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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 Agricultural Experiment Station

Soil Survey of Washoe County, Nevada, North Part

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 Thus, as older published interpretive information becomes outdated, new interpretive data must be generated and tailored to local conditions.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 1994. Soil names and descriptions were approved in 1995. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1994. This survey was made cooperatively by the Natural Resources Conservation, Bureau of Land Management, and University of Nevada Agricultural Experiment Station. It is part of the technical assistance furnished to the Vya 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 Washoe County, Nevada, North Part. 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 the Nevada Cooperative Extension.

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Soil Survey of Washoe County, Nevada, North Part

By Steve Slusser, Natural Resources Conservation Service

Fieldwork by Steve Slusser and Edward W. Blake, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with the Bureau of Land Management and the University of Nevada Agricultural Experiment Station

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.

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

Denied Access and Areas of Reduced Reliability.

In some small areas of the survey area, access was denied or otherwise restricted. Soil map units were interpolated across the area of denied access using photographic interpretation based on the map units in the adjacent areas. The accuracy of the photo interpretation is dependent on several factors, including the size and complexity of the area; the scale and quality of the photobase; and the degree of relief across the landscape. Because the mapping is made using methods other than field investigation, the reliability of mapping is reduced.

About 20,000 acres in the general vicinity of Vya have been mapped with reduced reliability.

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 original inhabitants of this survey area were the Paiute Indians. John C. Fremont was the first explorer of the area to make recorded observations. He led a party on an expedition to find the legendary Buenaventura River. This river was thought to flow from the Rocky Mountains to San Francisco Bay.

The Applegate Road and Noble Trail were early routes winding westward through the area. They were traveled by thousands of emigrants to northern California. The Applegate Road crosses through the survey area. Noble Trail crosses Black Rock and Smoke Creek Deserts. In 1854, John Dreibelbis surveyed and mapped both of these deserts for the Pacific Railroad. Fortynine Lake was named for an 1849 crossing.

Vya the tiny settlement north of Fortynine Canyon, near the junction of State Routes 8A and 34, in Long Valley was named for Vya Wimer, the first white baby born in the valley. (4)

Massacre Lake is a small lake, or dry sink, east of Vya. A large wagon train was reputedly attacked near there in 1850 by Indians of the High Rock Canyon country. Forty men of the emigrant party were supposed to have been killed in the battle and interred in a common grave. (4)

Industry, Transportation, and Recreation

The Washoe County, Nevada, North Part is an area of sparse population and limited development. The primary industry is livestock production with livestock grazing on federal grazing allotments, administered mainly by the Bureau of Land Management, and on various private holdings scattered throughout the area. Sporadic mining exploration has occurred in the area, but there is presently no active mining on a large scale. The principal mineral in the area is mercury, with widespread occurrences of marginal quality in the Lone Pine mining district. (3)

The major access to the survey area is provided from Denio and Cedarville, California via State Route 8A and from Gerlach via State Route 34. Both are improved gravel roads. Travel on these, and other roads in the survey area, may be restricted during the winter months. Winter travel should be approached with caution.

The survey area is actively used by recreationists, who come to hunt, rock hound, take photographs or simply to enjoy the scenic open spaces in the area. Principal game species include mule deer, pronghorn antelope, upland game birds, and waterfowl. Rock hounds may find obsidian, petrified wood, and various other rocks and minerals. The nearby towns of Gerlach, NV, to the south, Cedarville, CA, to the west, or Denio, NV to the east are the principal sources of fuel and supplies for recreationists and others. There are no such services available in the survey area.

Physiography, Drainage, and Geology

The Washoe county, Nevada, North Part is in the northern portion of the Basin and Range Province (5). It is transitional to the Columbia Plateaus Province. The area is typified by broad, elongated valleys with no external drainage and long mountain ranges running north to south. The north and eastern parts of the area are dominated by dissected plateaus.

The plateaus and mountains are drained by numerous small, intermittent streams and infrequently by perennial streams such as Coleman Creek. Drainages converge in the basins, giving rise to numerous playas and intermittent lakes. During periods of spring runoff these lakes and playas are filled with shallow water, drying out again by late summer in most years. In wet years, some of the deeper lakes may be wet throughout the year. Crooks Lake, Mosquito Lake, Massacre Lake, and Alkali Lake are prominent intermittent lakes in the area.

Volcanic rocks of the Canyon assemblage dominate the geology of the survey area. (3) According to Bonham (3) this assemblage of volcanic rocks is dated from Oligocene to Pliocene with the oldest rocks being dacitic, andesitic, and basatic flows of Oligocene and Miocene age. These are rather isolated units, located around Bald Mountain, east of Alkali Lake and east of Coleman Canyon.

Rocks of the late Miocene Canõn Rhyolite, composed of flows, welded ash-flow tuff, and domes of rhyolite are

abundant near Coleman Creek and to the south and west of Painted Point. Devada, Ninemile, and Hart Camp are typical soils formed on the hard rocks of these areas. Locally, large areas of ash-flow, ash-fall, water-lain tuffs and water re-worked tuffs with small areas of diatomite and tuffaceous sedimentary rocks of late Miocene age occur. Notable areas of these rocks, identified as the High Rock sequence, are found near High Rock Canyon, Fortynine Creek, and Painted Point. Ashone, Tuffo, Saraph, and Hangrock soils are typical of soils formed on the tuffaceous rocks of the High Rock sequence. The youngest rocks of the Canyon assemblage are olivine basalt of late Miocene to Pliocene age. They are extensive around Barrel Springs, Bitner Butte, and capping the peaks of the Hays Canyon Range south of Fortynine Creek. Devada and Ninemile soils are common on these areas.

Quaternary deposits occupy the basins, both as lacustrine deposits from Pleistocene lakes and as more recent alluvial deposits. Remnant lake features are an important part of the landscape in many parts of the area. McWatt, Paypoint, and Langston soils are typical of soils formed in lacustrine deposits from ancient lakes. Soils formed on alluvial fans and fan piedmonts are also common. Fulstone, and Valmy are examples of soils formed in alluvial deposits.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Vya and Sheldon. Vya is located in the west-central part of the survey area. The Sheldon weather station is located on the Sheldon national Wildlife Refuge, just east of the survey area. Table 2 shows probable dates of the first freeze in fall and the last freeze in the spring. Table 3 provides data on length of growing season.

Growing degree days, shown in Table 1, 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.

In Washoe County, summers are hot, especially at the lower elevations, and winters are cold. At the lower elevations, precipitation is normally light during all months of the year and the land is used mainly for range. At higher elevations, precipitation is much greater and snow accumulates to a considerable depth. Some of the snowmelt irrigates crops in nearby valleys. Climatic data for Vya and Sheldon Nevada, reflect the climatic diversity of the survey area.

In winter, the average temperature is 28 degrees F and the average daily minimum temperature is 19 degrees F at Sheldon and 30 degrees and 18 degrees respectively at Vya. In summer, the average temperature is 58 degrees, F, and the average daily maximum temperature is 75 degrees F at Sheldon and 62 degrees and 80 degrees respectively at Vya.

The total annual precipitation is about 12 inches at Sheldon and 14 inches at Vya, Nevada. About 38 percent of the total usually falls from April through September. The growing season for most crops falls within this period.

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, occasionally flooded is a phase of the Wetvit series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or associations. A *complex* consists of two or more soils or miscellanieous areas in such an intricate pattern or in such small areas that they cannont be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Soughe-Rock outcrop complex, 4 to 30 percent slopes is an example.

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

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

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

1010--Macyflet-Boulder Lake association

Composition

Major Components
Macyflet silty clay loam, 0 to 2 percent slopes--50 percent
Boulder Lake silty clay, 0 to 2 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Paypoint gravelly sandy loam, 0 to 2 percent slopes--10 percent
Inclusion 2: Davey loamy fine sand, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Bolsons
Macyflet--Landform: Alluvial flats
Boulder Lake--Landform: Alluvial flats
Inclusion 1--Landform: Lagoons
Inclusion 2--Landform: Beach terraces

Major Component Description

Macyflet Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 80 days
Surface layer texture: Silty clay loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Boulder Lake Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 80 days
Surface layer texture: Silty clay
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks and lake sediments

Dominant Present Vegetation

Macyflet: Thurber needlegrass, alkali sagebrush, bluegrass
Boulder Lake: Bluegrass, silver sagebrush
Inclusion 1: Douglas rabbitbrush, basin wildrye, big sagebrush
Inclusion 2: Indian ricegrass, basin big sagebrush, needleandthread

Ecological Site

Macyflet: 023XY090NV
Boulder Lake: 023XY003NV
Inclusion 1: 023XY082NV
Inclusion 2: 023XY051NV

1011--Macyflet silt loam, 0 to 2 percent slopes

Composition

Major Components
Macyflet silt loam, 0 to 2 percent slopes--90 percent
Contrasting Inclusions
Inclusion 1: Boulder Lake silt loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Paypoint gravelly sandy loam, 0 to 2 percent slopes--4 percent

Map Unit Setting

Landscape position: Bolsons
Macyflet--Landform: Basin floors
Inclusion 1--Landform: Lake plains; shape of slope: concave
Inclusion 2--Landform: Lagoons

Major Component Description

Macyflet Series
Elevation: 5,700 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 80 days
Surface layer texture: Silt loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Macyflet: Cusick bluegrass, Thurber needlegrass, alkali sagebrush, basin wildrye
Inclusion 1: Bluegrass, silver sagebrush
Inclusion 2: Basin wildrye, big sagebrush, rabbitbrush

Ecological Site

Macyflet: 023XY090NV
Inclusion 1: 023XY003NV
Inclusion 2: 023XY082NV

1012--Macyflet-Indian Creek association

Composition

Major Components
Macyflet silt loam, 0 to 2 percent slopes--45 percent
Indian Creek very cobbly loam, 2 to 8 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Davey loamy fine sand, 2 to 8 percent slopes--6 percent
Inclusion 2: Schamp loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Emagert silt loam, 0 to 2 percent slopes--4 percent

Map Unit Setting

Landscape position: Bolsons
Macyflet--Landform: Lake plains
Indian Creek--Landform: Fan skirts
Inclusion 1--Landform: Beach terraces
Inclusion 2--Landform: Hills; geomorphic position: toeslope
Inclusion 3--Landform: Stream terraces

Major Component Description

Macyflet Series
Elevation: 5,700 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 80 days
Surface layer texture: Silt loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Indian Creek Series
Elevation: 5,700 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 48 degrees
Frost-free season: About 90 days
Surface rock fragments: 20 percent cobbles; 15 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Macyflet: Cusick bluegrass, Douglas rabbitbrush, Thurber needlegrass, alkali sagebrush, basin wildrye
Indian Creek: Thurber needlegrass, bluegrass, low sagebrush
Inclusion 1: Basin big sagebrush, needlegrass
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye

Ecological Site

Macyflet: 023XY090NV
Indian Creek: 023XY059NV
Inclusion 1: 023XY051NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY009NV

1015--Powlow very gravelly loam, 2 to 15 percent slopes

Composition

Major Components
Powlow very gravelly loam, 2 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Old Camp very cobbly loam, 4 to 15 percent slopes--6 percent
Inclusion 2: Saraph very gravelly sandy loam, 8 to 30 percent slopes--4 percent
Inclusion 3: Powlow very gravelly loam, 15 to 30 percent slopes--3 percent
Inclusion 4: Esmod very gravelly fine sandy loam, 2 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Powlow--Landform: Alluvial fans
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: summit
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope
Inclusion 4--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Powlow Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation

Powlow: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Wyoming big sagebrush, bluegrass
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Thurber needlegrass, bluegrass, low sagebrush

Ecological Site

Powlow: 023XY020NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY020NV
Inclusion 4: 023XY059NV

1020--Bearbutte-Welch association

Composition

Major Components
Bearbutte fine sandy loam, 4 to 15 percent slopes--75 percent
Welch loam, 0 to 4 percent slopes, rarely flooded--15 percent
Contrasting Inclusions
Inclusion 1: Ashone very gravelly fine sandy loam, 4 to 30 percent slopes--6 percent
Inclusion 2: Ashdos very gravelly sandy loam, 4 to 30 percent slopes--3 percent
Inclusion 3: Surprise gravelly loamy sand, 2 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Bearbutte--Landform: Hills
Welch--Landform: Drainageways
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Inset fans

Major Component Description

Bearbutte Series
Elevation: 6,000 to 6,200 feet
Precipitation: About 13 inches
Air temperature: About 43 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from tuffaceous rocks

Welch Series
Elevation: 6,000 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 60 days
Surface layer texture: Loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation

Bearbutte: Idaho fescue, Thurber needlegrass, antelope bitterbrush, mountain big sagebrush
Welch: Nevada bluegrass, sedge
Inclusion 1: Idaho fescue, Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 2: Idaho fescue, Thurber needlegrass, low sagebrush
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Bearbutte: 023XY066NV
Welch: 023XY013NV
Inclusion 1: 023XY078NV
Inclusion 2: 023XY079NV
Inclusion 3: 023XY020NV

1025--Mesman fine sandy loam, 0 to 4 percent slopes

Composition

Major Components
Mesman fine sandy loam, 0 to 4 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Langston gravelly sandy loam, 2 to 8 percent slopes--5 percent
Inclusion 3: McWatt extremely stony loam, 4 to 8 percent slopes--2 percent

Inclusion 4: Valmy sandy loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Bolsons
Mesman--Landform: Lake terraces
Inclusion 1--Landform: Lagoons
Inclusion 2--Landform: Longshore bars (relict)
Inclusion 3--Landform: Beach terraces
Inclusion 4--Landform: Beach terraces

Major Component Description

Mesman Series
Elevation: 4,580 to 4,600 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Mesman: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Basin big sagebrush, basin wildrye, bottlebrush squirreltail
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 4: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Mesman: 023XY006NV
Inclusion 1: 023XY082NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY006NV
Inclusion 4: 024XY022NV

1030--Zorravista fine sand, 4 to 15 percent slopes

Composition

Major Components
Zorravista fine sand, 4 to 15 percent slopes--90 percent
Contrasting Inclusions
Inclusion 1: Davey loamy fine sand, 2 to 15 percent slopes--6 percent
Inclusion 2: Corral loamy fine sand, 2 to 15 percent slopes--3 percent
Inclusion 3: Buffaran stony loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
Zorravista--Landform: Dunes
Inclusion 1--Landform: Beach terraces
Inclusion 2--Landform: Pediments
Inclusion 3--Landform: Alluvial fans

Major Component Description

Zorravista Series
Elevation: 5,800 to 5,900 feet
Precipitation: About 9 inches
Air temperature: About 48 degrees
Frost-free season: About 90 days
Surface layer texture: Fine sand
Drainage class: Excessively drained
Dominant parent material: Eolian material

Dominant Present Vegetation

Zorravista: Indian ricegrass, basin big sagebrush, needleandthread
Inclusion 1: Indian ricegrass, basin big sagebrush, needleandthread
Inclusion 2: Indian ricegrass, needleandthread, Wyoming big sagebrush
Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Zorravista: 023XY011NV
Inclusion 1: 023XY051NV
Inclusion 2: 023XY051NV
Inclusion 3: 023XY006NV

1035--Ninemile-Madeline-Crocan association

Composition

Major Components
Ninemile very cobbly loam, 4 to 30 percent slopes--40 percent
Madeline very stony loam, 4 to 30 percent slopes--25 percent
Crocan extremely stony loam, 2 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Vertic Palexerolls, very-fine, montmorillonitic, frigid very cobbly loam, 0 to 8 percent slopes--6 percent
Inclusion 2: Badgercamp bouldery loam, 4 to 30 percent slopes--4 percent
Inclusion 3: Typic Argixerolls, fine, montmorillonitic, frigid very stony loam, 15 to 30 percent slopes--3 percent
Inclusion 4: Newlands stony loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus
Madeline--Landform: Plateaus; geomorphic position: backslope
Crocan--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: backslope

Inclusion 4--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description

Ninemile Series
Elevation: 6,100 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Madeline Series
Elevation: 6,100 to 6,500 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Crocan Series
Elevation: 6,100 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 10 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Madeline: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Crocan: Cusick bluegrass, Idaho fescue, bluebunch wheatgrass, low sagebrush, western juniper
Inclusion 1: Idaho fescue, low sagebrush
Inclusion 2: Bluegrass, curlleaf mountainmahogany, mountain big sagebrush
Inclusion 3: Idaho fescue, bluebunch wheatgrass, bluegrass, mountain big sagebrush, western juniper
Inclusion 4: Idaho fescue, mountain big sagebrush, needlegrass, snowberry

Ecological Site

Ninemile: 023XY017NV
Madeline: 023XY015NV
Crocan: 023XY095NV
Inclusion 1: 023XY014NV
Inclusion 2: 023XY026NV
Inclusion 3: 023XY024NV
Inclusion 4: 023XY065NV

1036--Tinpan-Ninemile association

Composition

Major Components
Tinpan extremely cobbly loam, 0 to 8 percent slopes--50 percent
Ninemile very cobbly loam, 2 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Karlo very cobbly clay, 0 to 4 percent slopes--9 percent
Inclusion 2: Crocan extremely stony loam, 2 to 15 percent slopes--4 percent
Inclusion 3: Vertic Palexerolls, very-fine, montmorillonitic, frigid very stony loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Tinpan--Landform: Plateaus; shape of slope: concave
Ninemile--Landform: Plateaus; shape of slope: convex
Inclusion 1--Landform: Plateaus; shape of slope: concave
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: summit; shape of slope: concave

Major Component Description

Tinpan Series
Elevation: 6,000 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 40 percent cobbles; 20 percent gravel
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Ninemile Series
Elevation: 6,000 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Tinpan: Idaho fescue, bluebunch wheatgrass, bluegrass, low sagebrush
Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Bluegrass, low sagebrush, rubber rabbitbrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, low sagebrush, western juniper
Inclusion 3: Idaho fescue, bluegrass, low sagebrush

Ecological Site

Tinpan: 023XY017NV
Ninemile: 023XY017NV
Inclusion 1: 023XY001NV
Inclusion 2: 023XY095NV
Inclusion 3: 023XY014NV

