-5	2-8	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	---	---	---	10-20	---	---
low sagebrush	ARAR8	---	---	15-25	15-25	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	---	---	---
Range site number		025XY014NV	025XY012NV	025XY017NV	025XY017NV	025XY014NV	none	none
Potential production (lb/acre):								
Favorable years		1000	1400	900	900	1000		
Normal years		800	1000	700	700	800		
Unfavorable years		600	700	400	400	600		

2173--Deseed-Quarz association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Deseed	Quarz	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	---	30-40
Nevada bluegrass	PONE3	---	---	---	---	---	2-5
Thurber needlegrass	STTH2	10-20	10-20	---	10-20	---	---
basin wildrye	ELCI2	2-8	2-8	---	2-8	---	2-10
bluebunch wheatgrass	AGSP	20-35	20-35	---	20-35	---	15-30
bluegrass	POA++	2-10	2-10	---	2-10	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	2-8	---	2-8	---	5-10
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	10-20	---	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	10-20
Range site number		025XY014NV	025XY014NV	none	025XY014NV	none	025XY012NV
Potential production (lb/acre):							
Favorable years		1000	1000		1000		1400
Normal years		800	800		800		1000
Unfavorable years		600	600		600		700

2205--Coltroop-Snowmore association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Coltroop	Snowmore	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-8	2-8	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-30	15-30	15-25	15-25
Webber ricegrass	STWE	---	---	2-8	2-8	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	20-40	20-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	---	---	15-25	15-25
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
sagebrush	ARTEM	---	---	20-30	20-30	---	---
Range site number		025XY019NV	025XY019NV	025XY018NV	025XY018NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2206--Coltroop-Vanwyper association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Coltroop	Vanwyper	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	none
Potential production (lb/acre):						
Favorable years		800	800	800	800	
Normal years		600	600	600	600	
Unfavorable years		400	400	400	400	

2310--Bulake-Deunah-Bulake, very cobbly association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bulake	Deunah	Bulake	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	30-50	30-50	40-60	---	---	40-60
Nevada bluegrass	PONE3	---	---	---	2-8	---	---	2-8
basin wildrye	ELCI2	---	---	---	2-8	---	---	2-8
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	5-15	---	---	5-15
bluegrass	POA++	2-10	2-10	2-10	---	---	---	---
antelope bitterbrush	PUTR2	2-5	2-5	2-5	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	10-20	---	---	10-20
low sagebrush	ARAR8	15-25	15-25	15-25	---	---	---	---
Range site number		025XY017NV	025XY017NV	025XY017NV	025XY027NV	none	none	025XY027NV
Potential production (lb/acre):								
Favorable years		900	900	900	1300			1300
Normal years		700	700	700	900			900
Unfavorable years		400	400	400	500			500

2311--Bulake-Hatpeak-Petan association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bulake	Hatpeak	Petan	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	40-60	---	30-40	---	---	---
Nevada bluegrass	PONE3	---	2-8	---	2-5	40-60	---	---
Sandberg bluegrass	POSE	---	---	2-10	---	---	---	---
Thurber needlegrass	STTH2	---	---	10-20	---	---	5-15	5-15
Webber ricegrass	STWE	---	---	5-10	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	20-40	---	---
basin wildrye	ELCI2	---	2-8	---	2-10	2-8	2-5	2-5
bluebunch wheatgrass	AGSP	15-30	5-15	20-30	15-30	---	60-80	60-80
bluegrass	POA++	2-10	---	---	---	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
meadow barley	HOBR2	---	---	---	---	2-5	---	---
sedge	CAREX	---	---	---	---	2-8	---	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
balsamroot	BALSA	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	5-15	5-15
antelope bitterbrush	PUTR2	2-5	---	---	5-10	---	1-5	1-5
basin big sagebrush	ARTRT	---	10-20	---	---	---	---	---
low sagebrush	ARAR8	15-25	---	25-35	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	10-20	---	---	---

Range site number	025XY017NV	025XY027NV	025XY022NV	025XY012NV	025XY006NV	025XY015NV	025XY015NV
Potential production (lb/acre):							
Favorable years	900	1300	600	1400	2000	1000	1000
Normal years	700	900	400	1000	1300	700	700
Unfavorable years	400	500	250	700	800	500	500

2505--Buffaran-Zevadez association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Buffaran	Zevadez	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	---	15-30	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	---	5-15
basin wildrye	ELCI2	---	---	---	---	2-8	2-5
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	---	60-80
bottlebrush squirreltail	SIHY	---	---	---	---	5-10	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-30	5-15
antelope bitterbrush	PUTR2	---	---	---	---	2-8	1-5
black sagebrush	ARARN	---	---	---	---	10-20	---
spiny hopsage	GRSP	---	---	---	---	2-5	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY025NV	025XY015NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	500	1000
Normal years		600	600	600	600	350	700
Unfavorable years		400	400	400	400	200	500

2511--Bilbo-Alley-Deepeek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bilbo	Alley	Deepeek	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	---	---	---	15-30
Sandberg bluegrass	POSE	---	2-5	---	---	---	2-5	---
Thurber needlegrass	STTH2	5-15	15-25	5-15	---	---	15-25	---
basin wildrye	ELCI2	2-5	---	2-5	---	---	---	2-8
bluebunch wheatgrass	AGSP	60-80	25-40	60-80	---	---	25-40	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	---	5-10
Wyoming big sagebrush	ARTRW	5-15	15-25	5-15	---	---	15-25	15-30
antelope bitterbrush	PUTR2	1-5	---	1-5	---	---	---	2-8
black sagebrush	ARARN	---	---	---	---	---	---	10-20
spiny hopsage	GRSP	---	---	---	---	---	---	2-5
Range site number		025XY015NV	025XY019NV	025XY015NV	none	none	025XY019NV	025XY025NV
Potential production (lb/acre):								
Favorable years		1000	800	1000			800	500
Normal years		700	600	700			600	350
Unfavorable years		500	400	500			400	200

2514--Bilbo-Susie Creek-Buffaran association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Bilbo	Susie Creek	Buffaran	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Indian ricegrass	ORHY	---	---	---	---	---	---	15-30
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	---	---	2-5	---
Thurber needlegrass	STTH2	5-15	10-20	15-25	10-20	10-20	15-25	---
basin wildrye	ELCI2	2-5	2-8	---	2-8	2-8	---	2-8
bluebunch wheatgrass	AGSP	60-80	20-35	25-40	20-35	20-35	25-40	---
bluegrass	POA++	---	2-10	---	2-10	2-10	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	---	5-10
Wyoming big sagebrush	ARTRW	5-15	---	15-25	---	---	15-25	15-30
antelope bitterbrush	PUTR2	1-5	2-8	---	2-8	2-8	---	2-8
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	---	10-20	---	10-20	10-20	---	---
black sagebrush	ARARN	---	---	---	---	---	---	10-20
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
spiny hopsage	GRSP	---	---	---	---	---	---	2-5

Range site number	025XY015NV	025XY014NV	025XY019NV	025XY014NV	025XY014NV	025XY019NV	025XY025NV
Potential production (lb/acre):							
Favorable years	1000	1000	800	1000	1000	800	500
Normal years	700	800	600	800	800	600	350
Unfavorable years	500	600	400	600	600	400	200

2521--Dewar-Chiara-Chiara, very cobbly association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Dewar	Chiara	Chiara	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	none
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	
Normal years		600	600	600	600	600	
Unfavorable years		400	400	400	400	400	

2522--Dewar-Sodhouse association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Dewar	Sodhouse	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	40-60	---	---	20-30	---
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	---	---
Thurber needlegrass	STTH2	20-40	---	15-25	15-25	---	---
Webber ricegrass	STWE	2-8	---	---	---	---	---
bluebunch wheatgrass	AGSP	---	---	25-40	25-40	---	---
bottlebrush squirreltail	SIHY	2-5	2-8	---	---	5-10	---
desert globemallow	SPAM2	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	20-30	---	15-25	15-25	---	---
bud sagebrush	ARSP5	---	2-8	---	---	---	---
sickle saltbush	ATFA	---	---	---	---	50-60	---
spiny hopsage	GRSP	2-5	---	---	---	---	---
winterfat	EULA5	---	20-25	---	---	---	---
Range site number		023XY006NV	024XY059NV	025XY019NV	025XY019NV	024XY012NV	none
Potential production (lb/acre):							
Favorable years		800	700	800	800	700	
Normal years		600	500	600	600	400	
Unfavorable years		400	300	400	400	200	

2531--Clurde Variant-Clurde-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Clurde Variant	Clurde	Rock outcrop	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	---	2-10	15-25	15-25	15-25
Webber ricegrass	STWE	---	---	---	2-5	---	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	---	70-80	25-40	25-40	25-40
sedge	CAREX	---	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	---	---	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	none	025XY050NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800		800	800	800	800
Normal years		600	600		600	600	600	600
Unfavorable years		400	400		400	400	400	400

2541--Kelk very fine sandy loam, occasionally flooded, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Kelk	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	---	5-10	---
Sandberg bluegrass	POSE	---	---	2-5
Thurber needlegrass	STTH2	---	---	15-25
basin wildrye	ELCI2	55-65	60-70	---
bluebunch wheatgrass	AGSP	---	---	25-40
creeping wildrye	ELTR3	5-15	---	---
mat muhly	MURI	---	2-8	---
streambank wheatgrass	AGDAR	---	2-8	---
western wheatgrass	AGSM	5-15	---	---
Wyoming big sagebrush	ARTRW	---	---	15-25
basin big sagebrush	ARTRT	10-15	5-10	---
black greasewood	SAVE4	2-8	---	---
Range site number		024XY006NV	025XY003NV	025XY019NV
Potential production (lb/acre):				
Favorable years		1500	4500	800
Normal years		1100	3500	600
Unfavorable years		600	2000	400

2545--Kelk-Clurde association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Kelk	Clurde	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	---
basin wildrye	ELCI2	---	---	---	---	55-65
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	---
creeping wildrye	ELTR3	---	---	---	---	5-15
western wheatgrass	AGSM	---	---	---	---	5-15
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---
basin big sagebrush	ARTRT	---	---	---	---	10-15
black greasewood	SAVE4	---	---	---	---	2-8
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	024XY006NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	1500
Normal years		600	600	600	600	1100
Unfavorable years		400	400	400	400	600

2555--Piline silty clay loam

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Piline	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	15-25	5-15	---
Sandberg bluegrass	POSE	---	---	2-5
Thurber needlegrass	STTH2	---	---	15-25
bluebunch wheatgrass	AGSP	---	---	25-40
mat muhly	MURI	50-70	20-30	---
povertyweed	IVAX	2-5	2-5	---
Wyoming big sagebrush	ARTRW	---	---	15-25
mountain silver sagebrush	ARCAV	2-5	50-65	---
Range site number		025XY049NV	025XY048NV	025XY019NV
Potential production (lb/acre):				
Favorable years		450	350	800
Normal years		325	250	600
Unfavorable years		250	150	400