1040--Langston gravelly sandy loam, 2 to 8 percent slopes

Composition

Major Components
Langston gravelly sandy loam, 2 to 8 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Davey loamy fine sand, 2 to 15 percent slopes--8 percent
Inclusion 2: Longdis silty clay loam, 0 to 2 percent slopes--7 percent

Map Unit Setting

Landscape position: Intermontane basins
Langston--Landform: Longshore bars (relict)
Inclusion 1--Landform: Beach terraces
Inclusion 2--Landform: Lake terraces; position on slope: lower

Major Component Description

Langston Series
Elevation: 5,400 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 25 percent gravel
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Langston: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 1: Basin big sagebrush, needleandthread
Inclusion 2: Big sagebrush, black greasewood

Ecological Site

Langston: 023XY006NV
Inclusion 1: 023XY051NV
Inclusion 2: 024XY022NV

1041--Langston-Old Camp-Paypoint association

Composition

Major Components
Langston gravelly sandy loam, 2 to 15 percent slopes--45 percent
Old Camp very gravelly loam, 4 to 15 percent slopes--30 percent
Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Davey loamy fine sand, 2 to 8 percent slopes--5 percent
Inclusion 2: Weezweed loam, 0 to 2 percent slopes--3 percent
Inclusion 3: Emagert loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Langston--Landform: Longshore bars (relict)
Old Camp--Landform: Plateaus
Paypoint--Landform: Lagoons
Inclusion 1--Landform: Beach terraces
Inclusion 2--Landform: Stream terraces
Inclusion 3--Landform: Stream terraces; position on slope: lower

Major Component Description

Langston Series
Elevation: 5,700 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 25 percent gravel
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Old Camp Series
Elevation: 5,700 to 5,800 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Paypoint Series
Elevation: 5,700 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent gravel
Surface layer texture: Gravelly fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Langston: Thurber needlegrass, Wyoming big sagebrush, bottlebrush squirreltail
Old Camp: Thurber needlegrass, Wyoming big sagebrush
Paypoint: Thurber needlegrass, basin wildrye, big sagebrush, bottlebrush squirreltail, rubber rabbitbrush
Inclusion 1: Indian ricegrass, basin big sagebrush, needlegrass
Inclusion 2: Basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 3: Basin big sagebrush, basin wildrye, rubber rabbitbrush

Ecological Site

Langston: 023XY006NV
Old Camp: 023XY006NV
Paypoint: 023XY082NV
Inclusion 1: 023XY051NV
Inclusion 2: 023XY005NV
Inclusion 3: 023XY009NV

1045--Paypoint-Langston association

Composition

Major Components
Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--60 percent
Langston gravelly sandy loam, 2 to 8 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Longdis silty clay loam, 0 to 2 percent slopes--9 percent
Inclusion 2: Davey loamy fine sand, 0 to 4 percent slopes--5 percent
Inclusion 3: Aridic Haploxerolls, fine, montmorillonitic, mesic silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
Paypoint--Landform: Lagoons
Langston--Landform: Longshore bars (relict)
Inclusion 1--Landform: Lake terraces; position on slope: lower
Inclusion 2--Landform: Beach terraces
Inclusion 3--Landform: Drainageways

Major Component Description

Paypoint Series
Elevation: 5,500 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent gravel
Surface layer texture: Gravelly fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Langston Series
Elevation: 5,500 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 25 percent gravel
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Paypoint: Douglas rabbitbrush, basin wildrye, big sagebrush, bottlebrush squirreltail, rubber rabbitbrush
Langston: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 1: Big sagebrush, black greasewood
Inclusion 2: Basin big sagebrush, needleandthread
Inclusion 3: Basin big sagebrush, basin wildrye

Ecological Site

Paypoint: 023XY082NV
Langston: 023XY006NV
Inclusion 1: 024XY022NV
Inclusion 2: 023XY051NV
Inclusion 3: 023XY005NV

1050--Skullwak silt loam, 0 to 2 percent slopes

Composition

Major Components
Skullwak silt loam, 0 to 2 percent slopes--90 percent
Contrasting Inclusions
Inclusion 1: Updike silt loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Longdis fine sandy loam, 0 to 2 percent slopes--4 percent

Map Unit Setting

Landscape position: Bolsons
Skullwak--Landform: Basin floors
Inclusion 1--Landform: Lake terraces
Inclusion 2--Landform: Lake terraces

Major Component Description

Skullwak Series
Elevation: 5,500 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Poorly drained

Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Skullwak: Nevada bluegrass, alkaligrass, inland saltgrass
Inclusion 1: Black greasewood, inland saltgrass
Inclusion 2: Big sagebrush, black greasewood

Ecological Site

Skullwak: 023XY002NV
Inclusion 1: 023XY010NV
Inclusion 2: 024XY022NV

1055--Devada-Hapgood-Hart Camp association

Composition

Major Components
Devada very gravelly loam, 15 to 50 percent slopes--40 percent
Hapgood very gravelly loam, 15 to 30 percent slopes--30 percent
Hart Camp stony loam, 4 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Lithic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 15 to 50 percent slopes--7 percent
Inclusion 2: Ninemile very stony loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Vitritorrandic Haploxerolls, Ashy, mesic loam, 2 to 15 percent slopes--4 percent

Map Unit Setting

Landscape position: Plateaus and mountains
Devada--Landform: Mountains; geomorphic position: backslope; aspect: south
Hapgood--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Hart Camp--Landform: Plateaus; geomorphic position: toeslope; position on slope: lower; aspect: south
Inclusion 1--Landform: Mountains; geomorphic position: summit; position on slope: upper
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Inset fans; shape of slope: concave

Major Component Description

Devada Series
Elevation: 6,300 to 6,800 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Hapgood Series
Elevation: 6,300 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Hart Camp Series
Elevation: 6,300 to 6,800 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Hapgood: Idaho fescue, mountain big sagebrush, mountain brome, snowberry
Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, low sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 3: Basin wildrye, big sagebrush

Ecological Site

Devada: 023XY031NV
Hapgood: 023XY065NV
Hart Camp: 023XY015NV
Inclusion 1: 023XY008NV
Inclusion 2: 023XY017NV
Inclusion 3: 023XY009NV

1060--Bombadil-Chime association

Composition

Major Components
Bombadil very stony loam, 4 to 30 percent slopes--60 percent
Chime gravelly loam, 2 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Corral very stony loam, 15 to 30 percent slopes--7 percent
Inclusion 2: Schamp loam, 2 to 15 percent slopes--5 percent
Inclusion 3: McConnel gravelly sandy loam, 0 to 2 percent slopes, occasionally flooded--3 percent

Map Unit Setting

Landscape position: Plateaus
Bombadil--Landform: Plateaus; aspect: south
Chime--Landform: Plateaus; geomorphic position: backslope

Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: northeast
Inclusion 2--Landform: Hills
Inclusion 3--Landform: Inset fans

Major Component Description

Bombadil Series
Elevation: 4,700 to 5,000 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent stones and boulders; 10 percent cobbles; 25 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Chime Series
Elevation: 4,700 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface rock fragments: 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Bombadil: Wyoming big sagebrush, spiny hopsage
Chime: Wyoming big sagebrush, spiny hopsage
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye

Ecological Site

Bombadil: 024XY020NV
Chime: 024XY020NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY005NV

1061--Old Camp gravelly loam, 8 to 30 percent slopes

Composition

Major Components
Old Camp gravelly loam, 8 to 30 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Schamp very stony loam, 4 to 15 percent slopes--7 percent
Inclusion 2: Corral very stony loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Bombadil very gravelly loam, 4 to 15 percent slopes--4 percent

Map Unit Setting

Landscape position: Plateaus
Old Camp--Landform: Plateaus
Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: lower
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; position on slope: lower; aspect: southwest

Major Component Description

Old Camp Series
Elevation: 5,200 to 5,500 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent cobbles; 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Old Camp: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush
Inclusion 3: Wyoming big sagebrush, spiny hopsage

Ecological Site

Old Camp: 023XY006NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY006NV
Inclusion 3: 024XY020NV

1062--Old Camp-Corral association

Composition

Major Components
Old Camp very cobbly loam, 4 to 15 percent slopes--50 percent
Corral stony loam, 4 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Pachic Argixerolls, loamy-skeletal, mixed, frigid very stony loam, 15 to 30 percent slopes--7 percent
Inclusion 2: Lithic Xeric Haplargids, loamy, mixed, mesic very cobbly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Bucklake very cobbly loam, 15 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Old Camp--Landform: Plateaus; geomorphic position: summit
Corral--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Old Camp Series
Elevation: 5,500 to 5,700 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 25 percent cobbles; 15 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Corral Series
Elevation: 5,500 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 3 percent stones and boulders; 10 percent cobbles; 10 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Old Camp: Thurber needlegrass, Wyoming big sagebrush
Corral: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Thurber needlegrass, low sagebrush
Inclusion 3: Big sagebrush, bluebunch wheatgrass

Ecological Site

Old Camp: 023XY006NV
Corral: 023XY006NV
Inclusion 1: 023XY007NV
Inclusion 2: 023XY059NV
Inclusion 3: 023XY039NV

1063--Old Camp very stony loam, 8 to 30 percent slopes

Composition

Major Components
Old Camp very stony loam, 8 to 30 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Buffaran very stony loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Zymans very cobbly loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Reywat very stony loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Bidrim extremely stony loam, 2 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus and hills
Old Camp--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: toeslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope
Inclusion 4--Landform: Plateaus; geomorphic position: shoulder

Major Component Description

Old Camp Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Old Camp: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Cusick bluegrass, Nevada bluegrass, bluebunch wheatgrass, low sagebrush, western juniper

Ecological Site

Old Camp: 023XY006NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY039NV
Inclusion 4: 023XY091NV

1065--Old Camp-Reywat-Rubble land association

Composition

Major Components
Old Camp extremely stony loam, 30 to 75 percent slopes--40 percent
Reywat extremely stony loam, 30 to 75 percent slopes--30 percent
Rubble land fragmental material, 30 to 75 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Lithic Xeric Torriorthents, loamy-skeletal, mixed (calcareous), mesic very stony sandy loam, 30 to 75 percent slopes--7 percent
Inclusion 2: Wylo very stony fine sandy loam, 4 to 30 percent slopes--5 percent
Inclusion 3: Weezweed loam, 0 to 2 percent slopes--2 percent
Inclusion 4: Wetvit fine sandy loam, 0 to 2 percent slopes, occasionally flooded--1 percent

Map Unit Setting

Landscape position: Plateaus
Old Camp--Landform: Plateaus; geomorphic position: backslope; position on slope: lower; aspect: south
Reywat--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: south
Rubble land--Landform: Plateaus
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; shape of slope: convex
Inclusion 3--Landform: Stream terraces
Inclusion 4--Landform: Stream terraces

Major Component Description

Old Camp Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent stones and boulders; 20 percent cobbles; 20 percent gravel
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Reywat Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 30 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rubble land Miscellaneous Area
Elevation: 5,000 to 6,000 feet
Surface layer texture: Fragmental material
Drainage class: Excessively drained

Dominant Present Vegetation

Old Camp: Thurber needlegrass, Wyoming big sagebrush
Reywat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Rubble land: None
Inclusion 1: Indian ricegrass, Wyoming big sagebrush, basin wildrye, bottlebrush squirreltail, eriogonum
Inclusion 2: Sandberg bluegrass, Thurber needlegrass, bluebunch wheatgrass, sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 4: Baltic rush, Nevada bluegrass, meadow barley

Ecological Site

Old Camp: 023XY006NV
Reywat: 023XY039NV
Rubble land: none
Inclusion 1: 023XY088NV
Inclusion 2: 023XY037NV
Inclusion 3: 023XY005NV
Inclusion 4: 023XY013NV

1070--Oreneva very gravelly loam, 2 to 15 percent slopes

Composition

Major Components
Oreneva very gravelly loam, 2 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Langston very gravelly sandy loam, 2 to 8 percent slopes--8 percent
Inclusion 2: Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Surprise gravelly loamy sand, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Oreneva--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Longshore bars (relict)
Inclusion 2--Landform: Lagoons
Inclusion 3--Landform: Beach terraces

Major Component Description

Oreneva Series
Elevation: 5,400 to 5,500 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Oreneva: Thurber needlegrass, big sagebrush, bluebunch wheatgrass, bluegrass
Inclusion 1: Thurber needlegrass, big sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, basin wildrye
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Oreneva: 023XY020NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY082NV
Inclusion 3: 023XY020NV

1075--Surprise gravelly loamy sand, 2 to 15 percent slopes

Composition

Major Components
Surprise gravelly loamy sand, 2 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Davey loamy fine sand, 2 to 15 percent slopes--7 percent
Inclusion 2: Emagert loam, 0 to 4 percent slopes--4 percent
Inclusion 3: Wetvit loam, 0 to 4 percent slopes--4 percent

Map Unit Setting

Landscape position: Fan piedmonts
Surprise--Landform: Alluvial fans
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Stream terraces
Inclusion 3--Landform: Inset fans

Major Component Description

Surprise Series
Elevation: 5,500 to 5,600 feet
Precipitation: About 12 inches
Air temperature: About 48 degrees
Frost-free season: About 90 days
Surface rock fragments: 20 percent gravel
Surface layer texture: Gravelly loamy sand
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation

Surprise: Thurber needlegrass, Wyoming big sagebrush, basin big sagebrush, bluebunch wheatgrass
Inclusion 1: Indian ricegrass, basin big sagebrush, needleandthread
Inclusion 2: Basin big sagebrush, basin wildrye
Inclusion 3: Bluegrass, sedge

Ecological Site

Surprise: 023XY020NV
Inclusion 1: 023XY051NV
Inclusion 2: 023XY009NV
Inclusion 3: 023XY089NV

1080--Bucklake-Rock outcrop-Corral association

Composition

Major Components
Bucklake very stony loam, 30 to 50 percent slopes--50 percent
Rock outcrop--20 percent
Corral very stony loam, 30 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Pachic Argixerolls, loamy-skeletal, mixed, frigid very stony loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Reywat very stony loam, 15 to 50 percent slopes--5 percent
Inclusion 3: Devada very cobbly loam, 15 to 30 percent slopes--5 percent

Map Unit Setting

Landscape position: Plateaus
Bucklake--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: south
Rock outcrop--Landform: Plateaus
Corral--Landform: Plateaus; geomorphic position: backslope; position on slope: lower; aspect: south
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: east
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder

Major Component Description

Bucklake Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 5,300 to 5,500 feet
Drainage class: Excessively drained

Corral Series
Elevation: 5,300 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days

Surface rock fragments: 15 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Bucklake: Big sagebrush, bluebunch wheatgrass
Rock outcrop: None
Corral: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Idaho fescue, basin wildrye, big sagebrush, bluebunch wheatgrass
Inclusion 2: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Bluebunch wheatgrass, low sagebrush

Ecological Site

Bucklake: 023XY039NV
Corral: 023XY006NV
Rock outcrop: none
Inclusion 1: 023XY041NV
Inclusion 2: 023XY039NV
Inclusion 3: 023XY031NV

1081--Bucklake-Fiddler association

Composition

Major Components
Bucklake very cobbly loam, 15 to 50 percent slopes--65 percent
Fiddler very stony loam, 15 to 50 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Devada very stony loam, 15 to 50 percent slopes--8 percent
Inclusion 2: Menbo very stony loam, 15 to 50 percent slopes--5 percent
Inclusion 3: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Plateaus
Bucklake--Landform: Plateaus; geomorphic position: backslope; aspect: south
Fiddler--Landform: Plateaus; geomorphic position: summit; position on slope: upper
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: lower
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Plateaus

Major Component Description

Bucklake Series
Elevation: 5,700 to 6,100 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 5 percent stones and boulders; 20 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Fiddler Series
Elevation: 5,700 to 6,100 feet
Precipitation: About 13 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Bucklake: Big sagebrush, bluebunch wheatgrass
Fiddler: Bluebunch wheatgrass, western juniper
Inclusion 1: Thurber needlegrass, low sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: None

Ecological Site

Bucklake: 023XY039NV
Fiddler: 023XY024NV
Inclusion 1: 023XY031NV
Inclusion 2: 023XY007NV
Inclusion 3: none

1083--Bucklake-Rubble land association

Composition

Major Components
Bucklake very cobbly loam, 30 to 50 percent slopes--50 percent
Rubble land fragmental material, 30 to 50 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Reywat very stony loam, 15 to 50 percent slopes--7 percent
Inclusion 2: Devada very stony loam, 8 to 30 percent slopes--5 percent
Inclusion 3: Dosie very stony loam, 30 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Bucklake--Landform: Plateaus; geomorphic position: backslope; aspect: south
Rubble land--Landform: Plateaus
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: summit
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: east

Major Component Description

Bucklake Series
Elevation: 5,600 to 6,400 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 5 percent stones and boulders; 20 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Rubble land Miscellaneous Area
Elevation: 5,600 to 6,400 feet
Surface layer texture: Fragmental material
Drainage class: Excessively drained

Dominant Present Vegetation

Bucklake: Big sagebrush, bluebunch wheatgrass
Rubble land: None
Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 2: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 3: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Bucklake: 023XY039NV
Rubble land: none
Inclusion 1: 023XY039NV
Inclusion 2: 023XY031NV
Inclusion 3: 023XY016NV

1090--Jaybee-Verdico association

Composition

Major Components
Jaybee very cobbly loam, 2 to 8 percent slopes--50 percent
Verdico very stony sandy loam, 4 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Emagert loam, 0 to 4 percent slopes--7 percent
Inclusion 2: Reywat very stony loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Toney very cobbly loam, 8 to 30 percent slopes--2 percent
Inclusion 4: Schamp stony loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Jaybee--Landform: Plateaus; geomorphic position: summit
Verdico--Landform: Plateaus; geomorphic position: toeslope
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 4--Landform: Alluvial fans; geomorphic position: toeslope

Major Component Description

Jaybee Series
Elevation: 4,800 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent stones and boulders; 25 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Verdico Series
Elevation: 4,800 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Very stony sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Jaybee: Thurber needlegrass, sagebrush
Verdico: Thurber needlegrass, bluebunch wheatgrass, sagebrush
Inclusion 1: Basin big sagebrush, basin wildrye
Inclusion 2: Big sagebrush, bluebunch wheatgrass
Inclusion 3: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 4: Thurber needlegrass, big sagebrush

Ecological Site

Jaybee: 023XY047NV
Verdico: 023XY047NV
Inclusion 1: 023XY009NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY017NV
Inclusion 4: 023XY006NV

1095--Corral-Mahala association

Composition

Major Components
Corral very stony loam, 15 to 50 percent slopes--50 percent
Mahala very cobbly silt loam, 0 to 8 percent slopes--35 percent

Contrasting Inclusions
Inclusion 1: Davey gravelly loamy sand, 2 to 8 percent slopes--5 percent
Inclusion 2: Hart Camp stony loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Vitritorrandic Haploxerolls, Ashy, mesic loam, 2 to 4 percent slopes--5 percent

Map Unit Setting
Landscape position: Plateaus and hills
Corral--Landform: Hills; geomorphic position: backslope; aspect: south
Mahala--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Inset fans

Major Component Description
Corral Series
Elevation: 5,000 to 5,300 feet
Precipitation: About 9 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 15 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Mahala Series
Elevation: 5,000 to 5,300 feet
Precipitation: About 12 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 30 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly silt loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Corral: Thurber needlegrass, big sagebrush
Mahala: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 1: Basin big sagebrush, needleandthread
Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Basin wildrye, big sagebrush

Ecological Site
Corral: 023XY006NV
Mahala: 023XY031NV
Inclusion 1: 023XY051NV
Inclusion 2: 023XY015NV
Inclusion 3: 023XY009NV

1105--Freznik very stony loam, 2 to 15 percent slopes

Composition
Major Components
Freznik very stony loam, 2 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Ferver very cobbly silt loam, 2 to 15 percent slopes--8 percent
Inclusion 2: Tunnison very cobbly clay, 0 to 8 percent slopes--7 percent

Map Unit Setting
Landscape position: Plateaus
Freznik--Landform: Plateaus
Inclusion 1--Landform: Plateaus; geomorphic position: toeslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave

Major Component Description
Freznik Series
Elevation: 5,400 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 15 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Freznik: Bluegrass, low sagebrush
Inclusion 1: Thurber needlegrass, bluegrass, low sagebrush
Inclusion 2: Rabbitbrush

Ecological Site
Freznik: 023XY021NV
Inclusion 1: 023XY059NV
Inclusion 2: 023XY001NV

1110--Indian Creek-Buffaran association

Composition
Major Components
Indian Creek very cobbly loam, 4 to 15 percent slopes--50 percent
Buffaran very stony loam, 4 to 15 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Corral stony loam, 4 to 15 percent slopes--4 percent
Inclusion 2: Devada very stony loam, 2 to 15 percent

slopes--4 percent
Inclusion 3: Schamp very stony loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Indian Creek--Landform: Alluvial fans; shape of slope: concave
Buffaran--Landform: Alluvial fans; shape of slope: convex
Inclusion 1--Landform: Pediments
Inclusion 2--Landform: Plateaus; position on slope: upper
Inclusion 3--Landform: Fan remnants; geomorphic position: toeslope

Major Component Description

Indian Creek Series
Elevation: 5,400 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 48 degrees
Frost-free season: About 90 days
Surface rock fragments: 20 percent cobbles; 15 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Buffaran Series
Elevation: 5,400 to 5,800 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Indian Creek: Thurber needlegrass, bluegrass, low sagebrush
Buffaran: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 2: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bluegrass

Ecological Site

Indian Creek: 023XY059NV
Buffaran: 023XY006NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY031NV
Inclusion 3: 023XY006NV

1115--Lofftus-Mesman complex, 0 to 2 percent slopes

Composition

Major Components
Lofftus silt loam, 0 to 1 percent slopes--45 percent
Mesman fine sandy loam, 0 to 2 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Langston very gravelly sandy loam, 2 to 4 percent slopes--4 percent
Inclusion 3: Emagert loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Wetvit loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Bolsons
Lofftus--Landform: Lake terraces
Mesman--Landform: Lake terraces; shape of slope: concave
Inclusion 1--Landform: Lagoons
Inclusion 2--Landform: Longshore bars (relict)
Inclusion 3--Landform: Stream terraces
Inclusion 4--Landform: Flood plains

Major Component Description

Lofftus Series
Elevation: 4,560 to 4,580 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface layer texture: Silt loam
Drainage class: Somewhat poorly drained
Dominant parent material: Alluvium derived from lacustrine sediments

Mesman Series
Elevation: 4,560 to 4,580 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Lofftus: Basin wildrye, black greasewood, inland saltgrass
Mesman: Basin wildrye, big sagebrush, black greasewood
Inclusion 1: Thurber needlegrass, basin big sagebrush, basin wildrye
Inclusion 2: Thurber needlegrass, big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 4: Nevada bluegrass, creeping wildrye, sedge

Ecological Site

Lofftus: 023XY010NV
Mesman: 024XY022NV
Inclusion 1: 023XY082NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY009NV
Inclusion 4: 023XY089NV

1120--McConnel very stony sandy loam, 2 to 8 percent slopes

Composition

Major Components
McConnel very stony sandy loam, 2 to 8 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Mazuma fine sandy loam, 0 to 2 percent slopes--9 percent
Inclusion 2: Xeric Torriorthents, sandy-skeletal, mixed, mesic very gravelly sandy loam, 0 to 2 percent slopes--6 percent

Map Unit Setting

Landscape position: Fan piedmonts
McConnel--Landform: Fan aprons
Inclusion 1--Landform: Lake plains
Inclusion 2--Landform: Inset fans

Major Component Description

McConnel Series
Elevation: 4,200 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 49 degrees
Frost-free season: About 100 days
Surface rock fragments: 10 percent stones and boulders; 20 percent gravel
Surface layer texture: Very stony sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

McConnel: Thurber needlegrass, Wyoming big sagebrush, spiny hopsage
Inclusion 1: Bud sagebrush, shadscale
Inclusion 2: Basin big sagebrush, basin wildrye, spiny hopsage

Ecological Site

McConnel: 024XY020NV
Inclusion 1: 024XY065NV
Inclusion 2: 024XY041NV

1121--McConnel gravelly fine sandy loam, 2 to 8 percent slopes

Composition

Major Components
McConnel gravelly fine sandy loam, 0 to 2 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Mazuma fine sandy loam, 2 to 8 percent slopes--7 percent
Inclusion 2: Schamp stony loam, 4 to 15 percent slopes--5 percent
Inclusion 3: McConnel very gravelly sandy loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
McConnel--Landform: Beach terraces; position on slope: upper
Inclusion 1--Landform: Lake terraces; position on slope: lower
Inclusion 2--Landform: Hills; geomorphic position: toeslope
Inclusion 3--Landform: Drainageways

Major Component Description

McConnel Series
Elevation: 4,600 to 4,800 feet
Precipitation: About 9 inches
Air temperature: About 49 degrees
Frost-free season: About 100 days
Surface rock fragments: 20 percent gravel
Surface layer texture: Gravelly fine sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

McConnel: Wyoming big sagebrush, shadscale, spiny hopsage
Inclusion 1: Bud sagebrush, shadscale
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush
Inclusion 3: Basin big sagebrush, basin wildrye

Ecological Site

McConnel: 024XY020NV
Inclusion 1: 024XY065NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY005NV

1125--Halvert-Jaybee-Tunnison association

Composition

Major Components
Halvert gravelly loam, 0 to 8 percent slopes--40

percent
Jaybee very cobbly loam, 2 to 8 percent slopes--30 percent
Tunnison cobbly clay, 0 to 4 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Schamp clay loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Bucklake very gravelly loam, 2 to 8 percent slopes--6 percent
Inclusion 3: Fiddler very stony loam, 4 to 15 percent slopes--2 percent
Inclusion 4: Boulder Lake silty clay, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Halvert--Landform: Plateaus; geomorphic position: toeslope
Jaybee--Landform: Plateaus; geomorphic position: summit
Tunnison--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder
Inclusion 4--Landform: Depressions

Major Component Description

Halvert Series
Elevation: 5,250 to 5,500 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent cobbles; 15 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Jaybee Series
Elevation: 5,250 to 5,500 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent stones and boulders; 25 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Tunnison Series
Elevation: 5,250 to 5,500 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 15 percent cobbles; 10 percent gravel
Surface layer texture: Cobbly clay
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Halvert: Bluebunch wheatgrass, sagebrush
Jaybee: Thurber needlegrass, sagebrush
Tunnison: Low sagebrush, rubber rabbitbrush
Inclusion 1: Big sagebrush, Thurber needlegrass
Inclusion 2: Big sagebrush, bluebunch wheatgrass
Inclusion 3: Bluebunch wheatgrass, western juniper
Inclusion 4: Nevada bluegrass, silver sagebrush

Ecological Site

Halvert: 023XY037NV
Jaybee: 023XY047NV
Tunnison: 023XY001NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY024NV
Inclusion 4: 023XY003NV

1130--Soughe-Rock outcrop complex, 4 to 30 percent slopes

Composition

Major Components
Soughe very cobbly loam, 4 to 30 percent slopes--75 percent
Rock outcrop--15 percent
Contrasting Inclusions
Inclusion 1: Bucklake very cobbly loam, 15 to 30 percent slopes--7 percent
Inclusion 2: Old Camp very cobbly loam, 15 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Soughe--Landform: Plateaus; geomorphic position: summit
Rock outcrop--Landform: Plateaus
Inclusion 1--Landform: Plateaus; aspect: north
Inclusion 2--Landform: Plateaus; aspect: south

Major Component Description

Soughe Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 20 percent cobbles; 25 percent gravel
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: 5,000 to 6,000 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Soughe: Thurber needlegrass, Wyoming big sagebrush, spiny hopsage
Rock outcrop: None
Inclusion 1: Big sagebrush, bluebunch wheatgrass
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush

Ecological Site

Soughe: 023XY006NV
Rock outcrop: none
Inclusion 1: 023XY039NV
Inclusion 2: 023XY006NV

1131--Soughe-Rock outcrop complex, 30 to 50 percent slopes

Composition

Major Components
Soughe very cobbly loam, 30 to 50 percent slopes--60 percent
Rock outcrop--25 percent
Contrasting Inclusions
Inclusion 1: Uhaldi very cobbly sandy loam, 30 to 50 percent slopes--7 percent
Inclusion 2: Chime gravelly loam, 4 to 15 percent slopes--6 percent
Inclusion 3: Pachic Haploxerolls, loamy-skeletal, mixed, mesic gravelly loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Soughe--Landform: Ash flows; geomorphic position: summit
Rock outcrop--Landform: Hills
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Pediments
Inclusion 3--Landform: Alluvial fans

Major Component Description

Soughe Series
Elevation: 4,800 to 5,200 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 30 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 4,800 to 5,200 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Soughe: Thurber needlegrass, Wyoming big sagebrush
Rock outcrop: None
Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Wyoming big sagebrush, spiny hopsage
Inclusion 3: Basin big sagebrush, basin wildrye

Ecological Site

Soughe: 023XY006NV
Rock outcrop: none
Inclusion 1: 023XY020NV
Inclusion 2: 024XY020NV
Inclusion 3: 023XY009NV

1135--McWatt-Old Camp association

Composition

Major Components
McWatt extremely stony fine sandy loam, 8 to 30 percent slopes--50 percent
Old Camp extremely stony loam, 8 to 30 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Rubble land fragmental material--7 percent
Inclusion 2: Langston very gravelly sandy loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Aridic Argixerolls, loamy-skeletal, mixed, mesic very stony loam, 15 to 50 percent slopes--2 percent
Inclusion 4: Fernpoint very cobbly sandy loam, 15 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
McWatt--Landform: Plateaus
Old Camp--Landform: Plateaus
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Longshore bars (relict)
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 4--Landform: Beach terraces; position on slope: lower; aspect: north

Major Component Description

McWatt Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent stones and boulders; 20 percent cobbles; 30 percent gravel
Surface layer texture: Extremely stony fine sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Alluvium derived from volcanic rocks

Old Camp Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent stones and boulders; 20 percent cobbles; 20 percent gravel
Surface layer texture: Extremely stony loam

Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

McWatt: Thurber needlegrass, Wyoming big sagebrush, bottlebrush squirreltail, spiny hopsage
Old Camp: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: None
Inclusion 2: Thurber needlegrass, big sagebrush, spiny hopsage
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

McWatt: 023XY006NV
Old Camp: 023XY006NV
Inclusion 1: none
Inclusion 2: 023XY006NV
Inclusion 3: 023XY020NV
Inclusion 4: 023XY020NV

1140--Valmy very fine sandy loam, 0 to 2 percent slopes

Composition

Major Components
Valmy very fine sandy loam, 0 to 2 percent slopes--95 percent
Contrasting Inclusions
Inclusion 1: Raglan very fine sandy loam, 0 to 2 percent slopes--3 percent
Inclusion 2: Updike silt loam, 0 to 2 percent slopes, rarely flooded--2 percent

Map Unit Setting

Landscape position: Bolsons
Valmy--Landform: Inset fans
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Alluvial flats

Major Component Description

Valmy Series
Elevation: 4,900 to 4,950 feet
Precipitation: About 8 inches
Air temperature: About 51 degrees
Frost-free season: About 100 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

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

Ecological Site

Valmy: 024XY006NV
Inclusion 1: 024XY003NV
Inclusion 2: 024XY008NV

1141--Valmy-Langston-Paypoint association

Composition

Major Components
Valmy fine sandy loam, 2 to 8 percent slopes--50 percent
Langston gravelly sandy loam, 2 to 8 percent slopes--20 percent
Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Dugway fine sandy loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Saraph gravelly sandy loam, 2 to 4 percent slopes--5 percent
Inclusion 3: Mesman fine sandy loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins
Valmy--Landform: Beach terraces
Langston--Landform: Longshore bars (relict)
Paypoint--Landform: Lagoons
Inclusion 1--Landform: Lake terraces
Inclusion 2--Landform: Pediments; geomorphic position: shoulder; shape of slope: convex
Inclusion 3--Landform: Lake terraces

Major Component Description

Valmy Series
Elevation: 4,600 to 4,800 feet
Precipitation: About 8 inches
Air temperature: About 51 degrees
Frost-free season: About 100 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Langston Series
Elevation: 4,600 to 4,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 25 percent gravel
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Paypoint Series
Elevation: 4,600 to 4,800 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent gravel
Surface layer texture: Gravelly fine sandy loam

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

Dominant Present Vegetation

Valmy: Big sagebrush, black greasewood, wheatgrass
Langston: Thurber needlegrass, Wyoming big sagebrush, bottlebrush squirreltail
Paypoint: Basin wildrye, big sagebrush, bottlebrush squirreltail, rubber rabbitbrush
Inclusion 1: Basin wildrye, big sagebrush, rabbitbrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, wheatgrass
Inclusion 3: Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Valmy: 024XY022NV
Langston: 023XY006NV
Paypoint: 023XY082NV
Inclusion 1: 023XY005NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY006NV

1145--Wendane silt loam, 0 to 2 percent slopes, rarely flooded

Composition

Major Components
Wendane silt loam, 0 to 2 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Raglan silt loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Isolde fine sand, 4 to 15 percent slopes--5 percent
Inclusion 3: Playas, 0 to 1 percent slopes--5 percent

Map Unit Setting

Landscape position: Bolsons
Wendane--Landform: Alluvial flats
Inclusion 1--Landform: Lake terraces
Inclusion 2--Landform: Dunes
Inclusion 3--Landform: Playas

Major Component Description

Wendane Series
Elevation: 4,000 to 4,200 feet
Precipitation: About 7 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Somewhat poorly drained
Dominant parent material: Alluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Wendane: Basin wildrye, black greasewood
Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale
Inclusion 2: Indian ricegrass, black greasewood
Inclusion 3: None

Ecological Site

Wendane: 024XY011NV
Inclusion 1: 024XY003NV
Inclusion 2: 024XY066NV
Inclusion 3: none

1150--Saraph-Hangrock-Tuffo association

Composition

Major Components
Saraph very gravelly sandy loam, 4 to 30 percent slopes--35 percent
Hangrock very gravelly loam, 2 to 15 percent slopes--30 percent
Tuffo very gravelly sandy loam, 15 to 50 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Vitrixerandic Haplargids, Ashy, mesic sandy loam, 0 to 4 percent slopes--7 percent
Inclusion 2: Fulstone very gravelly sandy loam, 2 to 8 percent slopes--3 percent
Inclusion 3: Xeric Torriorthents, clayey, montmorillonitic (calcareous), mesic, shallow gravelly clay loam, 8 to 30 percent slopes--3 percent
Inclusion 4: Badland, 50 to 75 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Saraph--Landform: Ash flows; geomorphic position: shoulder
Hangrock--Landform: Fan remnants; geomorphic position: summit
Tuffo--Landform: Ash flows; geomorphic position: backslope
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Fan remnants; geomorphic position: summit
Inclusion 3--Landform: Pediments; geomorphic position: backslope
Inclusion 4--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Saraph Series
Elevation: 5,700 to 6,100 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 50 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hangrock Series
Elevation: 5,700 to 6,100 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam

Drainage class: Well drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Tuffo Series
Elevation: 5,700 to 6,100 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 100 days
Surface rock fragments: 35 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Saraph: Thurber needlegrass, Wyoming big sagebrush
Hangrock: Thurber needlegrass, Wyoming big sagebrush, bottlebrush squirreltail
Tuffo: Wyoming big sagebrush, needlegrass, sagebrush
Inclusion 1: Douglas rabbitbrush, basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 2: Thurber needlegrass, bluegrass, sagebrush
Inclusion 3: Thurber needlegrass, sagebrush
Inclusion 4: None

Ecological Site

Saraph: 023XY006NV
Hangrock: 023XY006NV
Tuffo: 023XY088NV
Inclusion 1: 023XY082NV
Inclusion 2: 023XY093NV
Inclusion 3: 023XY047NV
Inclusion 4: none