2560--McCleary silt loam, occasionally flooded

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		McCleary	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	5-15	---	15-25	---
Sandberg bluegrass	POSE	---	2-5	---	2-5
Thurber needlegrass	STTH2	---	15-25	---	15-25
bluebunch wheatgrass	AGSP	---	25-40	---	25-40
mat muhly	MURI	20-30	---	50-70	---
povertyweed	IVAX	2-5	---	2-5	---
Wyoming big sagebrush	ARTRW	---	15-25	---	15-25
mountain silver sagebrush	ARCAV	50-65	---	2-5	---
Range site number		025XY048NV	025XY019NV	025XY049NV	025XY019NV
Potential production (lb/acre):					
Favorable years		350	800	450	800
Normal years		250	600	325	600
Unfavorable years		150	400	250	400

2561--McCleary cobbly silt loam, drained, rarely flooded

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		McCleary	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	---	5-15	---
Sandberg bluegrass	POSE	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	---	15-25
bluebunch wheatgrass	AGSP	25-40	---	25-40
mat muhly	MURI	---	20-30	---
povertyweed	IVAX	---	2-5	---
Wyoming big sagebrush	ARTRW	15-25	---	15-25
mountain silver sagebrush	ARCAV	---	50-65	---
Range site number		025XY019NV	025XY048NV	025XY019NV
Potential production (lb/acre):				
Favorable years		800	350	800
Normal years		600	250	600
Unfavorable years		400	150	400

2571--Chiara, cobbly-Chiara-Chiara, very cobbly association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Chiara	Chiara	Chiara	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2572--Chiara-Chiara, moderately eroded association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Chiara	Chiara	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	2-10
Webber ricegrass	STWE	---	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	70-80
sedge	CAREX	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY050NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2573--Chiara, very cobbly-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Chiara	Chiara	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	2-10	15-25	---
Webber ricegrass	STWE	---	---	---	2-5	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	70-80	25-40	---
sedge	CAREX	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	15-25	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY050NV	025XY019NV	none
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	
Normal years		600	600	600	600	600	
Unfavorable years		400	400	400	400	400	

2575--Chiara-Dacker-Shalake association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Chiara	Dacker	Shalake	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	2-10
Webber ricegrass	STWE	---	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	70-80
sedge	CAREX	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY050NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2577--Chiara-Orovada association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Chiara	Orovada	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	---	5-15	---	30-40
Sandberg bluegrass	POSE	---	2-8	---	---
Thurber needlegrass	STTH2	40-50	15-25	40-50	---
basin wildrye	ELCI2	---	---	---	2-8
bluebunch wheatgrass	AGSP	2-10	---	2-10	---
bottlebrush squirreltail	SIHY	---	2-5	---	---
needleandthread	STCO4	---	---	---	5-15
thickspike wheatgrass	AGDA	---	---	---	5-10
cansigre	RUHY	---	---	---	1-3
globemallow	SPHAE	1-3	1-2	1-3	---
lemon scurfpea	PSLA	---	---	---	1-3
tufted eveningprimrose	OECE2	---	---	---	1-3
Wyoming big sagebrush	ARTRW	25-35	20-35	25-35	---
basin big sagebrush	ARTRT	---	---	---	25-30
fourwing saltbush	ATCA2	---	---	---	2-8
spiny hopsage	GRSP	2-5	5-20	2-5	2-8
Range site number		024XY005NV	024XY020NV	024XY005NV	024XY001NV
Potential production (lb/acre):					
Favorable years		800	700	800	800
Normal years		600	450	600	500
Unfavorable years		400	300	400	300

2600--Shalake-Chiara-Shalake, gently sloping association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Shalake	Chiara	Shalake	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	2-10	15-25	15-25
Webber ricegrass	STWE	---	---	---	---	2-5	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	70-80	25-40	25-40
sedge	CAREX	---	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY050NV	025XY019NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	800	800	800	800	800
Normal years		600	600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400	400

2611--Dacker-Hunnton association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Dacker	Hunnton	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	800
Normal years		600	600	600	600	600
Unfavorable years		400	400	400	400	400

2612--Dacker-Zevadez association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Dacker	Zevadez	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	800
Normal years		600	600	600	600	600
Unfavorable years		400	400	400	400	400

2615--Dacker-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Dacker	Chiara	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	2-10
Webber ricegrass	STWE	---	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	70-80
sedge	CAREX	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY050NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2621--Gochea-Susie Creek-Carstump association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Gochea	Susie Creek	Carstump	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	2-5	---	---
Thurber needlegrass	STTH2	10-20	10-20	10-20	10-20	15-25	---	---
basin wildrye	ELCI2	2-8	2-8	2-8	2-8	---	---	---
bluebunch wheatgrass	AGSP	20-35	20-35	20-35	20-35	25-40	---	---
bluegrass	POA++	2-10	2-10	2-10	2-10	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	15-25	---	---
antelope bitterbrush	PUTR2	2-8	2-8	2-8	2-8	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	10-20	10-20	10-20	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
Range site number		025XY014NV	025XY014NV	025XY014NV	025XY014NV	025XY019NV	none	none
Potential production (lb/acre):								
Favorable years		1000	1000	1000	1000	800		
Normal years		800	800	800	800	600		
Unfavorable years		600	600	600	600	400		