1151--Saraph-Tuffo-Yellowhills association

Composition

Major Components
Saraph loamy sand, 2 to 8 percent slopes--50 percent
Tuffo fine sandy loam, 15 to 30 percent slopes--25 percent
Yellowhills sandy loam, 0 to 2 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Badland, 50 to 75 percent slopes--5 percent
Inclusion 2: Devada very stony loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Plateaus
Saraph--Landform: Ash flows; geomorphic position: summit
Tuffo--Landform: Ash flows; geomorphic position: backslope
Yellowhills--Landform: Inset fans
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Plateaus

Major Component Description

Saraph Series
Elevation: 5,700 to 6,100 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Loamy sand
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Tuffo Series
Elevation: 5,700 to 6,100 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 100 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Fine sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Residuum derived from tuffaceous rocks

Yellowhills Series
Elevation: 5,700 to 6,100 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Saraph: Thurber needlegrass, Wyoming big sagebrush
Tuffo: Wyoming big sagebrush, needlegrass
Yellowhills: Idaho fescue, Thurber needlegrass, basin big sagebrush
Inclusion 1: None
Inclusion 2: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Ecological Site

Saraph: 023XY006NV
Tuffo: 023XY020NV
Yellowhills: 023XY071NV
Inclusion 1: none
Inclusion 2: 023XY031NV

1155--Madeline-Ninemile complex, 4 to 15 percent slopes

Composition

Major Components
Madeline stony loam, 4 to 15 percent slopes--45 percent
Ninemile very cobbly loam, 4 to 15 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Devada very cobbly loam, 4 to 30 percent slopes--8 percent
Inclusion 2: Reywat stony loam, 4 to 15 percent slopes--4 percent
Inclusion 3: Uhaldi stony loam, 8 to 15 percent slopes--2 percent

Inclusion 4: Westbutte stony loam, 8 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Madeline--Landform: Plateaus; geomorphic position: shoulder; shape of slope: concave
Ninemile--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Plateaus; geomorphic position: summit; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description

Madeline Series
Elevation: 5,900 to 6,200 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface rock fragments: 1 percent stones and boulders; 20 percent cobbles; 10 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Ninemile Series
Elevation: 5,900 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Madeline: Antelope bitterbrush, bluebunch wheatgrass, bluegrass, mountain big sagebrush
Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Madeline: 023XY015NV
Ninemile: 023XY017NV
Inclusion 1: 023XY031NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY020NV
Inclusion 4: 023XY007NV

1160--Wylo-Bucklake-Rock outcrop association

Composition

Major Components
Wylo very stony loam, 8 to 30 percent slopes--55 percent
Bucklake extremely stony loam, 15 to 50 percent slopes--20 percent
Rock outcrop--15 percent
Contrasting Inclusions
Inclusion 1: Ceejay stony loam, 8 to 30 percent slopes--4 percent
Inclusion 2: Old Camp very stony loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Halvert gravelly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Wylo--Landform: Plateaus; geomorphic position: summit
Bucklake--Landform: Plateaus; geomorphic position: backslope
Rock outcrop--Landform: Plateaus
Inclusion 1--Landform: Plateaus; geomorphic position: summit; position on slope: lower
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: lower
Inclusion 3--Landform: Plateaus; geomorphic position: summit; shape of slope: concave

Major Component Description

Wylo Series
Elevation: 5,800 to 5,900 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 5 percent cobbles; 25 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Bucklake Series
Elevation: 5,800 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 20 percent stones and boulders; 10 percent cobbles; 10 percent gravel
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 5,800 to 6,000 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Wylo: Bluebunch wheatgrass, sagebrush
Bucklake: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Rock outcrop: None
Inclusion 1: Thurber needlegrass, bluegrass, sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush
Inclusion 3: Thurber needlegrass, bluebunch wheatgrass, sagebrush

Ecological Site

Wylo: 023XY037NV
Bucklake: 023XY039NV
Rock outcrop: none
Inclusion 1: 023XY093NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY037NV

1162--Devada-Nitpac association

Composition

Major Components
Devada extremely cobbly loam, 4 to 15 percent slopes--70 percent
Nitpac very cobbly loam, 2 to 8 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Grassycan extremely stony fine sandy loam, 2 to 15 percent slopes--4 percent
Inclusion 2: Ferver very gravelly fine sandy loam, 2 to 15 percent slopes--3 percent
Inclusion 3: Uhaldi stony loam, 2 to 15 percent slopes--2 percent
Inclusion 4: Ninemile very stony loam, 2 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: summit
Nitpac--Landform: Plateaus; geomorphic position: toeslope
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder
Inclusion 4--Landform: Plateaus; geomorphic position: summit; aspect: north

Major Component Description

Devada Series
Elevation: 6,100 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 35 percent cobbles; 35 percent gravel
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Nitpac Series
Elevation: 6,100 to 6,200 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Devada: Bluebunch wheatgrass, low sagebrush
Nitpac: Bluebunch wheatgrass, bluegrass, low sagebrush
Inclusion 1: Bluegrass, low sagebrush
Inclusion 2: Thurber needlegrass, bluegrass, low sagebrush
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Idaho fescue, bluebunch wheatgrass, low sagebrush

Ecological Site

Devada: 023XY031NV
Nitpac: 023XY031NV
Inclusion 1: 023XY021NV
Inclusion 2: 023XY059NV
Inclusion 3: 023XY020NV
Inclusion 4: 023XY017NV

1163--Devada-Deseed complex, 2 to 15 percent slopes

Composition

Major Components
Devada very cobbly loam, 2 to 15 percent slopes--50 percent
Deseed silt loam, 2 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Reywat very stony loam, 4 to 15 percent slopes--7 percent
Inclusion 2: Uhaldi stony loam, 4 to 15 percent slopes--4 percent
Inclusion 3: Zymans cobbly loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Bidrim extremely stony loam, 2 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: summit
Deseed--Landform: Plateaus; geomorphic position: shoulder; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: convex
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; position on slope: upper

Inclusion 4--Landform: Plateaus; geomorphic position: shoulder

Major Component Description

Devada Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 25 percent cobbles; 25 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Deseed Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Devada: Bluebunch wheatgrass, low sagebrush
Deseed: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Bluebunch wheatgrass, bluegrass, low sagebrush, western juniper

Ecological Site

Devada: 023XY031NV
Deseed: 023XY020NV
Inclusion 1: 023XY020NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY020NV
Inclusion 4: 023XY091NV

1164--Devada-Ashcamp association

Composition

Major Components
Devada very gravelly loam, 2 to 15 percent slopes--60 percent
Ashcamp sandy loam, 2 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Wylo very gravelly loam, 2 to 15 percent slopes--5 percent
Inclusion 2: Saraph gravelly sandy loam, 4 to 30 percent slopes--5 percent
Inclusion 3: Ferver very gravelly fine sandy loam, 2 to 8 percent slopes--3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: summit
Ashcamp--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: summit; position on slope: lower
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder; position on slope: lower
Inclusion 3--Landform: Plateaus; geomorphic position: summit; shape of slope: concave
Inclusion 4--Landform: Plateaus

Major Component Description

Devada Series
Elevation: 5,800 to 6,400 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Ashcamp Series
Elevation: 5,800 to 6,400 feet
Precipitation: About 13 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Ashcamp: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 3: Thurber needlegrass, bluegrass, low sagebrush
Inclusion 4: None

Ecological Site

Devada: 023XY031NV
Ashcamp: 023XY020NV
Inclusion 1: 023XY037NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY059NV
Inclusion 4: none

1165--Devada-Nitpac-Bidrim association

Composition

Major Components
Devada very cobbly loam, 2 to 30 percent slopes--50 percent
Nitpac very cobbly loam, 4 to 15 percent slopes--20 percent
Bidrim extremely stony loam, 2 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Tunnison very cobbly clay, 0 to 8 percent slopes--8 percent
Inclusion 2: Bucklake stony loam, 4 to 15 percent slopes--4 percent
Inclusion 3: Lithic Argixerolls, clayey, montmorillonitic, mesic very stony loam, 4 to 15 percent slopes--2 percent
Inclusion 4: Ferver very cobbly loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: summit
Nitpac--Landform: Plateaus; geomorphic position: toeslope
Bidrim--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Depressions; shape of slope: concave
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: summit
Inclusion 4--Landform: Plateaus; geomorphic position: summit

Major Component Description

Devada Series
Elevation: 5,300 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 30 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Nitpac Series
Elevation: 5,300 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Bidrim Series
Elevation: 5,300 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent stones and boulders; 20 percent cobbles; 20 percent gravel
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Devada: Bluebunch wheatgrass, low sagebrush
Nitpac: Bluebunch wheatgrass, low sagebrush
Bidrim: Cusick bluegrass, Nevada bluegrass, bluebunch wheatgrass, low sagebrush, western juniper
Inclusion 1: Bluegrass, low sagebrush, rubber rabbitbrush
Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Sandberg bluegrass, low sagebrush
Inclusion 4: Thurber needlegrass, bluegrass, low sagebrush

Ecological Site

Devada: 023XY031NV
Nitpac: 023XY031NV
Bidrim: 023XY091NV
Inclusion 1: 023XY001NV
Inclusion 2: 023XY039NV
Inclusion 3: 023XY021NV
Inclusion 4: 023XY059NV

1166--Devada-Bieber association

Composition

Major Components
Devada very cobbly loam, 2 to 15 percent slopes--50 percent
Bieber very gravelly loam, 2 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Buffaran very gravelly loam, 2 to 15 percent slopes--8 percent
Inclusion 2: Reywat very stony loam, 15 to 30 percent slopes--7 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Devada--Landform: Plateaus; geomorphic position: backslope
Bieber--Landform: Plateaus; geomorphic position: toeslope
Inclusion 1--Landform: Fan remnants
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: south

Major Component Description

Devada Series
Elevation: 5,300 to 5,450 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 30 percent cobbles; 20 percent gravel

Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Bieber Series
Elevation: 5,300 to 5,450 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 60 days
Surface rock fragments: 50 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation

Devada: Bluebunch wheatgrass, low sagebrush
Bieber: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, low sagebrush
Inclusion 1: Thurber needlegrass, big sagebrush
Inclusion 2: Big sagebrush, bluebunch wheatgrass

Ecological Site

Devada: 023XY031NV
Bieber: 023XY031NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY039NV

1167--Devada-Reywat association

Composition

Major Components
Devada very stony loam, 4 to 30 percent slopes--50 percent
Reywat very stony loam, 4 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Reywat very stony loam, 15 to 50 percent slopes--9 percent
Inclusion 2: Bucklake very stony loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Hart Camp stony loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Indian Creek very cobbly loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Devada--Landform: Plateaus; geomorphic position: shoulder
Reywat--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: south
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder; aspect: north
Inclusion 4--Landform: Alluvial fans

Major Component Description

Devada Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent stones and boulders, 15 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Reywat Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Reywat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Big sagebrush, bluebunch wheatgrass
Inclusion 2: Big sagebrush, bluebunch wheatgrass
Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Thurber needlegrass, low sagebrush

Ecological Site

Devada: 023XY031NV
Reywat: 023XY020NV
Inclusion 1: 023XY039NV
Inclusion 2: 023XY039NV
Inclusion 3: 023XY015NV
Inclusion 4: 023XY059NV

1168--Devada extremely cobbly loam, 4 to 15 percent slopes

Composition

Major Components
Devada extremely cobbly loam, 4 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Rock outcrop--5 percent
Inclusion 2: Bucklake extremely stony loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Grassycan very stony sandy loam, 2 to 8 percent slopes--3 percent
Inclusion 4: Nitpac very cobbly loam, 4 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: summit
Inclusion 4--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Devada Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 35 percent cobbles; 35 percent gravel
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Devada: Bluebunch wheatgrass, low sagebrush
Inclusion 1: None
Inclusion 2: Big sagebrush, bluebunch wheatgrass
Inclusion 3: Thurber needlegrass, bluegrass, low sagebrush
Inclusion 4: Bluebunch wheatgrass, bluegrass, low sagebrush

Ecological Site

Devada: 023XY031NV
Inclusion 1: none
Inclusion 2: 023XY039NV
Inclusion 3: 023XY059NV
Inclusion 4: 023XY031NV

1170--Devada-Bucklake association

Composition

Major Components
Devada very stony loam, 4 to 50 percent slopes--55 percent
Bucklake very cobbly loam, 30 to 50 percent slopes--30 percent
Contrasting Inclusions
Inclusion 1: Dosie very stony loam, 30 to 50 percent slopes--7 percent
Inclusion 2: Menbo very stony loam, 30 to 50 percent slopes--6 percent
Inclusion 3: Bidrim extremely stony loam, 2 to 15 percent slopes--1 percent
Inclusion 4: Fiddler extremely stony loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Bucklake--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: east
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: south

Major Component Description

Devada Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent stones and boulders; 5 percent cobbles; 5 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Bucklake Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 35 percent cobbles; 15 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Bucklake: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Thurber needlegrass, low sagebrush, western juniper
Inclusion 4: Bluebunch wheatgrass, mountain big sagebrush, western juniper

Ecological Site

Devada: 023XY031NV
Bucklake: 023XY039NV
Inclusion 1: 023XY016NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY091NV
Inclusion 4: 023XY024NV

1171--Devada-Indian Creek association

Composition

Major Components
Devada very stony loam, 4 to 30 percent slopes--50 percent
Indian Creek very cobbly loam, 4 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Zymans very stony loam, 8 to 15 percent slopes--7 percent
Inclusion 2: Mahala very cobbly loam, 2 to 8 percent slopes--5 percent
Inclusion 3: Hart Camp stony loam, 8 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Devada--Landform: Plateaus; geomorphic position: summit
Indian Creek--Landform: Inset fans
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Ash flows; geomorphic position: summit
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: east

Major Component Description

Devada Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent stones and boulders; 5 percent cobbles; 5 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Indian Creek Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 48 degrees
Frost-free season: About 90 days
Surface rock fragments: 20 percent cobbles; 15 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Indian Creek: Thurber needlegrass, bluegrass, low sagebrush
Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 2: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Devada: 023XY031NV
Indian Creek: 023XY059NV
Inclusion 1: 023XY020NV
Inclusion 2: 023XY031NV
Inclusion 3: 023XY015NV

1172--Devada-Madeline-Ninemile association

Composition

Major Components
Devada very gravelly loam, 8 to 30 percent slopes--45 percent
Madeline very cobbly loam, 8 to 30 percent slopes--20 percent
Ninemile very cobbly loam, 8 to 30 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Nitpac very cobbly loam, 4 to 15 percent slopes--6 percent
Inclusion 2: Tinpan very cobbly loam, 0 to 8 percent slopes--5 percent
Inclusion 3: Welch sandy loam, 2 to 8 percent slopes, rarely flooded--3 percent
Inclusion 4: Newlands very gravelly loam, 15 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: backslope; aspect: south
Madeline--Landform: Plateaus; geomorphic position: backslope; shape of slope: convex; aspect: north
Ninemile--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: toeslope; aspect: south
Inclusion 2--Landform: Depressions; shape of slope: concave; aspect: north
Inclusion 3--Landform: Drainageways; shape of slope: convex
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description

Devada Series
Elevation: 5,800 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Madeline Series
Elevation: 5,800 to 6,200 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days

Surface layer texture: Very cobbly loam
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Ninemile Series
Elevation: 5,800 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Madeline: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 3: Nevada bluegrass, big sagebrush, sedge
Inclusion 4: Idaho fescue, mountain big sagebrush, needlegrass, snowberry

Ecological Site
Devada: 023XY031NV
Madeline: 023XY015NV
Ninemile: 023XY017NV
Inclusion 1: 023XY031NV
Inclusion 2: 023XY017NV
Inclusion 3: 023XY013NV
Inclusion 4: 023XY065NV

1173--Devada-Nitpac-Uhaldi association

Composition
Major Components
Devada very cobbly loam, 8 to 30 percent slopes--35 percent
Nitpac very cobbly loam, 4 to 15 percent slopes--30 percent
Uhaldi stony loam, 8 to 30 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Ninemile very cobbly loam, 8 to 30 percent slopes--5 percent
Inclusion 2: Westbutte stony loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Hart Camp stony loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Reywat very stony loam, 15 to 30 percent slopes--3 percent

Map Unit Setting
Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: summit
Nitpac--Landform: Plateaus; geomorphic position: toeslope
Uhaldi--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: summit; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Pediments; geomorphic position: backslope; aspect: north
Inclusion 4--Landform: Plateaus; geomorphic position: backslope

Major Component Description
Devada Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 30 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Nitpac Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Uhaldi Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 3 percent cobbles; 30 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Nitpac: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Uhaldi: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Inclusion 3: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Big sagebrush, bluebunch wheatgrass

Ecological Site

Devada: 023XY031NV
Nitpac: 023XY031NV
Uhaldi: 023XY020NV
Inclusion 1: 023XY017NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY015NV
Inclusion 4: 023XY039NV

1174--Devada-Uhaldi association

Composition

Major Components
Devada very cobbly loam, 8 to 30 percent slopes--50 percent
Uhaldi stony loam, 8 to 30 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Reywat very stony loam, 15 to 30 percent slopes--9 percent
Inclusion 2: Reywat very stony loam, 4 to 15 percent slopes--4 percent
Inclusion 3: Westbutte stony loam, 15 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Devada--Landform: Plateaus; geomorphic position: summit
Uhaldi--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description

Devada Series
Elevation: 5,500 to 6,300 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 30 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Uhaldi Series
Elevation: 5,500 to 6,300 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 3 percent cobbles; 30 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Uhaldi: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
Inclusion 1: Big sagebrush, bluebunch wheatgrass
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 3: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Devada: 023XY031NV
Uhaldi: 023XY020NV
Inclusion 1: 023XY039NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY007NV

1175--Ferver-Tunnison association

Composition

Major Components
Ferver very cobbly silt loam, 2 to 8 percent slopes--65 percent
Tunnison cobbly clay, 0 to 4 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Lithic Xeric Haplargids, loamy, mixed, mesic very stony loam, 2 to 8 percent slopes--7 percent
Inclusion 2: Devada very cobbly loam, 2 to 8 percent slopes--6 percent
Inclusion 3: Boulder Lake silty clay, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Ferver--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave
Tunnison--Landform: Depressions; shape of slope: concave
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Plateaus
Inclusion 3--Landform: Depressions

Major Component Description

Ferver Series
Elevation: 5,200 to 5,500 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 25 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Tunnison Series
Elevation: 5,200 to 5,500 feet

Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 15 percent cobbles; 10 percent gravel
Surface layer texture: Cobbly clay
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Ferver: Thurber needlegrass, bluegrass, low sagebrush
Tunnison: Low sagebrush, rubber rabbitbrush
Inclusion 1: Sandberg bluegrass, low sagebrush
Inclusion 2: Bluebunch wheatgrass, bluegrass, low sagebrush
Inclusion 3: Silver sagebrush

Ecological Site

Ferver: 023XY059NV
Tunnison: 023XY001NV
Inclusion 1: 023XY021NV
Inclusion 2: 023XY031NV
Inclusion 3: 023XY003NV

1180--Ninemile-Karlo association

Composition

Major Components
Ninemile very cobbly loam, 2 to 15 percent slopes--70 percent
Karlo very cobbly clay, 0 to 8 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Toney very cobbly loam, 2 to 15 percent slopes--7 percent
Inclusion 2: Madeline very stony loam, 8 to 15 percent slopes--6 percent
Inclusion 3: Badgercamp very stony loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; shape of slope: convex
Karlo--Landform: Plateaus; shape of slope: concave
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder

Major Component Description

Ninemile Series
Elevation: 6,000 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Karlo Series
Elevation: 6,000 to 6,200 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 30 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly clay
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Karlo: Low sagebrush, rubber rabbitbrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Curlleaf mountainmahogany, mountain big sagebrush

Ecological Site

Ninemile: 023XY017NV
Karlo: 023XY001NV
Inclusion 1: 023XY017NV
Inclusion 2: 023XY015NV
Inclusion 3: 023XY026NV

1181--Ninemile-Madeline-Tinpan association

Composition

Major Components
Ninemile very cobbly loam, 2 to 15 percent slopes--35 percent
Madeline very cobbly loam, 4 to 15 percent slopes--30 percent
Tinpan extremely cobbly loam, 0 to 8 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Karlo very cobbly clay, 0 to 4 percent slopes--9 percent
Inclusion 2: Newlands stony loam, 8 to 30 percent slopes--3 percent
Inclusion 3: Crocan extremely stony loam, 2 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Madeline--Landform: Plateaus; geomorphic position: backslope
Tinpan--Landform: Plateaus; shape of slope: concave
Inclusion 1--Landform: Depressions
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north

Inclusion 3--Landform: Plateaus; geomorphic position: shoulder

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 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Madeline Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Tinpan Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 40 percent cobbles; 20 percent gravel
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Madeline: Antelope bitterbrush, bluebunch wheatgrass, bluegrass, mountain big sagebrush
Tinpan: Idaho fescue, bluebunch wheatgrass, bluegrass, low sagebrush
Inclusion 1: Low sagebrush, rubber rabbitbrush
Inclusion 2: Idaho fescue, mountain big sagebrush, needlegrass
Inclusion 3: Idaho fescue, bluebunch wheatgrass, low sagebrush, western juniper

Ecological Site

Ninemile: 023XY017NV
Madeline: 023XY015NV
Tinpan: 023XY017NV
Inclusion 1: 023XY001NV
Inclusion 2: 023XY065NV
Inclusion 3: 023XY095NV

1182--Ninemile-Westbutte complex, 2 to 15 percent slopes

Composition

Major Components
Ninemile very cobbly loam, 2 to 15 percent slopes--60 percent
Westbutte stony loam, 2 to 15 percent slopes--30 percent
Contrasting Inclusions
Inclusion 1: Devada very stony loam, 4 to 30 percent slopes--8 percent
Inclusion 2: Vitritorrandic Haploxerolls, Ashy, frigid gravelly loamy sand, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Ninemile--Landform: Plateaus; geomorphic position: summit
Westbutte--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Inset fans

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 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Westbutte Series
Elevation: 6,000 to 6,400 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Westbutte: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Bluebunch wheatgrass, low sagebrush
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Ninemile: 023XY017NV
Westbutte: 023XY007NV
Inclusion 1: 023XY031NV

Inclusion 2: 023XY096NV

1183--Ninemile-Westbutte association, 30 to 50 percent slopes

Composition

Major Components
Ninemile very cobbly loam, 30 to 50 percent slopes--60 percent
Westbutte stony loam, 30 to 50 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Ashdos very gravelly fine sandy loam, 15 to 30 percent slopes--7 percent
Inclusion 2: Ashtre very gravelly sandy loam, 15 to 30 percent slopes--6 percent
Inclusion 3: Devada very cobbly loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: backslope; shape of slope: convex
Westbutte--Landform: Plateaus; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: summit; aspect: south

Major Component Description

Ninemile Series
Elevation: 6,000 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Westbutte Series
Elevation: 6,000 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Westbutte: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, Thurber needlegrass, low sagebrush
Inclusion 2: Idaho fescue, mountain big sagebrush, needlegrass
Inclusion 3: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Ecological Site

Ninemile: 023XY017NV
Westbutte: 023XY007NV
Inclusion 1: 023XY079NV
Inclusion 2: 023XY094NV
Inclusion 3: 023XY031NV

1184--Ninemile-Tinpan association

Composition

Major Components
Ninemile very cobbly loam, 2 to 30 percent slopes--65 percent
Tinpan extremely cobbly loam, 0 to 8 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Devada very stony loam, 4 to 15 percent slopes--7 percent
Inclusion 2: Lithic Argixerolls, clayey, montmorillonitic, frigid extremely cobbly loam, 2 to 8 percent slopes--6 percent
Inclusion 3: Crocan extremely stony loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Tinpan--Landform: Plateaus; shape of slope: concave
Inclusion 1--Landform: Plateaus; geomorphic position: summit; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder

Major Component Description

Ninemile Series
Elevation: 6,000 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Tinpan Series
Elevation: 6,000 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days

Surface rock fragments: 40 percent cobbles; 20 percent gravel
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Tinpan: Idaho fescue, bluebunch wheatgrass, bluegrass, low sagebrush
Inclusion 1: Bluebunch wheatgrass, bluegrass, low sagebrush
Inclusion 2: Idaho fescue, bluegrass, low sagebrush
Inclusion 3: Idaho fescue, bluebunch wheatgrass, low sagebrush, western juniper

Ecological Site

Ninemile: 023XY017NV
Tinpan: 023XY017NV
Inclusion 1: 023XY031NV
Inclusion 2: 023XY014NV
Inclusion 3: 023XY095NV

1185--Ninemile-Hart Camp association

Composition

Major Components
Ninemile very cobbly loam, 4 to 30 percent slopes--60 percent
Hart Camp stony loam, 4 to 30 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Devada very stony loam, 4 to 30 percent slopes--5 percent
Inclusion 2: Lithic Argixerolls, loamy-skeletal, mixed, frigid extremely gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Pachic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 4 to 15 percent slopes--4 percent
Inclusion 4: Tusune stony loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Hart Camp--Landform: Plateaus; geomorphic position: summit; shape of slope: concave
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: lower; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder; aspect: north
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north

Major Component Description

Ninemile Series
Elevation: 6,200 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Hart Camp Series
Elevation: 6,200 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 2: Idaho fescue, bluegrass, low sagebrush
Inclusion 3: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Idaho fescue, mountain big sagebrush

Ecological Site

Ninemile: 023XY017NV
Hart Camp: 023XY015NV
Inclusion 1: 023XY031NV
Inclusion 2: 023XY008NV
Inclusion 3: 023XY007NV
Inclusion 4: 023XY054NV

1186--Ninemile-Tinpan-Crocan association

Composition

Major Components
Ninemile very cobbly loam, 4 to 30 percent slopes--40 percent
Tinpan extremely cobbly loam, 0 to 8 percent slopes--30 percent
Crocan extremely stony loam, 2 to 15 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Devada very stony loam, 4 to 30 percent slopes--5 percent
Inclusion 2: Karlo very cobbly clay, 0 to 8 percent slopes--3 percent

Inclusion 3: Vertic Argixerolls, very-fine, montmorillonitic, frigid extremely cobbly loam, 2 to 8 percent slopes--1 percent
Inclusion 4: Madeline very stony loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: summit
Tinpan--Landform: Plateaus; shape of slope: concave
Crocan--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: lower; aspect: west
Inclusion 2--Landform: Plateaus; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: summit; shape of slope: concave
Inclusion 4--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Ninemile Series
Elevation: 6,000 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 5 percent stones and boulders; 20 percent cobbles; 15 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Tinpan Series
Elevation: 6,000 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 40 percent cobbles; 20 percent gravel
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Crocan Series
Elevation: 6,000 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 10 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Tinpan: Idaho fescue, bluebunch wheatgrass, bluegrass, low sagebrush
Crocan: Cusick bluegrass, Idaho fescue, bluebunch wheatgrass, low sagebrush, western juniper
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 2: Bluegrass, low sagebrush, rubber rabbitbrush
Inclusion 3: Idaho fescue, bluegrass, low sagebrush
Inclusion 4: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Ninemile: 023XY017NV
Tinpan: 023XY017NV
Crocan: 023XY095NV
Inclusion 1: 023XY031NV
Inclusion 2: 023XY001NV
Inclusion 3: 023XY014NV
Inclusion 4: 023XY015NV

1187--Ninemile-Tinpan-Hart Camp association

Composition

Major Components
Ninemile very stony loam, 4 to 30 percent slopes--40 percent
Tinpan extremely cobbly loam, 0 to 8 percent slopes--30 percent
Hart Camp stony loam, 4 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Lithic Argixerolls, clayey, montmorillonitic, frigid extremely stony loam, 2 to 15 percent slopes--8 percent
Inclusion 2: Devada very cobbly loam, 4 to 30 percent slopes--5 percent
Inclusion 3: Ashtre stony loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: summit
Tinpan--Landform: Plateaus; shape of slope: concave
Hart Camp--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Plateaus; geomorphic position: summit; aspect: south
Inclusion 3--Landform: Ash flows

Major Component Description

Ninemile Series
Elevation: 5,900 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 5 percent stones and boulders; 20 percent cobbles; 15 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Tinpan Series
Elevation: 5,900 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 40 percent cobbles; 20 percent gravel
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from volcanic rocks

Hart Camp Series
Elevation: 5,900 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Tinpan: Idaho fescue, bluebunch wheatgrass, bluegrass, low sagebrush
Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, bluegrass, low sagebrush
Inclusion 2: Thurber needlegrass, bluebunch wheatgrass, bluegrass, low sagebrush
Inclusion 3: Idaho fescue, mountain big sagebrush, needlegrass

Ecological Site
Ninemile: 023XY017NV
Tinpan: 023XY017NV
Hart Camp: 023XY015NV
Inclusion 1: 023XY008NV
Inclusion 2: 023XY031NV
Inclusion 3: 023XY094NV

1188--Ninemile-Newlands-Hart Camp association

Composition
Major Components
Ninemile very cobbly loam, 8 to 30 percent slopes--40 percent
Newlands stony loam, 15 to 30 percent slopes--25 percent
Hart Camp stony loam, 8 to 30 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Dosie very stony loam, 30 to 50 percent slopes--7 percent
Inclusion 2: Cotant very gravelly loam, 4 to 15 percent slopes--4 percent
Inclusion 3: Devada very cobbly loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Vitritorrandic Haploxerolls, Ashy, frigid sandy loam, 0 to 4 percent slopes--1 percent

Map Unit Setting
Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: summit
Newlands--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Hart Camp--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: summit; aspect: south
Inclusion 4--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave

Major Component Description
Ninemile Series
Elevation: 6,200 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Newlands Series
Elevation: 6,200 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Hart Camp Series
Elevation: 6,200 to 6,800 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Newlands: Idaho fescue, mountain big sagebrush, needlegrass, snowberry

Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, low sagebrush
Inclusion 3: Bluebunch wheatgrass, low sagebrush
Inclusion 4: Nevada bluegrass, rush

Ecological Site

Ninemile: 023XY017NV
Newlands: 023XY065NV
Hart Camp: 023XY015NV
Inclusion 1: 023XY016NV
Inclusion 2: 023XY017NV
Inclusion 3: 023XY031NV
Inclusion 4: 023XY082NV

1189--Ninemile-Badgercamp-Crocan association

Composition

Major Components

Ninemile very cobbly loam, 4 to 30 percent slopes--35 percent
Badgercamp bouldery loam, 4 to 30 percent slopes--30 percent
Crocan extremely stony loam, 2 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Hart Camp stony loam, 4 to 30 percent slopes--7 percent
Inclusion 2: Newlands stony loam, 8 to 30 percent slopes--5 percent
Inclusion 3: Hackwood gravelly loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Vertic Palexerolls, very-fine, montmorillonitic, frigid very cobbly loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: summit
Badgercamp--Landform: Plateaus; geomorphic position: shoulder
Crocan--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 4--Landform: Plateaus; geomorphic position: toeslope; shape of slope: convex

Major Component Description

Ninemile Series

Elevation: 6,200 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Badgercamp Series

Elevation: 6,200 to 6,800 feet
Precipitation: About 16 inches
Air temperature: About 40 degrees
Frost-free season: About 50 days
Surface rock fragments: 2 percent stones and boulders; 2 percent cobbles; 10 percent gravel
Surface layer texture: Bouldery loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Crocan Series

Elevation: 6,200 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 10 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Badgercamp: Idaho fescue, big sagebrush, curlleaf mountainmahogany, needlegrass
Crocan: Cusick bluegrass, Idaho fescue, bluebunch wheatgrass, low sagebrush, western juniper
Inclusion 1: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue, mountain big sagebrush, needlegrass, snowberry
Inclusion 3: Quaking aspen
Inclusion 4: Idaho fescue, low sagebrush

Ecological Site

Ninemile: 023XY017NV
Badgercamp: 023XY026NV
Crocan: 023XY095NV
Inclusion 1: 023XY015NV
Inclusion 2: 023XY065NV
Inclusion 3: 023XY028NV
Inclusion 4: 023XY014NV

1190--Ferver-Nitpac association

Composition

Major Components

Ferver very gravelly loam, 2 to 15 percent slopes--50 percent

Nitpac very cobbly loam, 2 to 15 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Tunnison cobbly clay, 0 to 8 percent slopes--9 percent
Inclusion 2: Devada very stony loam, 2 to 15 percent slopes--3 percent
Inclusion 3: Boulder Lake silty clay, 0 to 2 percent slopes--2 percent
Inclusion 4: Weimer clay, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Ferver--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave
Nitpac--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Depressions; geomorphic position: summit; shape of slope: concave
Inclusion 2--Landform: Plateaus
Inclusion 3--Landform: Depressions
Inclusion 4--Landform: Depressions

Major Component Description

Ferver Series

Elevation: 5,300 to 5,600 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent cobbles; 45 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Nitpac Series

Elevation: 5,300 to 5,600 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Ferver: Thurber needlegrass, bluegrass, low sagebrush
Nitpac: Bluebunch wheatgrass, low sagebrush
Inclusion 1: Bluegrass, rubber rabbitbrush
Inclusion 2: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 3: Bluegrass, silver sagebrush
Inclusion 4: Sedge, silver sagebrush

Ecological Site

Ferver: 023XY059NV
Nitpac: 023XY031NV
Inclusion 1: 023XY001NV
Inclusion 2: 023XY031NV
Inclusion 3: 023XY003NV
Inclusion 4: 023XY023NV

1195--Bitner-Ashcamp association

Composition

Major Components

Bitner gravelly sandy loam, 4 to 30 percent slopes--50 percent
Ashcamp sandy loam, 2 to 15 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Reywat stony loam, 15 to 50 percent slopes--6 percent
Inclusion 2: Frentera gravelly sandy loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Powlow very gravelly loam, 2 to 15 percent slopes--4 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Bitner--Landform: Plateaus; geomorphic position: shoulder
Ashcamp--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Fan remnants

Major Component Description

Bitner Series

Elevation: 5,600 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent gravel
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Ashcamp Series

Elevation: 5,600 to 6,200 feet
Precipitation: About 13 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Bitner: Idaho fescue, Thurber needlegrass, big sagebrush, bluebunch wheatgrass, bluegrass
Ashcamp: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 2: Idaho fescue, Thurber needlegrass, big sagebrush
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Bitner: 023XY096NV
Ashcamp: 023XY020NV
Inclusion 1: 023XY039NV
Inclusion 2: 023XY072NV
Inclusion 3: 023XY020NV

1205--Davey loamy fine sand, 2 to 15 percent slopes

Composition

Major Components
Davey loamy fine sand, 2 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Zorravista fine sand, 4 to 15 percent slopes--5 percent
Inclusion 3: Bombadil very stony loam, cool, 8 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins
Davey--Landform: Beach terraces
Inclusion 1--Landform: Lagoons
Inclusion 2--Landform: Dunes
Inclusion 3--Landform: Plateaus; geomorphic position: summit

Major Component Description

Davey Series
Elevation: 5,500 to 5,700 feet
Precipitation: About 9 inches
Air temperature: About 45 degrees
Frost-free season: About 100 days
Surface layer texture: Loamy fine sand
Drainage class: Somewhat excessively drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Davey: Indian ricegrass, basin big sagebrush, needleandthread
Inclusion 1: Basin wildrye, big sagebrush
Inclusion 2: Indian ricegrass, basin big sagebrush
Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bottlebrush squirreltail

Ecological Site

Davey: 023XY051NV
Inclusion 1: 023XY082NV
Inclusion 2: 023XY011NV
Inclusion 3: 023XY006NV

1206--Davey-Corral association

Composition

Major Components
Davey loamy fine sand, 2 to 15 percent slopes--50 percent
Corral loamy fine sand, 2 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Langston very gravelly loamy fine sand, 2 to 15 percent slopes--5 percent
Inclusion 2: Zorravista fine sand, 2 to 15 percent slopes--5 percent
Inclusion 3: Saraph gravelly loamy sand, 2 to 15 percent slopes--3 percent
Inclusion 4: Paypoint gravelly sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Davey--Landform: Beach terraces
Corral--Landform: Pediments
Inclusion 1--Landform: Longshore bars (relict)
Inclusion 2--Landform: Dunes
Inclusion 3--Landform: Pediments; geomorphic position: summit; shape of slope: convex
Inclusion 4--Landform: Lagoons