2641--Olac-Snowmore association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Olac	Snowmore	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-8	2-5	2-5	2-5	---	---
Thurber needlegrass	STTH2	15-30	15-25	15-25	15-25	---	2-10
Webber ricegrass	STWE	2-8	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	20-40	25-40	25-40	25-40	---	70-80
sedge	CAREX	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	15-25	15-25	15-25	---	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
sagebrush	ARTEM	20-30	---	---	---	---	---
Range site number		025XY018NV	025XY019NV	025XY019NV	025XY019NV	none	025XY050NV
Potential production (lb/acre):							
Favorable years		800	800	800	800		800
Normal years		600	600	600	600		600
Unfavorable years		400	400	400	400		400

2650--Wieland-Bartome-Zevadez association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Wieland	Bartome	Zevadez	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	800
Normal years		600	600	600	600	600
Unfavorable years		400	400	400	400	400

2651--Wieland-Buffaran association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Wieland	Buffaran	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	---	15-30	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	---	---
basin wildrye	ELCI2	---	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	5-10	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-30	---
antelope bitterbrush	PUTR2	---	---	---	---	2-8	---
black sagebrush	ARARN	---	---	---	---	10-20	---
spiny hopsage	GRSP	---	---	---	---	2-5	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY025NV	none
Potential production (lb/acre):							
Favorable years		800	800	800	800	500	
Normal years		600	600	600	600	350	
Unfavorable years		400	400	400	400	200	

2652--Wieland-Dacker-Zevadez association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Wieland	Dacker	Zevadez	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-8	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-30	10-20	15-25
Webber ricegrass	STWE	---	---	---	---	2-8	---	---
basin wildrye	ELCI2	---	---	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	20-40	20-35	25-40
bluegrass	POA++	---	---	---	---	---	2-10	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---	---	15-25
antelope bitterbrush	PUTR2	---	---	---	---	---	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	10-20	---
early sagebrush	ARLO9	---	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
sagebrush	ARTEM	---	---	---	---	20-30	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY018NV	025XY014NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	800	800	800	1000	800
Normal years		600	600	600	600	600	800	600
Unfavorable years		400	400	400	400	400	600	400

2655--Wieland-Gumble-Bilbo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Wieland	Gumble	Bilbo	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	---	40-60	---
Nevada bluegrass	PONE3	---	---	---	---	---	2-8	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---	---	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	5-15	---	10-20
basin wildrye	ELCI2	---	---	---	---	2-5	2-8	2-8
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	60-80	5-15	20-35
bluegrass	POA++	---	---	---	---	---	---	2-10
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	5-15	---	---
antelope bitterbrush	PUTR2	---	---	---	---	1-5	---	2-8
basin big sagebrush	ARTRT	---	---	---	---	---	10-20	---
big sagebrush	ARTR2	---	---	---	---	---	---	10-20
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY015NV	025XY027NV	025XY014NV
Potential production (lb/acre):								
Favorable years		800	800	800	800	1000	1300	1000
Normal years		600	600	600	600	700	900	800
Unfavorable years		400	400	400	400	500	500	600

2656--Wieland-Hunnton-Thwoop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Wieland	Hunnton	Thwoop	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10	---
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	10-20	15-25	15-25	---	15-25
basin wildrye	ELCI2	---	---	2-8	---	---	60-70	---
bluebunch wheatgrass	AGSP	25-40	25-40	20-35	25-40	25-40	---	25-40
bluegrass	POA++	---	---	2-10	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
Wyoming big sagebrush	ARTRW	15-25	15-25	---	15-25	15-25	---	15-25
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	---	10-20	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
Range site number		025XY019NV	025XY019NV	025XY014NV	025XY019NV	025XY019NV	025XY003NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	1000	800	800	4500	800
Normal years		600	600	800	600	600	3500	600
Unfavorable years		400	400	600	400	400	2000	400

2658--Wieland very gravelly loam, 15 to 30 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Wieland	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):					
Favorable years		800	800	800	800
Normal years		600	600	600	600
Unfavorable years		400	400	400	400

2666--Puett-Orovada association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Puett	Orovada	Inclusion 1
Indian ricegrass	ORHY	15-30	5-15	---
Sandberg bluegrass	POSE	---	2-8	---
Thurber needlegrass	STTH2	---	15-25	40-50
basin wildrye	ELCI2	2-8	---	---
bluebunch wheatgrass	AGSP	---	---	2-10
bottlebrush squirreltail	SIHY	5-10	2-5	---
globemallow	SPHAE	---	1-2	1-3
Wyoming big sagebrush	ARTRW	15-30	20-35	25-35
antelope bitterbrush	PUTR2	2-8	---	---
black sagebrush	ARARN	10-20	---	---
spiny hopsage	GRSP	2-5	5-20	2-5
Range site number		025XY025NV	024XY020NV	024XY005NV
Potential production (lb/acre):				
Favorable years		500	700	800
Normal years		350	450	600
Unfavorable years		200	300	400

2667--Puett-Rock outcrop-Clurde association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Puett	Rock outcrop	Clurde	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	15-30	---	---	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	---	---	15-25	15-25	15-25	15-25
basin wildrye	ELCI2	2-8	---	---	---	---	---
bluebunch wheatgrass	AGSP	---	---	25-40	25-40	25-40	25-40
bottlebrush squirreltail	SIHY	5-10	---	---	---	---	---
Wyoming big sagebrush	ARTRW	15-30	---	15-25	15-25	15-25	15-25
antelope bitterbrush	PUTR2	2-8	---	---	---	---	---
black sagebrush	ARARN	10-20	---	---	---	---	---
spiny hopsage	GRSP	2-5	---	---	---	---	---
Range site number		025XY025NV	none	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		500		800	800	800	800
Normal years		350		600	600	600	600
Unfavorable years		200		400	400	400	400