Major Component Description

Davey Series
Elevation: 5,550 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 45 degrees
Frost-free season: About 100 days
Surface layer texture: Loamy fine sand
Drainage class: Somewhat excessively drained
Dominant parent material: Alluvium derived from mixed rocks

Corral Series
Elevation: 5,500 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface layer texture: Loamy fine sand
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Davey: Indian ricegrass, basin big sagebrush, needleandthread
Corral: Indian ricegrass, basin big sagebrush, needleandthread
Inclusion 1: Indian ricegrass, basin big sagebrush, needleandthread
Inclusion 2: Basin big sagebrush, needleandthread
Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, needlegrass
Inclusion 4: Douglas rabbitbrush, basin wildrye, big sagebrush, bottlebrush squirreltail, rubber rabbitbrush

Ecological Site

Davey: 023XY051NV
Corral: 023XY051NV
Inclusion 1: 023XY051NV
Inclusion 2: 023XY011NV
Inclusion 3: 023XY006NV
Inclusion 4: 023XY082NV

1210--Mazuma-Bighat association

Composition

Major Components
Mazuma fine sandy loam, 2 to 4 percent slopes--50 percent
Bighat very stony sandy loam, 4 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Mazuma fine sandy loam, alkali, 2 to 8 percent slopes--8 percent
Inclusion 2: Raglan fine sandy loam, 0 to 4 percent slopes--7 percent

Map Unit Setting

Landscape position: Bolsons
Mazuma--Landform: Lake terraces
Bighat--Landform: Beach terraces
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Lake terraces; position on slope: lower

Major Component Description

Mazuma Series
Elevation: 4,500 to 4,700 feet
Precipitation: About 6 inches
Air temperature: About 50 degrees
Frost-free season: About 100 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Bighat Series
Elevation: 4,500 to 4,700 feet
Precipitation: About 6 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface rock fragments: 5 percent stones and boulders; 20 percent cobbles; 15 percent gravel
Surface layer texture: Very stony sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Mazuma: Bud sagebrush, shadscale
Bighat: Bud sagebrush, shadscale
Inclusion 1: Black greasewood, shadscale
Inclusion 2: Black greasewood, shadscale

Ecological Site

Mazuma: 024XY065NV
Bighat: 024XY002NV
Inclusion 1: 024XY003NV
Inclusion 2: 024XY003NV

1215--Raglan-Isolde association

Composition

Major Components
Raglan very fine sandy loam, 0 to 2 percent slopes--50 percent
Isolde fine sand, 2 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Mazuma silt loam, 0 to 2 percent slopes, dry--6 percent
Inclusion 2: Xeric Haplocambids, coarse-loamy, mixed, mesic fine sandy loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Haploduridic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic fine sandy loam, 0 to 2 percent slopes--4 percent

Map Unit Setting

Landscape position: Bolsons
Raglan--Landform: Lake terraces
Isolde--Landform: Dunes
Inclusion 1--Landform: Lake terraces
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Inset fans

Major Component Description

Raglan Series
Elevation: 4,500 to 4,600 feet
Precipitation: About 6 inches
Air temperature: About 50 degrees
Frost-free season: About 100 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Isolde Series
Elevation: 4,500 to 4,600 feet
Precipitation: About 6 inches
Air temperature: About 50 degrees
Frost-free season: About 100 days
Surface layer texture: Fine sand
Drainage class: Excessively drained
Dominant parent material: Eolian material

Dominant Present Vegetation

Raglan: Black greasewood, bud sagebrush, shadscale
Isolde: Indian ricegrass, black greasewood, spiny hopsage
Inclusion 1: Bottlebrush squirreltail, shadscale
Inclusion 2: Wyoming big sagebrush, spiny hopsage
Inclusion 3: Basin wildrye, big sagebrush, black greasewood, western wheatgrass

Ecological Site

Raglan: 024XY003NV
Isolde: 024XY066NV
Inclusion 1: 024XY067NV
Inclusion 2: 024XY020NV
Inclusion 3: 024XY006NV

1220--Schamp very stony loam, 4 to 15 percent slopes

Composition

Major Components
Schamp very stony loam, 4 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Schamp very stony loam, 15 to 30 percent slopes--9 percent
Inclusion 2: Chime very gravelly loam, 2 to 30 percent slopes--4 percent
Inclusion 3: Pachic Haploxerolls, loamy-skeletal, mixed, mesic very gravelly loam, 2 to 30 percent slopes--1 percent
Inclusion 4: Xeric Haplocambids, fine-loamy, mixed, mesic fine sandy loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Schamp--Landform: Hills; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: toeslope
Inclusion 2--Landform: Hills; geomorphic position: toeslope
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Drainageways

Major Component Description

Schamp Series
Elevation: 4,800 to 5,100 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation

Schamp: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Wyoming big sagebrush, spiny hopsage
Inclusion 3: Basin wildrye, big sagebrush
Inclusion 4: Basin wildrye, big sagebrush

Ecological Site

Schamp: 023XY006NV
Inclusion 1: 023XY006NV
Inclusion 2: 024XY020NV
Inclusion 3: 023XY009NV
Inclusion 4: 023XY005NV

1221--Schamp very stony loam, 30 to 50 percent slopes

Composition

Major Components
Schamp very stony loam, 30 to 50 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Zymans very stony loam, 30 to 50 percent slopes--8 percent
Inclusion 2: McConnel stony sandy loam, 2 to 15 percent slopes--4 percent
Inclusion 3: Chime very gravelly loam, 4 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Schamp--Landform: Hills; geomorphic position: shoulder
Inclusion 1--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Alluvial fans; position on slope: lower
Inclusion 3--Landform: Hills; geomorphic position: summit

Major Component Description

Schamp Series
Elevation: 4,800 to 5,400 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation

Schamp: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Basin wildrye, big sagebrush
Inclusion 3: Wyoming big sagebrush, spiny hopsage

Ecological Site

Schamp: 023XY006NV
Inclusion 1: 023XY020NV
Inclusion 2: 023XY005NV
Inclusion 3: 024XY020NV

1223--Schamp loam, 4 to 15 percent slopes

Composition

Major Components
Schamp loam, 4 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Old Camp very stony loam, 2 to 8 percent slopes--9 percent
Inclusion 2: Langston gravelly sandy loam, 2 to 15 percent slopes--3 percent
Inclusion 3: Davey loamy fine sand, 1 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Schamp--Landform: Hills; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: summit

Inclusion 2--Landform: Longshore bars (relict)
Inclusion 3--Landform: Beach terraces

Major Component Description

Schamp Series
Elevation: 5,000 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 80 days
Surface rock fragments: 15 percent gravel
Surface layer texture: Loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation

Schamp: Thurber needlegrass, Wyoming big sagebrush
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush
Inclusion 3: Indian ricegrass, basin big sagebrush, needleandthread

Ecological Site

Schamp: 023XY006NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY051NV

1230--Raglan-Mazuma association

Composition

Major Components
Raglan very fine sandy loam, 0 to 2 percent slopes--45 percent
Mazuma fine sandy loam, 0 to 2 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Xeric Haplocambids, loamy-skeletal, mixed, mesic fine sandy loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Isolde fine sand, 2 to 15 percent slopes--6 percent
Inclusion 3: Xeric Haplocambids, coarse-loamy, mixed, mesic fine sand, 0 to 2 percent slopes--2 percent
Inclusion 4: Skullwak silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Bolsons
Raglan--Landform: Lake terraces
Mazuma--Landform: Lake terraces
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Dunes
Inclusion 3--Landform: Lake terraces; shape of slope: concave
Inclusion 4--Landform: Swales

Major Component Description

Raglan Series
Elevation: 4,550 to 4,600 feet
Precipitation: About 6 inches
Air temperature: About 50 degrees
Frost-free season: About 100 days
Surface layer texture: Very fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Mazuma Series
Elevation: 4,550 to 4,600 feet
Precipitation: About 6 inches
Air temperature: About 50 degrees
Frost-free season: About 100 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Raglan: Black greasewood, bottlebrush squirreltail, bud sagebrush, shadscale
Mazuma: Bud sagebrush, shadscale
Inclusion 1: Basin wildrye, big sagebrush, black greasewood, western wheatgrass
Inclusion 2: Indian ricegrass, black greasewood, spiny hopsage
Inclusion 3: Wyoming big sagebrush, spiny hopsage
Inclusion 4: Nevada bluegrass, alkaligrass, inland saltgrass

Ecological Site

Raglan: 024XY003NV
Mazuma: 024XY065NV
Inclusion 1: 024XY006NV
Inclusion 2: 024XY066NV
Inclusion 3: 024XY020NV
Inclusion 4: 023XY002NV

1235--Chime gravelly loam, 4 to 15 percent slopes

Composition

Major Components
Chime gravelly loam, 4 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Schamp stony loam, 4 to 30 percent slopes--8 percent
Inclusion 2: Lithic Haplargids, loamy, mixed, mesic stony loam, 15 to 30 percent slopes--6 percent
Inclusion 3: Xeric Haplocambids, fine-silty, mixed, mesic gravelly loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Chime--Landform: Pediments; geomorphic position: backslope
Inclusion 1--Landform: Hills; geomorphic position: toeslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Fan skirts

Major Component Description

Chime Series
Elevation: 4,700 to 4,900 feet
Precipitation: About 9 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface rock fragments: 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Chime: Wyoming big sagebrush, spiny hopsage
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Bud sagebrush, shadscale
Inclusion 3: Basin big sagebrush, basin wildrye

Ecological Site

Chime: 024XY020NV
Inclusion 1: 023XY006NV
Inclusion 2: 024XY025NV
Inclusion 3: 023XY005NV

1240--Toney-Millerlux-Hart Camp association

Composition

Major Components
Toney extremely cobbly loam, 2 to 8 percent slopes--40 percent
Millerlux very cobbly loam, 2 to 15 percent slopes--30 percent
Hart Camp stony loam, 4 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Ninemile very stony loam, 2 to 8 percent slopes--8 percent
Inclusion 2: Karlo very cobbly clay, 0 to 4 percent slopes--6 percent
Inclusion 3: Hapgood stony loam, 8 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus and hills
Toney--Landform: Hills; geomorphic position: backslope; shape of slope: concave
Millerlux--Landform: Hills; geomorphic position: summit; shape of slope: convex
Hart Camp--Landform: Hills; geomorphic position: toeslope; position on slope: lower
Inclusion 1--Landform: Plateaus
Inclusion 2--Landform: Depressions; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description

Toney Series
Elevation: 6,000 to 6,300 feet
Precipitation: About 13 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface rock fragments: 10 percent stones and boulders; 30 percent cobbles; 25 percent gravel
Surface layer texture: Extremely cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Millerlux Series
Elevation: 6,000 to 6,300 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 60 days
Surface rock fragments: 25 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hart Camp Series
Elevation: 6,000 to 6,300 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Toney: Idaho fescue, bluebunch wheatgrass, low sagebrush
Millerlux: Sandberg bluegrass, low sagebrush
Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 2: Low sagebrush, rubber rabbitbrush
Inclusion 3: Idaho fescue, mountain big sagebrush, needlegrass

Ecological Site

Toney: 023XY017NV
Millerlux: 023XY021NV
Hart Camp: 023XY015NV
Inclusion 1: 023XY017NV
Inclusion 2: 023XY001NV
Inclusion 3: 023XY065NV

1245--Saraph-Uhaldi-Frentera association

Composition

Major Components
Saraph very gravelly sandy loam, 4 to 30 percent slopes--45 percent
Uhaldi stony loam, 4 to 30 percent slopes--25 percent
Frentera gravelly sandy loam, 15 to 30 percent slopes--15 percent

Contrasting Inclusions
Inclusion 1: Paypoint sandy loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Old Camp very stony loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Powlow very gravelly loam, 2 to 8 percent slopes--2 percent
Inclusion 4: Esmod very gravelly fine sandy loam, 2 to 15 percent slopes--1 percent

Map Unit Setting
Landscape position: Hills and intermontane basins
Saraph--Landform: Ash flows; geomorphic position: summit; shape of slope: convex
Uhaldi--Landform: Hills; geomorphic position: backslope; shape of slope: concave
Frentera--Landform: Ash flows; geomorphic position: backslope
Inclusion 1--Landform: Lagoons
Inclusion 2--Landform: Plateaus
Inclusion 3--Landform: Fan remnants
Inclusion 4--Landform: Fan remnants; geomorphic position: summit

Major Component Description
Saraph Series
Elevation: 5,600 to 6,100 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 50 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Uhaldi Series
Elevation: 5,600 to 6,100 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 1 percent stones and boulders; 3 percent cobbles; 30 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Frentera Series
Elevation: 5,600 to 6,100 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 30 percent gravel
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Saraph: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Uhaldi: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
Frentera: Idaho fescue, Thurber needlegrass, mountain big sagebrush
Inclusion 1: Basin big sagebrush, basin wildrye, bluegrass
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Thurber needlegrass, bluegrass, low sagebrush

Ecological Site
Saraph: 023XY006NV
Uhaldi: 023XY020NV
Frentera: 023XY072NV
Inclusion 1: 023XY082NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY020NV
Inclusion 4: 023XY059NV

1250--Ashone-Ashdos-Bearbutte association

Composition
Major Components
Ashone very gravelly fine sandy loam, 4 to 30 percent slopes--40 percent
Ashdos very gravelly fine sandy loam, 4 to 30 percent slopes--35 percent
Bearbutte fine sandy loam, 4 to 15 percent slopes--10 percent
Contrasting Inclusions
Inclusion 1: Vitrixerandic Torriorthents, Ashy-skeletal, mesic, shallow very gravelly sandy loam, 2 to 15 percent slopes--10 percent
Inclusion 2: Welch fine sandy loam, 2 to 8 percent slopes, rarely flooded--3 percent
Inclusion 3: Rock outcrop--2 percent

Map Unit Setting
Landscape position: Mountains and intermontane basins
Ashone--Landform: Ash flows; geomorphic position: backslope; aspect: south
Ashdos--Landform: Ash flows; geomorphic position: backslope; aspect: north
Bearbutte--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
Inclusion 1--Landform: Alluvial fans
Inclusion 2--Landform: Depressions; shape of slope: concave
Inclusion 3--Landform: Mountains

Major Component Description
Ashone Series
Elevation: 5,900 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 1 percent cobbles; 50 percent gravel
Surface layer texture: Very gravelly fine sandy loam
Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Ashdos Series
Elevation: 5,900 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Bearbutte Series
Elevation: 5,900 to 6,400 feet
Precipitation: About 13 inches
Air temperature: About 43 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation
Ashone: Idaho fescue, Thurber needlegrass, antelope bitterbrush, low sagebrush
Ashdos: Idaho fescue, Thurber needlegrass, low sagebrush
Bearbutte: Idaho fescue, Thurber needlegrass, antelope bitterbrush, mountain big sagebrush
Inclusion 1: Sandberg bluegrass, low sagebrush
Inclusion 2: Nevada bluegrass, Rocky Mountain iris, big sagebrush
Inclusion 3: None

Ecological Site
Ashone: 023XY078NV
Ashdos: 023XY079NV
Bearbutte: 023XY066NV
Inclusion 1: 023XY021NV
Inclusion 2: 023XY013NV
Inclusion 3: none

1251--Ashone-Ashdos-Ashtre association

Composition
Major Components
Ashone very gravelly fine sandy loam, 4 to 30 percent slopes--35 percent
Ashdos very gravelly fine sandy loam, 4 to 30 percent slopes--30 percent
Ashtre very gravelly loam, 4 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid very stony sandy loam, 4 to 15 percent slopes--4 percent
Inclusion 2: Uhaldi very gravelly loam, 4 to 30 percent slopes--2 percent
Inclusion 3: Vitritorrandic Argixerolls, Ashy, frigid sandy loam, 0 to 4 percent slopes--2 percent
Inclusion 4: Vitritorrandic Haploxerolls, Ashy, mesic gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting
Landscape position: Plateaus and adjacent bolsons
Ashone--Landform: Ash flows; geomorphic position: backslope; aspect: south
Ashdos--Landform: Ash flows; geomorphic position: backslope; aspect: north
Ashtre--Landform: Ash flows; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Hills; aspect: south
Inclusion 3--Landform: Inset fans
Inclusion 4--Landform: Alluvial fans; geomorphic position: backslope; shape of slope: concave

Major Component Description
Ashone Series
Elevation: 5,900 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface layer texture: Very gravelly fine sandy loam
Surface rock fragments: 1 percent cobbles; 50 percent gravel
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Ashdos Series
Elevation: 5,900 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Ashtre Series
Elevation: 5,900 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation
Ashone: Idaho fescue, Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Ashdos: Idaho fescue, Thurber needlegrass, low sagebrush
Ashtre: Idaho fescue, Thurber needlegrass, mountain big sagebrush

Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush, western juniper
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 3: Idaho fescue, basin big sagebrush
Inclusion 4: Thurber needlegrass, basin wildrye, big sagebrush

Ecological Site

Ashone: 023XY078NV
Ashdos: 023XY079NV
Ashtre: 023XY094NV
Inclusion 1: 023XY095NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY071NV
Inclusion 4: 023XY082NV

1253--Ashdos-Ashtre-Hackwood association

Composition

Major Components

Ashdos very gravelly fine sandy loam, 30 to 50 percent slopes--35 percent
Ashtre very gravelly loam, 30 to 50 percent slopes--35 percent
Hackwood gravelly loam, 30 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Tusune stony loam, 30 to 50 percent slopes--7 percent
Inclusion 2: Boltz very gravelly sandy loam, 15 to 50 percent slopes--4 percent
Inclusion 3: Aquandic Endoaquolls, Ashy, frigid loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Cumulic Cryaquolls, loamy-skeletal, mixed very gravelly loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Ashdos--Landform: Ash flows; geomorphic position: backslope; shape of slope: convex
Ashtre--Landform: Ash flows; geomorphic position: backslope; shape of slope: concave
Hackwood--Landform: Plateaus; geomorphic position: toeslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Alluvial fans; geomorphic position: toeslope; shape of slope: concave
Inclusion 4--Landform: Drainageways

Major Component Description

Ashdos Series

Elevation: 6,000 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Ashtre Series

Elevation: 6,000 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Hackwood Series

Elevation: 6,000 to 6,900 feet
Precipitation: About 16 inches
Air temperature: About 41 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Ashdos: Idaho fescue, Thurber needlegrass, low sagebrush
Ashtre: Idaho fescue, Thurber needlegrass, mountain big sagebrush
Hackwood: Bluegrass, quaking aspen, snowberry
Inclusion 1: Idaho fescue, mountain big sagebrush
Inclusion 2: Idaho fescue, antelope bitterbrush, mountain big sagebrush
Inclusion 3: Nevada bluegrass, rush
Inclusion 4: Quaking aspen

Ecological Site

Ashdos: 023XY079NV
Ashtre: 023XY094NV
Hackwood: 023XY028NV
Inclusion 1: 023XY054NV
Inclusion 2: 023XY066NV
Inclusion 3: 023XY013NV
Inclusion 4: 023XY029NV

1255--Newlands-Ninemile complex, 4 to 15 percent slopes

Composition

Major Components

Newlands stony loam, 4 to 15 percent slopes--60 percent
Ninemile very cobbly loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Lithic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 2 to 15 percent slopes--5 percent
Inclusion 2: Menbo very gravelly loam, 4 to 15 percent slopes--5 percent

Inclusion 3: Westbutte very gravelly loam, 4 to 30 percent slopes--5 percent

Map Unit Setting

Landscape position: Plateaus
Newlands--Landform: Plateaus; geomorphic position: summit; shape of slope: concave; aspect: north
Ninemile--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: southwest

Major Component Description

Newlands Series
Elevation: 6,200 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 10 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Ninemile Series
Elevation: 6,200 to 6,400 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Newlands: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Idaho fescue, low sagebrush
Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Newlands: 023XY007NV
Ninemile: 023XY017NV
Inclusion 1: 023XY008NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY007NV

1256--Newlands-Menbo association

Composition

Major Components
Newlands stony loam, 4 to 30 percent slopes--50 percent
Menbo very gravelly loam, 4 to 30 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Hartig very gravelly loam, 4 to 30 percent slopes--8 percent
Inclusion 2: Hart Camp stony loam, 4 to 30 percent slopes--6 percent
Inclusion 3: Badgercamp bouldery loam, 15 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Newlands--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Menbo--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder; aspect: east
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: east
Inclusion 3--Landform: Plateaus; geomorphic position: summit

Major Component Description

Newlands Series
Elevation: 6,000 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Menbo Series
Elevation: 6,000 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 60 days
Surface rock fragments: 3 percent cobbles; 45 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Newlands: Idaho fescue, mountain big sagebrush, needlegrass, snowberry
Menbo: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, mountain big sagebrush, curlleaf mountainmahogany, needlegrass

Ecological Site

Newlands: 023XY065NV
Menbo: 023XY007NV
Inclusion 1: 023XY016NV
Inclusion 2: 023XY015NV
Inclusion 3: 023XY026NV

1257--Newlands-Hapgood association

Composition

Major Components
Newlands stony loam, 8 to 30 percent slopes--50 percent
Hapgood very gravelly loam, 8 to 30 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Menbo stony loam, 4 to 15 percent slopes--8 percent
Inclusion 2: Hackwood gravelly loam, 15 to 30 percent slopes--7 percent

Map Unit Setting

Landscape position: Plateaus
Newlands--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Hapgood--Landform: Plateaus; geomorphic position: shoulder
Inclusion 1--Landform: Plateaus; geomorphic position: toeslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north

Major Component Description

Newlands Series
Elevation: 6,200 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Hapgood Series
Elevation: 6,200 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Newlands: Idaho fescue, mountain big sagebrush, needlegrass, snowberry
Hapgood: Idaho fescue, mountain big sagebrush, needlegrass, snowberry
Inclusion 1: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Quaking aspen

Ecological Site

Newlands: 023XY065NV
Hapgood: 023XY065NV
Inclusion 1: 023XY007NV
Inclusion 2: 023XY028NV

1258--Newlands-Badgercamp-Hackwood association

Composition

Major Components
Newlands stony loam, 4 to 30 percent slopes--50 percent
Badgercamp bouldery loam, 4 to 30 percent slopes--20 percent
Hackwood gravelly loam, 15 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Ninemile very cobbly loam, 4 to 30 percent slopes--8 percent
Inclusion 2: Westbutte stony loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Plateaus
Newlands--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Badgercamp--Landform: Plateaus; geomorphic position: shoulder
Hackwood--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: west
Inclusion 3--Landform: Plateaus

Major Component Description

Newlands Series
Elevation: 6,000 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 60 days
Surface layer texture: Stony loam
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Badgercamp Series
Elevation: 6,000 to 6,500 feet
Precipitation: About 16 inches
Air temperature: About 40 degrees
Frost-free season: About 50 days
Surface rock fragments: 2 percent stones and boulders; 2 percent cobbles; 20 percent gravel
Surface layer texture: Bouldery loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hackwood Series
Elevation: 6,000 to 6,500 feet
Precipitation: About 16 inches
Air temperature: About 41 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation
Newlands: Idaho fescue, mountain big sagebrush, needlegrass, snowberry
Badgercamp: Idaho fescue, big sagebrush, curlleaf mountainmahogany, needlegrass
Hackwood: Bluegrass, quaking aspen, snowberry
Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: None

Ecological Site
Newlands: 023XY065NV
Badgercamp: 023XY026NV
Hackwood: 023XY028NV
Inclusion 1: 023XY017NV
Inclusion 2: 023XY007NV
Inclusion 3: none

1265--Fitzwater-Westbutte association

Composition
Major Components
Fitzwater extremely stony loam, 30 to 50 percent slopes--45 percent
Westbutte stony loam, 30 to 50 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Bucklake very stony loam, 30 to 50 percent slopes--7 percent
Inclusion 2: Hapgood very stony loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Hackwood very stony loam, 30 to 50 percent slopes--2 percent
Inclusion 4: Cumulic Haploxerolls, loamy-skeletal, mixed, mesic gravelly loam, 0 to 4 percent slopes--1 percent

Map Unit Setting
Landscape position: Plateaus
Fitzwater--Landform: Plateaus; geomorphic position: backslope; aspect: south
Westbutte--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: lower; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; shape of slope: convex; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; shape of slope: concave; aspect: north
Inclusion 4--Landform: Stream terraces

Major Component Description
Fitzwater Series
Elevation: 5,000 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent stones and boulders; 20 percent cobbles; 20 percent gravel
Surface layer texture: Extremely stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Westbutte Series
Elevation: 5,000 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation
Fitzwater: Bluebunch wheatgrass, mountain big sagebrush
Westbutte: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Big sagebrush, bluebunch wheatgrass
Inclusion 2: Mountain big sagebrush, serviceberry, snowberry
Inclusion 3: Quaking aspen
Inclusion 4: Basin wildrye, mountain big sagebrush

Ecological Site
Fitzwater: 023XY016NV
Westbutte: 023XY007NV
Inclusion 1: 023XY039NV
Inclusion 2: 023XY065NV
Inclusion 3: 023XY028NV
Inclusion 4: 023XY056NV

1270--Hartig gravelly loam, 8 to 30 percent slopes

Composition

Major Components
Hartig gravelly loam, 8 to 30 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Hartig gravelly loam, 30 to 50 percent slopes--5 percent
Inclusion 2: Menbo very gravelly loam, 8 to 30 percent slopes--4 percent
Inclusion 3: Ninemile very cobbly loam, 4 to 30 percent slopes--3 percent
Inclusion 4: Hart Camp stony loam, 8 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus and mountains
Hartig--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: summit; position on slope: upper; shape of slope: convex
Inclusion 4--Landform: Pediments; position on slope: lower

Major Component Description

Hartig Series
Elevation: 5,800 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 50 days
Surface rock fragments: 15 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Hartig: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 4: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Hartig: 023XY016NV
Inclusion 1: 023XY016NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY017NV
Inclusion 4: 023XY015NV

1271--Hartig-Newlands association

Composition

Major Components
Hartig very stony sandy loam, 30 to 50 percent slopes--70 percent
Newlands stony loam, 30 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Hackwood loam, 15 to 30 percent slopes--6 percent
Inclusion 2: Badgercamp very stony loam, 8 to 30 percent slopes--5 percent
Inclusion 3: Hackwood very gravelly loam, cold, 30 to 50 percent slopes--4 percent

Map Unit Setting

Landscape position: Plateaus
Hartig--Landform: Plateaus; geomorphic position: backslope
Newlands--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; shape of slope: concave; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; shape of slope: concave; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; position on slope: upper

Major Component Description

Hartig Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 50 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 25 percent gravel
Surface layer texture: Very stony sandy loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Newlands Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Hartig: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Newlands: Idaho fescue, bluebunch wheatgrass, bluegrass, mountain big sagebrush

Inclusion 1: Quaking aspen
Inclusion 2: Idaho fescue, curlleaf mountainmahogany, mountain big sagebrush
Inclusion 3: Mountain brome, quaking aspen, snowberry

Ecological Site

Hartig: 023XY016NV
Newlands: 023XY054NV
Inclusion 1: 023XY028NV
Inclusion 2: 023XY026NV
Inclusion 3: 023XY027NV

1272--Hartig-Rock outcrop association

Composition

Major Components
Hartig very gravelly sandy loam, 30 to 50 percent slopes--70 percent
Rock outcrop--15 percent
Contrasting Inclusions
Inclusion 1: Hartig very gravelly sandy loam, 50 to 90 percent slopes--6 percent
Inclusion 2: Ashdos very gravelly sandy loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Reywat very stony loam, 15 to 50 percent slopes--3 percent
Inclusion 4: Corral very stony loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus and mountains
Hartig--Landform: Mountains; geomorphic position: footslope; aspect: east
Rock outcrop--Landform: Plateaus
Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: east
Inclusion 2--Landform: Ash flows; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; aspect: south

Major Component Description

Hartig Series
Elevation: 5,700 to 6,000 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area
Elevation: 5,700 to 6,000 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Hartig: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Bluebunch wheatgrass
Inclusion 2: Idaho fescue, Thurber needlegrass, low sagebrush
Inclusion 3: Big sagebrush, bluebunch wheatgrass
Inclusion 4: Thurber needlegrass, Wyoming big sagebrush

Ecological Site

Hartig: 023XY016NV
Rock outcrop: none
Inclusion 1: 023XY016NV
Inclusion 2: 023XY079NV
Inclusion 3: 023XY039NV
Inclusion 4: 023XY006NV

1273--Hartig-Hapgood association

Composition

Major Components
Hartig very gravelly sandy loam, 50 to 70 percent slopes--60 percent
Hapgood very gravelly loam, 50 to 70 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Westbutte very gravelly loam, 30 to 70 percent slopes--9 percent
Inclusion 2: Badgercamp very gravelly loam, 30 to 70 percent slopes--4 percent
Inclusion 3: Hapgood very gravelly loam, 30 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Hartig--Landform: Plateaus; geomorphic position: backslope; aspect: east
Hapgood--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: southeast
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave

Major Component Description

Hartig Series
Elevation: 6,000 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Hapgood Series
Elevation: 6,000 to 6,500 feet

Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Hartig: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Hapgood: Idaho fescue, mountain big sagebrush, needlegrass, snowberry
Inclusion 1: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush
Inclusion 3: Idaho fescue, mountain big sagebrush, needlegrass, snowberry

Ecological Site

Hartig: 023XY016NV
Hapgood: 023XY065NV
Inclusion 1: 023XY007NV
Inclusion 2: 023XY026NV
Inclusion 3: 023XY065NV

1275--Hart Camp stony loam, 8 to 30 percent slopes

Composition

Major Components
Hart Camp stony loam, 8 to 30 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Hartig gravelly loam, 8 to 30 percent slopes--8 percent
Inclusion 2: Madeline stony loam, 4 to 15 percent slopes--4 percent
Inclusion 3: Reywat very stony loam, 4 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Hart Camp--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: summit; aspect: southwest

Major Component Description

Hart Camp Series
Elevation: 5,800 to 6,500 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Hart Camp: 023XY015NV
Inclusion 1: 023XY016NV
Inclusion 2: 023XY015NV
Inclusion 3: 023XY020NV

1276--Hart Camp-Reywat-Westbutte association

Composition

Major Components
Hart Camp stony loam, 30 to 50 percent slopes--40 percent
Reywat stony loam, 30 to 50 percent slopes--30 percent
Westbutte stony loam, 30 to 50 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Hartig stony loam, 30 to 50 percent slopes--8 percent
Inclusion 2: Newlands stony loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Fiddler very stony loam, 15 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Hart Camp--Landform: Plateaus; geomorphic position: backslope; aspect: east
Reywat--Landform: Plateaus; geomorphic position: backslope; aspect: south
Westbutte--Landform: Plateaus; geomorphic position: toeslope; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: east
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: summit; position on slope: upper; aspect: south

Major Component Description

Hart Camp Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days

Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Reywat Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 2 percent stones and boulders; 10 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Westbutte Series
Elevation: 5,500 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation
Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Reywat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Westbutte: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue, mountain big sagebrush
Inclusion 3: Big sagebrush, western juniper

Ecological Site
Hart Camp: 023XY015NV
Reywat: 023XY039NV
Westbutte: 023XY007NV
Inclusion 1: 023XY016NV
Inclusion 2: 023XY054NV
Inclusion 3: 023XY024NV

1277--Hart Camp-Ninemile association

Composition
Major Components
Hart Camp stony loam, 4 to 30 percent slopes--60 percent
Ninemile very gravelly loam, 4 to 30 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Tusune stony loam, 30 to 50 percent slopes--6 percent
Inclusion 2: Hartig very stony loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Lithic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 4 to 15 percent slopes--2 percent
Inclusion 4: Vitrandic Cryoborolls, Ashy gravelly sandy loam, 4 to 15 percent slopes--2 percent

Map Unit Setting
Landscape position: Plateaus
Hart Camp--Landform: Plateaus; geomorphic position: summit; shape of slope: concave
Ninemile--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Plateaus; geomorphic position: summit
Inclusion 4--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave; aspect: north

Major Component Description
Hart Camp Series
Elevation: 6,500 to 6,900 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Ninemile Series
Elevation: 6,500 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation
Hart Camp: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Idaho fescue, mountain big sagebrush
Inclusion 2: Idaho fescue, Thurber needlegrass, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, bluegrass, low sagebrush
Inclusion 4: Idaho fescue, Nevada bluegrass, mountain big sagebrush

Ecological Site
Hart Camp: 023XY015NV
Ninemile: 023XY017NV
Inclusion 1: 023XY054NV
Inclusion 2: 023XY016NV

Inclusion 3: 023XY008NV
Inclusion 4: 023XY084NV

1278--Boltz-Hart Camp association

Composition

Major Components
Boltz gravelly sandy loam, 4 to 30 percent slopes--60 percent
Hart Camp stony loam, 4 to 30 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Ashtre gravelly sandy loam, 8 to 15 percent slopes--5 percent
Inclusion 2: Menbo very gravelly loam, 8 to 30 percent slopes--5 percent
Inclusion 3: Tusune stony loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Vitrandic Cryoborolls, Ashy gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Boltz--Landform: Plateaus; geomorphic position: shoulder; aspect: north
Hart Camp--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Ash flows; geomorphic position: shoulder; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 4--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave

Major Component Description

Boltz Series
Elevation: 6,200 to 6,600 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface rock fragments: 15 percent gravel
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Hart Camp Series
Elevation: 6,200 to 6,600 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Boltz: Idaho fescue, antelope bitterbrush, mountain big sagebrush, needlegrass
Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, antelope bitterbrush, mountain big sagebrush, needlegrass
Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, mountain big sagebrush
Inclusion 4: Idaho fescue, bluegrass, mountain big sagebrush, needlegrass

Ecological Site

Boltz: 023XY066NV
Hart Camp: 023XY015NV
Inclusion 1: 023XY094NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY054NV
Inclusion 4: 023XY084NV

1279--Hart Camp-Nutzan-Westbutte association

Composition

Major Components
Hart Camp stony loam, 4 to 30 percent slopes--40 percent
Nutzan gravelly sandy loam, 4 to 30 percent slopes--30 percent
Westbutte very gravelly loam, 4 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Lithic Argixerolls, loamy-skeletal, mixed, frigid extremely gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Ashdos very gravelly fine sandy loam, 4 to 30 percent slopes--4 percent
Inclusion 3: Ninemile very cobbly loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Tusune stony loam, 30 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Hart Camp--Landform: Plateaus; geomorphic position: summit
Nutzan--Landform: Plateaus; geomorphic position: shoulder
Westbutte--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: summit
Inclusion 4--Landform: Ash flows; geomorphic position: backslope; aspect: north

Major Component Description

Hart Camp Series
Elevation: 6,200 to 6,800 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Nutzan Series
Elevation: 6,200 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 70 days
Surface rock fragments: 30 percent gravel
Surface layer texture: Gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Westbutte Series
Elevation: 6,200 to 6,800 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Hart Camp: Idaho fescue, Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass
Nutzan: Idaho fescue, antelope bitterbrush, mountain big sagebrush, needlegrass
Westbutte: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Idaho fescue, bluegrass, low sagebrush
Inclusion 2: Idaho fescue, low sagebrush, needlegrass
Inclusion 3: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 4: Idaho fescue, mountain big sagebrush

Ecological Site

Hart Camp: 023XY015NV
Nutzan: 023XY066NV
Westbutte: 023XY007NV
Inclusion 1: 023XY008NV
Inclusion 2: 023XY079NV
Inclusion 3: 023XY017NV
Inclusion 4: 023XY054NV

1285--Zymans-Indian Creek association

Composition

Major Components
Zymans cobbly loam, 4 to 15 percent slopes--60 percent
Indian Creek very cobbly loam, 4 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Corral very cobbly loam, 4 to 8 percent slopes--8 percent
Inclusion 2: Reywat very cobbly loam, 15 to 30 percent slopes--7 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Zymans--Landform: Hills; geomorphic position: backslope
Indian Creek--Landform: Alluvial fans
Inclusion 1--Landform: Hills; geomorphic position: shoulder
Inclusion 2--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Zymans Series
Elevation: 5,500 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 100 days
Surface rock fragments: 10 percent cobbles; 5 percent gravel
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Indian Creek Series
Elevation: 5,500 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 48 degrees
Frost-free season: About 90 days
Surface rock fragments: 20 percent cobbles; 15 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Zymans: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Indian Creek: Bluegrass, low sagebrush
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Big sagebrush, bluebunch wheatgrass