2668--Puett-Yuko-Zevadez association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Puett	Yuko	Zevadez	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-30	---	---	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	2-5	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	---	15-25	15-25	15-25	15-25	---	15-25
basin wildrye	ELCI2	2-8	---	---	---	---	---	---
bluebunch wheatgrass	AGSP	---	25-40	25-40	25-40	25-40	---	25-40
bottlebrush squirreltail	SIHY	5-10	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	15-30	15-25	15-25	15-25	15-25	---	15-25
antelope bitterbrush	PUTR2	2-8	---	---	---	---	---	---
black sagebrush	ARARN	10-20	---	---	---	---	---	---
spiny hopsage	GRSP	2-5	---	---	---	---	---	---
Range site number		025XY025NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	none	025XY019NV
Potential production (lb/acre):								
Favorable years		500	800	800	800	800		800
Normal years		350	600	600	600	600		600
Unfavorable years		200	400	400	400	400		400

2710--Ramires-Bartome-Bilbo association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Ramires	Bartome	Bilbo	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	2-5	---	2-5
Thurber needlegrass	STTH2	10-20	15-25	5-15	15-25	10-20	15-25
basin wildrye	ELCI2	2-8	---	2-5	---	2-8	---
bluebunch wheatgrass	AGSP	20-35	25-40	60-80	25-40	20-35	25-40
bluegrass	POA++	2-10	---	---	---	2-10	---
Wyoming big sagebrush	ARTRW	---	15-25	5-15	15-25	---	15-25
antelope bitterbrush	PUTR2	2-8	---	1-5	---	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	---	---	---	10-20	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY014NV	025XY019NV	025XY015NV	025XY019NV	025XY014NV	025XY019NV
Potential production (lb/acre):							
Favorable years		1000	800	1000	800	1000	800
Normal years		800	600	700	600	800	600
Unfavorable years		600	400	500	400	600	400

2711--Ramires-Bilbo-Buffaran association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Ramires	Bilbo	Buffaran	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	40-60	---
Nevada bluegrass	PONE3	---	---	---	---	2-8	---
Sandberg bluegrass	POSE	---	---	2-5	---	---	2-5
Thurber needlegrass	STTH2	10-20	5-15	15-25	10-20	---	15-25
basin wildrye	ELCI2	2-8	2-5	---	2-8	2-8	---
bluebunch wheatgrass	AGSP	20-35	60-80	25-40	20-35	5-15	25-40
bluegrass	POA++	2-10	---	---	2-10	---	---
Wyoming big sagebrush	ARTRW	---	5-15	15-25	---	---	15-25
antelope bitterbrush	PUTR2	2-8	1-5	---	2-8	---	---
basin big sagebrush	ARTRT	---	---	---	---	10-20	---
big sagebrush	ARTR2	10-20	---	---	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY014NV	025XY015NV	025XY019NV	025XY014NV	025XY027NV	025XY019NV
Potential production (lb/acre):							
Favorable years		1000	1000	800	1000	1300	800
Normal years		800	700	600	800	900	600
Unfavorable years		600	500	400	600	500	400

2741--Wilsor-Wilsor, moderately steep association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Wilsor	Wilsor	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---
Indian ricegrass	ORHY	---	---	15-30	---	---
Nevada bluegrass	PONE3	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---
Thurber needlegrass	STTH2	15-25	15-25	---	10-20	---
basin wildrye	ELCI2	---	---	2-8	2-8	---
bluebunch wheatgrass	AGSP	25-40	25-40	---	20-35	---
bluegrass	POA++	---	---	---	2-10	---
bottlebrush squirreltail	SIHY	---	---	5-10	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-30	---	---
antelope bitterbrush	PUTR2	---	---	2-8	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	10-20	---
black sagebrush	ARARN	---	---	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---
spiny hopsage	GRSP	---	---	2-5	---	---
Range site number		025XY019NV	025XY019NV	025XY025NV	025XY014NV	none
Potential production (lb/acre):						
Favorable years		800	800	500	1000	
Normal years		600	600	350	800	
Unfavorable years		400	400	200	600	

2751--Yuko-Chime-Clurde association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Yuko	Chime	Clurde	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	800	800	800	800	800
Normal years		600	600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400	400

2775--Zevadez-Bartome-Wieland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Zevadez	Bartome	Wieland	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2776--Zevadez-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Zevadez	Chiara	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2777--Zevadez-Wieland-Clurde association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Zevadez	Wieland	Clurde	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	---	---	---	5-15	---	5-15
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	---	15-25	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	---	25-40	---
mat muhly	MURI	---	---	---	20-30	---	20-30
povertyweed	IVAX	---	---	---	2-5	---	2-5
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	15-25	---
mountain silver sagebrush	ARCAV	---	---	---	50-65	---	50-65
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY048NV	025XY019NV	025XY048NV
Potential production (lb/acre):							
Favorable years		800	800	800	350	800	350
Normal years		600	600	600	250	600	250
Unfavorable years		400	400	400	150	400	150

2778--Zevadez-Yuko-Kelk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Zevadez	Yuko	Kelk	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	800	800	800	800	800
Normal years		600	600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400	400

2780--Snowmore, cobbly-Snowmore association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Snowmore	Snowmore	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-8	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-30	---
Webber ricegrass	STWE	---	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	20-40	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
sagebrush	ARTEM	---	---	---	---	20-30	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY018NV	none
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	
Normal years		600	600	600	600	600	
Unfavorable years		400	400	400	400	400	

2781--Snowmore, cobbly-Snowmore, very cobbly-Snowmore association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Snowmore	Snowmore	Snowmore	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	---	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	---	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	none	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800		800	800
Normal years		600	600	600		600	600
Unfavorable years		400	400	400		400	400

2782--Snowmore-Zevadez-Snowmore, cobbly association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Snowmore	Zevadez	Snowmore	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2783--Snowmore-Willhill association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Snowmore	Willhill	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-8	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-30	2-10	15-25
Webber ricegrass	STWE	---	---	---	2-8	2-5	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	20-40	70-80	25-40
sedge	CAREX	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	---	15-25
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
sagebrush	ARTEM	---	---	---	20-30	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY018NV	025XY050NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2790--Old Camp-Troughs-Olac association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Old Camp	Troughs	Olac	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-8	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-30	15-25	---
Webber ricegrass	STWE	---	---	2-8	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	20-40	25-40	---
Wyoming big sagebrush	ARTRW	15-25	15-25	---	15-25	---
early sagebrush	ARLO9	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---
sagebrush	ARTEM	---	---	20-30	---	---
Range site number		025XY019NV	025XY019NV	025XY018NV	025XY019NV	none
Potential production (lb/acre):						
Favorable years		800	800	800	800	
Normal years		600	600	600	600	
Unfavorable years		400	400	400	400	

2801--Bartome-Alley-Clurde association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Bartome	Alley	Clurde	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2802--Bartome-Buffaran association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Bartome	Buffaran	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	10-20	15-25
basin wildrye	ELCI2	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	20-35	25-40
bluegrass	POA++	---	---	---	2-10	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	15-25
antelope bitterbrush	PUTR2	---	---	---	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	10-20	---
mountain big sagebrush	ARVA2	---	---	---	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY014NV	025XY019NV
Potential production (lb/acre):						
Favorable years		800	800	800	1000	800
Normal years		600	600	600	800	600
Unfavorable years		400	400	400	600	400

2803--Bartome-Buffaran-Ramires association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Bartome	Buffaran	Ramires	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	---	40-60
Nevada bluegrass	PONE3	---	---	---	---	---	2-8
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	---	---
Thurber needlegrass	STTH2	15-25	15-25	10-20	15-25	5-15	---
basin wildrye	ELCI2	---	---	2-8	---	2-5	2-8
bluebunch wheatgrass	AGSP	25-40	25-40	20-35	25-40	60-80	5-15
bluegrass	POA++	---	---	2-10	---	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	---	15-25	5-15	---
antelope bitterbrush	PUTR2	---	---	2-8	---	1-5	---
basin big sagebrush	ARTRT	---	---	---	---	---	10-20
big sagebrush	ARTR2	---	---	10-20	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY019NV	025XY019NV	025XY014NV	025XY019NV	025XY015NV	025XY027NV
Potential production (lb/acre):							
Favorable years		800	800	1000	800	1000	1300
Normal years		600	600	800	600	700	900
Unfavorable years		400	400	600	400	500	500

2804--Bartome-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Bartome	Chiara	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	2-10	15-25
Webber ricegrass	STWE	---	---	---	---	2-5	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	70-80	25-40
sedge	CAREX	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY050NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2805--Bartome very fine sandy loam, 0 to 2 percent slopes

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		Bartome	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):				
Favorable years		800	800	800
Normal years		600	600	600
Unfavorable years		400	400	400

2807--Bartome-Coltroop-Zevadez association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Bartome	Coltroop	Zevadez	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2808--Bartome-Susie Creek-Wieland association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Bartome	Susie Creek	Wieland	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	10-20	15-25	15-25	10-20	15-25
basin wildrye	ELCI2	---	2-8	---	---	2-8	---
bluebunch wheatgrass	AGSP	25-40	20-35	25-40	25-40	20-35	25-40
bluegrass	POA++	---	2-10	---	---	2-10	---
Wyoming big sagebrush	ARTRW	15-25	---	15-25	15-25	---	15-25
antelope bitterbrush	PUTR2	---	2-8	---	---	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	---	10-20	---	---	10-20	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY019NV	025XY014NV	025XY019NV	025XY019NV	025XY014NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	1000	800	800	1000	800
Normal years		600	800	600	600	800	600
Unfavorable years		400	600	400	400	600	400

2809--Bartome-Dacker association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Bartome	Dacker	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	2-10
Webber ricegrass	STWE	---	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	70-80
sedge	CAREX	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY050NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

2820--Alley-Vanwyper-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Alley	Vanwyper	Rock outcrop	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Indian ricegrass	ORHY	---	---	---	---	---	15-30	---
Nevada bluegrass	PONE3	---	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---	---
Thurber needlegrass	STTH2	15-25	15-25	---	---	10-20	---	---
basin wildrye	ELCI2	---	---	---	55-65	2-8	2-8	---
bluebunch wheatgrass	AGSP	25-40	25-40	---	---	20-35	---	---
bluegrass	POA++	---	---	---	---	2-10	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	5-10	---
creeping wildrye	ELTR3	---	---	---	5-15	---	---	---
western wheatgrass	AGSM	---	---	---	5-15	---	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	---	---	---	15-30	---
antelope bitterbrush	PUTR2	---	---	---	---	2-8	2-8	---
basin big sagebrush	ARTRT	---	---	---	10-15	---	---	---
big sagebrush	ARTR2	---	---	---	---	10-20	---	---
black greasewood	SAVE4	---	---	---	2-8	---	---	---
black sagebrush	ARARN	---	---	---	---	---	10-20	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	---
spiny hopsage	GRSP	---	---	---	---	---	2-5	---
Range site number		025XY019NV	025XY019NV	none	024XY006NV	025XY014NV	025XY025NV	none
Potential production (lb/acre):								
Favorable years		800	800		1500	1000	500	
Normal years		600	600		1100	800	350	
Unfavorable years		400	400		600	600	200	

2822--Alley-Rock outcrop-Rubble land association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Alley	Rock outcrop	Rubble land	Inclusion 1
Sandberg bluegrass	POSE	2-5	---	---	2-5
Thurber needlegrass	STTH2	15-25	---	---	15-25
bluebunch wheatgrass	AGSP	25-40	---	---	25-40
Wyoming big sagebrush	ARTRW	15-25	---	---	15-25
Range site number		025XY019NV	none	none	025XY019NV
Potential production (lb/acre):					
Favorable years		800			800
Normal years		600			600
Unfavorable years		400			400

3000--Handy-Wilsor-Deseed association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Handy	Wilsor	Deseed	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	---	---	---
Thurber needlegrass	STTH2	10-20	15-25	10-20	5-15	---	10-20
basin wildrye	ELCI2	2-8	---	2-8	2-5	---	2-8
bluebunch wheatgrass	AGSP	20-35	25-40	20-35	60-80	---	20-35
bluegrass	POA++	2-10	---	2-10	---	---	2-10
Wyoming big sagebrush	ARTRW	---	15-25	---	5-15	---	---
antelope bitterbrush	PUTR2	2-8	---	2-8	1-5	---	2-8
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	---	10-20	---	---	10-20
mountain big sagebrush	ARVA2	---	---	---	---	---	---
Range site number		025XY014NV	025XY019NV	025XY014NV	025XY015NV	none	025XY014NV
Potential production (lb/acre):							
Favorable years		1000	800	1000	1000		1000
Normal years		800	600	800	700		800
Unfavorable years		600	400	600	500		600

3010--Relley-Kelk association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		Relley	Kelk	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	20-30	---	---	---
Sandberg bluegrass	POSE	---	2-5	2-5	2-5
Thurber needlegrass	STTH2	---	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	---	25-40	25-40	25-40
bottlebrush squirreltail	SIHY	5-10	---	---	---
Wyoming big sagebrush	ARTRW	---	15-25	15-25	15-25
sickle saltbush	ATFA	50-60	---	---	---
Range site number		024XY012NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):					
Favorable years		700	800	800	800
Normal years		400	600	600	600
Unfavorable years		200	400	400	400

3020--Sodhouse-Chiara association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Sodhouse	Chiara	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	40-60	---	---	---	---	5-15
Sandberg bluegrass	POSE	---	2-5	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	---	15-25	15-25	15-25	15-25	---
bluebunch wheatgrass	AGSP	---	25-40	25-40	25-40	25-40	---
bottlebrush squirreltail	SIHY	2-8	---	---	---	---	5-10
desert globemallow	SPAM2	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	15-25	15-25	15-25	15-25	---
bud sagebrush	ARSP5	2-8	---	---	---	---	20-30
shadscale	ATCO	---	---	---	---	---	30-40
spiny hopsage	GRSP	---	---	---	---	---	2-5
winterfat	EULA5	20-25	---	---	---	---	2-5
Range site number		024XY059NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	024XY002NV
Potential production (lb/acre):							
Favorable years		700	800	800	800	800	750
Normal years		500	600	600	600	600	450
Unfavorable years		300	400	400	400	400	300

3030--Deepeek-Alley association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Deepeek	Alley	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	---	---	15-30
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	5-15	15-25	15-25	---
basin wildrye	ELCI2	---	---	2-5	---	---	2-8
bluebunch wheatgrass	AGSP	25-40	25-40	60-80	25-40	25-40	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	5-10
Wyoming big sagebrush	ARTRW	15-25	15-25	5-15	15-25	15-25	15-30
antelope bitterbrush	PUTR2	---	---	1-5	---	---	2-8
black sagebrush	ARARN	---	---	---	---	---	10-20
spiny hopsage	GRSP	---	---	---	---	---	2-5
Range site number		025XY019NV	025XY019NV	025XY015NV	025XY019NV	025XY019NV	025XY025NV
Potential production (lb/acre):							
Favorable years		800	800	1000	800	800	500
Normal years		600	600	700	600	600	350
Unfavorable years		400	400	500	400	400	200

3100--Ratsow-Quarz-Susie Creek association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Ratsow	Quarz	Susie Creek	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	---	---	30-40	---
Nevada bluegrass	PONE3	---	---	---	---	---	2-5	---
Thurber needlegrass	STTH2	10-20	10-20	10-20	10-20	10-20	---	---
basin wildrye	ELCI2	2-8	2-8	2-8	2-8	2-8	2-10	---
bluebunch wheatgrass	AGSP	20-35	20-35	20-35	20-35	20-35	15-30	---
bluegrass	POA++	2-10	2-10	2-10	2-10	2-10	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	---
antelope bitterbrush	PUTR2	2-8	2-8	2-8	2-8	2-8	5-10	---
basin big sagebrush	ARTRT	---	---	---	---	---	---	---
big sagebrush	ARTR2	10-20	10-20	10-20	10-20	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	10-20	---
Range site number		025XY014NV	025XY014NV	025XY014NV	025XY014NV	025XY014NV	025XY012NV	none
Potential production (lb/acre):								
Favorable years		1000	1000	1000	1000	1000	1400	
Normal years		800	800	800	800	800	1000	
Unfavorable years		600	600	600	600	600	700	

3510--Midraw-Troughs-Midraw, strongly sloping association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Midraw	Troughs	Midraw	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---	2-8
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	10-20	15-30
Webber ricegrass	STWE	---	---	---	---	---	2-8
basin wildrye	ELCI2	---	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	20-35	20-40
bluegrass	POA++	---	---	---	---	2-10	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---	---
antelope bitterbrush	PUTR2	---	---	---	---	2-8	---
basin big sagebrush	ARTRT	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	---	---	10-20	---
early sagebrush	ARLO9	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---
sagebrush	ARTEM	---	---	---	---	---	20-30
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY014NV	025XY018NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	1000	800
Normal years		600	600	600	600	800	600
Unfavorable years		400	400	400	400	600	400

3710--Petan-Bulake-Rock outcrop association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Petan	Bulake	Rock outcrop	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	30-50	---	30-50	40-60	---
Nevada bluegrass	PONE3	---	---	---	---	2-8	---
Sandberg bluegrass	POSE	2-10	---	---	---	---	---
Thurber needlegrass	STTH2	10-20	---	---	---	---	---
Webber ricegrass	STWE	5-10	---	---	---	---	---
basin wildrye	ELCI2	---	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	20-30	15-30	---	15-30	5-15	---
bluegrass	POA++	---	2-10	---	2-10	---	---
balsamroot	BALSA	2-5	---	---	---	---	---
antelope bitterbrush	PUTR2	---	2-5	---	2-5	---	---
basin big sagebrush	ARTRT	---	---	---	---	10-20	---
low sagebrush	ARAR8	25-35	15-25	---	15-25	---	---
Range site number		025XY022NV	025XY017NV	none	025XY017NV	025XY027NV	none
Potential production (lb/acre):							
Favorable years		600	900		900	1300	
Normal years		400	700		700	900	
Unfavorable years		250	400		400	500	

3715--Petan-Deunah-Hatpeak association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		Petan	Deunah	Hatpeak	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	30-50	40-60	40-60	---	30-50	---
Nevada bluegrass	PONE3	---	---	2-8	2-8	---	---	---
Sandberg bluegrass	POSE	2-10	---	---	---	---	---	---
Thurber needlegrass	STTH2	10-20	---	---	---	---	---	---
Webber ricegrass	STWE	5-10	---	---	---	---	---	---
basin wildrye	ELCI2	---	---	2-8	2-8	---	---	---
bluebunch wheatgrass	AGSP	20-30	15-30	5-15	5-15	---	15-30	---
bluegrass	POA++	---	2-10	---	---	---	2-10	---
balsamroot	BALSA	2-5	---	---	---	---	---	---
antelope bitterbrush	PUTR2	---	2-5	---	---	---	2-5	---
basin big sagebrush	ARTRT	---	---	10-20	10-20	---	---	---
low sagebrush	ARARS	25-35	15-25	---	---	---	15-25	---
Range site number		025XY022NV	025XY017NV	025XY027NV	025XY027NV	none	025XY017NV	none
Potential production (lb/acre):								
Favorable years		600	900	1300	1300		900	
Normal years		400	700	900	900		700	
Unfavorable years		250	400	500	500		400	

3721--Hatpeak-Deunah association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		Hatpeak	Deunah	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	40-60	30-50	40-60	---	30-50
Nevada bluegrass	PONE3	2-8	---	2-8	---	---
Sandberg bluegrass	POSE	---	---	---	2-10	---
Thurber needlegrass	STTH2	---	---	---	10-20	---
Webber ricegrass	STWE	---	---	---	5-10	---
basin wildrye	ELCI2	2-8	---	2-8	---	---
bluebunch wheatgrass	AGSP	5-15	15-30	5-15	20-30	15-30
bluegrass	POA++	---	2-10	---	---	2-10
balsamroot	BALSA	---	---	---	2-5	---
antelope bitterbrush	PUTR2	---	2-5	---	---	2-5
basin big sagebrush	ARTRT	10-20	---	10-20	---	---
low sagebrush	ARAR8	---	15-25	---	25-35	15-25
Range site number		025XY027NV	025XY017NV	025XY027NV	025XY022NV	025XY017NV
Potential production (lb/acre):						
Favorable years		1300	900	1300	600	900
Normal years		900	700	900	400	700
Unfavorable years		500	400	500	250	400

3722--Hatpeak-Hatpeak, moderately steep association

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		Hatpeak	Hatpeak	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	40-60	40-60	40-60	---	---	---
Nevada bluegrass	PONE3	2-8	2-8	2-8	---	---	5-10
Thurber needlegrass	STTH2	---	---	---	5-15	5-15	---
basin wildrye	ELCI2	2-8	2-8	2-8	2-5	2-5	60-70
bluebunch wheatgrass	AGSP	5-15	5-15	5-15	60-80	60-80	---
mat muhly	MURI	---	---	---	---	---	2-8
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8
Wyoming big sagebrush	ARTRW	---	---	---	5-15	5-15	---
antelope bitterbrush	PUTR2	---	---	---	1-5	1-5	---
basin big sagebrush	ARTRT	10-20	10-20	10-20	---	---	5-10
Range site number		025XY027NV	025XY027NV	025XY027NV	025XY015NV	025XY015NV	025XY003NV
Potential production (lb/acre):							
Favorable years		1300	1300	1300	1000	1000	4500
Normal years		900	900	900	700	700	3500
Unfavorable years		500	500	500	500	500	2000

W--Water

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions Soil name or Inclusion number-- Water
		---
Range site number		none
Potential production (lb/acre):		
Favorable years		
Normal years		
Unfavorable years		

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