Ecological Site

Zymans: 023XY020NV
Indian Creek: 023XY059NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY039NV

1286--Zymans-Cotant-Hart Camp association

Composition

Major Components
Zymans cobbly loam, 8 to 30 percent slopes--50 percent
Cotant very gravelly loam, 8 to 30 percent slopes--20 percent
Hart Camp stony loam, 15 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Schamp very stony loam, 8 to 30 percent slopes--8 percent
Inclusion 2: Old Camp very stony loam, 15 to 30 percent slopes--7 percent

Map Unit Setting

Landscape position: Plateaus and hills
Zymans--Landform: Hills; geomorphic position: backslope; aspect: south
Cotant--Landform: Hills; geomorphic position: summit
Hart Camp--Landform: Hills; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Hills; geomorphic position: toeslope; position on slope: lower
Inclusion 2--Landform: Plateaus; geomorphic position: backslope

Major Component Description

Zymans Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 100 days
Surface rock fragments: 10 percent cobbles; 5 percent gravel
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Cotant Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Hart Camp Series
Elevation: 5,600 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Zymans: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Cotant: Idaho fescue, bluebunch wheatgrass, low sagebrush
Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush

Ecological Site

Zymans: 023XY020NV
Cotant: 023XY017NV
Hart Camp: 023XY015NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY006NV

1290--Hapgood-Badgercamp-Hackwood association

Composition

Major Components
Hapgood very gravelly loam, 15 to 30 percent slopes--40 percent
Badgercamp bouldery loam, 4 to 30 percent slopes--30 percent
Hackwood gravelly loam, 4 to 15 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Hackwood very gravelly sandy loam, cold, 15 to 50 percent slopes--8 percent
Inclusion 2: Newlands very gravelly loam, 4 to 15 percent slopes--6 percent
Inclusion 3: Easte very cobbly loam, 15 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Hapgood--Landform: Plateaus; geomorphic position: backslope
Badgercamp--Landform: Plateaus; geomorphic position: shoulder
Hackwood--Landform: Plateaus; geomorphic position: toeslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Inclusion 2--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north

Major Component Description

Hapgood Series
Elevation: 6,500 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Badgercamp Series
Elevation: 6,500 to 6,900 feet
Precipitation: About 16 inches
Air temperature: About 40 degrees
Frost-free season: About 50 days
Surface rock fragments: 2 percent stones and boulders; 2 percent cobbles; 10 percent gravel
Surface layer texture: Bouldery loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hackwood Series
Elevation: 6,500 to 6,900 feet
Precipitation: About 16 inches
Air temperature: About 41 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation
Hapgood: Mountain big sagebrush, needlegrass, snowberry
Badgercamp: Idaho fescue, big sagebrush, curlleaf mountainmahogany, needlegrass
Hackwood: Bluegrass, quaking aspen, snowberry
Inclusion 1: Bitter cherry, quaking aspen, snowberry
Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Snowbrush ceanothus, white fir

Ecological Site
Hapgood: 023XY065NV
Badgercamp: 023XY026NV
Hackwood: 023XY028NV
Inclusion 1: 023XY027NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY092NV

1295--Devoy-Blizzard complex, 2 to 15 percent slopes

Composition
Major Components
Devoy cobbly loam, 2 to 15 percent slopes--50 percent
Blizzard very cobbly silty clay loam, 2 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Ninemile very stony loam, 2 to 15 percent slopes--8 percent
Inclusion 2: Tinpan very cobbly loam, 2 to 8 percent slopes--4 percent
Inclusion 3: Ashtre stony loam, 2 to 15 percent slopes--2 percent
Inclusion 4: Tusune stony loam, 15 to 50 percent slopes--1 percent

Map Unit Setting
Landscape position: Plateaus
Devoy--Landform: Plateaus; geomorphic position: backslope
Blizzard--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: summit
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description
Devoy Series
Elevation: 6,500 to 6,800 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 50 days
Surface rock fragments: 15 percent cobbles; 15 percent gravel
Surface layer texture: Cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Blizzard Series
Elevation: 6,500 to 6,800 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 50 days
Surface rock fragments: 1 percent stones and boulders; 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly silty clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation
Devoy: Idaho fescue, Thurber needlegrass, bluebunch wheatgrass, mountain big sagebrush
Blizzard: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, bluegrass, low sagebrush
Inclusion 3: Idaho fescue, mountain big sagebrush, needlegrass
Inclusion 4: Idaho fescue, mountain big sagebrush

Ecological Site
Devoy: 023XY094NV
Blizzard: 023XY017NV
Inclusion 1: 023XY017NV
Inclusion 2: 023XY017NV
Inclusion 3: 023XY094NV
Inclusion 4: 023XY054NV

1296--Blizzard very cobbly silty clay loam, 0 to 15 percent slopes

Composition

Major Components
Blizzard very cobbly silty clay loam, 0 to 15 percent slopes--90 percent
Contrasting Inclusions
Inclusion 1: Ninemile very cobbly loam, 2 to 15 percent slopes--5 percent
Inclusion 2: Hart Camp stony loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Newlands stony loam, 15 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Blizzard--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: backslope; aspect: north

Major Component Description

Blizzard Series
Elevation: 6,500 to 6,800 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 50 days
Surface rock fragments: 1 percent stones and boulders; 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly silty clay loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Blizzard: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, mountain big sagebrush, needlegrass

Ecological Site

Blizzard: 023XY017NV
Inclusion 1: 023XY017NV
Inclusion 2: 023XY015NV
Inclusion 3: 023XY065NV

1305--Updike-Mazuma association

Composition

Major Components
Updike silt loam, 0 to 2 percent slopes, rarely flooded--60 percent
Mazuma fine sandy loam, 0 to 4 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Longdis silt loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Skullwak silt loam, 0 to 2 percent slopes--6 percent
Inclusion 3: Mazuma sandy loam, moist, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Bolsons
Updike--Landform: Lake terraces; shape of slope: concave
Mazuma--Landform: Lake terraces; shape of slope: convex
Inclusion 1--Landform: Lake terraces
Inclusion 2--Landform: Basin floors
Inclusion 3--Landform: Basin floors

Major Component Description

Updike Series
Elevation: 5,400 to 5,500 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Mazuma Series
Elevation: 5,400 to 5,500 feet
Precipitation: About 6 inches
Air temperature: About 50 degrees
Frost-free season: About 100 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Updike: Basin wildrye, black greasewood, bottlebrush squirreltail, inland saltgrass
Mazuma: Bud sagebrush, shadscale
Inclusion 1: Big sagebrush, black greasewood
Inclusion 2: Nevada bluegrass, alkaligrass, inland saltgrass
Inclusion 3: Black greasewood, inland saltgrass

Ecological Site

Updike: 024XY008NV
Mazuma: 024XY065NV
Inclusion 1: 024XY022NV
Inclusion 2: 023XY002NV
Inclusion 3: 023XY010NV

1306--Updike-Longdis association

Composition

Major Components
Updike silt loam, 0 to 2 percent slopes, rarely flooded--70 percent
Longdis silty clay loam, 0 to 2 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Updike silt loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Playas, 0 to 1 percent slopes--4 percent

Map Unit Setting

Landscape position: Bolsons
Updike--Landform: Lake terraces; shape of slope: concave
Longdis--Landform: Lake terraces; shape of slope: convex
Inclusion 1--Landform: Lake terraces
Inclusion 2--Landform: Basin floors

Major Component Description

Updike Series
Elevation: 5,500 to 5,550 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Longdis Series
Elevation: 5,500 to 5,550 feet
Precipitation: About 9 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Silty clay loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Updike: Basin wildrye, black greasewood, bottlebrush squirreltail, inland saltgrass
Longdis: Big sagebrush, black greasewood
Inclusion 1: Basin wildrye, black greasewood, inland saltgrass
Inclusion 2: None

Ecological Site

Updike: 024XY008NV
Longdis: 024XY022NV
Inclusion 1: 023XY010NV
Inclusion 2: none

1310--Longdis-Updike association

Composition

Major Components
Longdis silty clay loam, 0 to 2 percent slopes--50 percent
Updike silt loam, 0 to 2 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Dugway fine sandy loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Skullwak silt loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--2 percent
Inclusion 4: Playas, 0 to 1 percent slopes--2 percent

Map Unit Setting

Landscape position: Bolsons
Longdis--Landform: Lake terraces; shape of slope: convex
Updike--Landform: Lake terraces; shape of slope: concave
Inclusion 1--Landform: Lake terraces
Inclusion 2--Landform: Basin floors
Inclusion 3--Landform: Lagoons
Inclusion 4--Landform: Playas

Major Component Description

Longdis Series
Elevation: 5,400 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Silty clay loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Updike Series
Elevation: 5,400 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Longdis: Big sagebrush, black greasewood
Updike: Nevada bluegrass, basin wildrye, black greasewood, rubber rabbitbrush
Inclusion 1: Basin wildrye, big sagebrush, rubber rabbitbrush
Inclusion 2: Alkaligrass, black greasewood, inland saltgrass
Inclusion 3: Wyoming big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 4: None

Ecological Site

Longdis: 024XY022NV
Updike: 023XY010NV
Inclusion 1: 023XY005NV
Inclusion 2: 023XY002NV
Inclusion 3: 023XY082NV
Inclusion 4: none

1311--Longdis-Macyflet-Aeric Epiaquents association

Composition

Major Components
Longdis silt loam, 0 to 2 percent slopes--40 percent
Macyflet silt loam, 0 to 2 percent slopes--30 percent
Aeric Epiaquents silt loam, 0 to 1 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Davey loamy fine sand, 0 to 4 percent slopes--4 percent
Inclusion 2: Surprise gravelly loamy sand, 2 to 8 percent slopes--4 percent
Inclusion 3: Indian Creek very cobbly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Bolsons
Longdis--Landform: Alluvial flats
Macyflet--Landform: Lake plains
Aeric Epiaquents--Landform: Lake plains; position on slope: lower
Inclusion 1--Landform: Beach terraces
Inclusion 2--Landform: Alluvial flats
Inclusion 3--Landform: Alluvial fans

Major Component Description

Longdis Series
Elevation: 5,670 to 5,750 feet
Precipitation: About 9 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Macyflet Series
Elevation: 5,670 to 5,750 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 80 days
Surface layer texture: Silt loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from mixed rocks and lake sediments

Aeric Epiaquents Soils
Elevation: 5,650 to 5,720 feet
Precipitation: About 11 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Longdis: Nevada bluegrass, silver sagebrush
Macyflet: Cusick bluegrass, Douglas rabbitbrush, Thurber needlegrass, alkali sagebrush, basin wildrye
Aeric Epiaquents: Mat muhly, other annual forbs, povertyweed
Inclusion 1: Basin big sagebrush, needleandthread
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 3: Thurber needlegrass, bluegrass, low sagebrush

Ecological Site

Longdis: 023XY003NV
Macyflet: 023XY090NV
Aeric Epiaquents: 023XY023NV
Inclusion 1: 023XY051NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY059NV

1312--Longdis-Dugway association

Composition

Major Components
Longdis silty clay loam, 0 to 2 percent slopes--60 percent
Dugway fine sandy loam, 0 to 2 percent slopes--30 percent
Contrasting Inclusions
Inclusion 1: Updike silt loam, 0 to 2 percent slopes, rarely flooded--6 percent
Inclusion 2: Langston gravelly sandy loam, 2 to 4 percent slopes--3 percent
Inclusion 3: Paypoint gravelly fine sandy loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Bolsons
Longdis--Landform: Lake terraces; shape of slope: convex
Dugway--Landform: Lake terraces
Inclusion 1--Landform: Lake terraces; shape of slope: concave
Inclusion 2--Landform: Longshore bars (relict)
Inclusion 3--Landform: Lagoons

Major Component Description

Longdis Series
Elevation: 5,500 to 5,600 feet
Precipitation: About 9 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Silty clay loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dugway Series
Elevation: 5,500 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Fine sandy loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Longdis: Big sagebrush, black greasewood
Dugway: Basin wildrye, big sagebrush, bottlebrush squirreltail, rubber rabbitbrush
Inclusion 1: Nevada bluegrass, basin wildrye, black greasewood, rubber rabbitbrush
Inclusion 2: Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Basin wildrye, big sagebrush, rubber rabbitbrush

Ecological Site

Longdis: 024XY022NV
Dugway: 023XY005NV
Inclusion 1: 023XY010NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY082NV

1313--Longdis silt loam, 0 to 2 percent slopes

Composition

Major Components
Longdis silt loam, 0 to 2 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Skullwak silt loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Emagert loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Aeric Epiaquents silt loam, 0 to 1 percent slopes--3 percent

Map Unit Setting

Landscape position: Bolsons
Longdis--Landform: Lake terraces
Inclusion 1--Landform: Basin floors
Inclusion 2--Landform: Stream terraces
Inclusion 3--Landform: Basin floors

Major Component Description

Longdis Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 9 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Longdis: Nevada bluegrass, silver sagebrush
Inclusion 1: Nevada bluegrass, inland saltgrass
Inclusion 2: Basin big sagebrush, basin wildrye
Inclusion 3: Mat muhly, other annual forbs, povertyweed

Ecological Site

Longdis: 023XY003NV
Inclusion 1: 023XY002NV
Inclusion 2: 023XY009NV
Inclusion 3: 023XY023NV

1320--Dugway fine sandy loam, 0 to 2 percent slopes

Composition

Major Components
Dugway fine sandy loam, 0 to 2 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Updike silt loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Longdis silty clay loam, 0 to 2 percent slopes--5 percent
Inclusion 3: Zorravista fine sand, 0 to 4 percent slopes--2 percent
Inclusion 4: Wetvit loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Bolsons
Dugway--Landform: Lake terraces
Inclusion 1--Landform: Alluvial flats
Inclusion 2--Landform: Alluvial flats
Inclusion 3--Landform: Dunes
Inclusion 4--Landform: Depressions

Major Component Description

Dugway Series
Elevation: 5,450 to 5,550 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Fine sandy loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Dugway: Big sagebrush, bottlebrush squirreltail, rubber rabbitbrush
Inclusion 1: Black greasewood
Inclusion 2: Basin wildrye, big sagebrush, black greasewood
Inclusion 3: Indian ricegrass, basin big sagebrush, rubber rabbitbrush
Inclusion 4: Bluegrass, sedge

Ecological Site

Dugway: 023XY005NV
Inclusion 1: 023XY010NV
Inclusion 2: 024XY022NV
Inclusion 3: 023XY011NV
Inclusion 4: 023XY089NV

1321--Dugway-Updike association

Composition

Major Components
Dugway fine sandy loam, 0 to 2 percent slopes--60 percent

Updike silt loam, 0 to 2 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Longdis silt loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Updike silt loam, 0 to 2 percent slopes--6 percent
Inclusion 3: Skullwak silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Bolsons
Dugway--Landform: Lake terraces
Updike--Landform: Lake terraces; shape of slope: concave
Inclusion 1--Landform: Lake terraces; shape of slope: convex
Inclusion 2--Landform: Lake terraces; shape of slope: convex
Inclusion 3--Landform: Basin floors

Major Component Description

Dugway Series
Elevation: 5,400 to 5,500 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Fine sandy loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Updike Series
Elevation: 5,400 to 5,500 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface layer texture: Silt loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from lacustrine sediments

Dominant Present Vegetation

Dugway: Big sagebrush, bottlebrush squirreltail, rubber rabbitbrush
Updike: Nevada bluegrass, basin wildrye, black greasewood, rubber rabbitbrush
Inclusion 1: Big sagebrush, black greasewood
Inclusion 2: Black greasewood, bottlebrush squirreltail, inland saltgrass
Inclusion 3: Nevada bluegrass, alkaligrass, inland saltgrass

Ecological Site

Dugway: 023XY005NV
Updike: 023XY010NV
Inclusion 1: 024XY022NV
Inclusion 2: 024XY008NV
Inclusion 3: 023XY002NV

1325--Reywat-Devada-Hart Camp association

Composition

Major Components
Reywat very stony loam, 4 to 15 percent slopes--40 percent
Devada very cobbly loam, 2 to 15 percent slopes--25 percent
Hart Camp stony loam, 4 to 30 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Reywat stony loam, 15 to 30 percent slopes--8 percent
Inclusion 2: Grassycan very gravelly loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Fiddler very stony loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Menbo very stony loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Reywat--Landform: Plateaus; geomorphic position: backslope; aspect: south
Devada--Landform: Plateaus; geomorphic position: summit
Hart Camp--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: south
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description

Reywat Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Devada Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 30 percent cobbles; 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Hart Camp Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 11 inches
Air temperature: About 43 degrees
Frost-free season: About 70 days
Surface rock fragments: 2 percent stones and boulders; 5 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Reywat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Devada: Bluebunch wheatgrass, low sagebrush
Hart Camp: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Big sagebrush, bluebunch wheatgrass
Inclusion 2: Thurber needlegrass, bluegrass, low sagebrush
Inclusion 3: Big sagebrush, bluebunch wheatgrass, western juniper
Inclusion 4: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Reywat: 023XY020NV
Devada: 023XY031NV
Hart Camp: 023XY015NV
Inclusion 1: 023XY039NV
Inclusion 2: 023XY059NV
Inclusion 3: 023XY024NV
Inclusion 4: 023XY007NV

1326--Reywat very stony loam, 8 to 30 percent slopes

Composition

Major Components
Reywat very stony loam, 8 to 30 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Bombadil very stony loam, cool, 4 to 15 percent slopes--8 percent
Inclusion 2: Fiddler extremely stony loam, 15 to 30 percent slopes--4 percent
Inclusion 3: Hartig stony loam, 15 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Reywat--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: east

Major Component Description

Reywat Series
Elevation: 5,600 to 5,800 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Reywat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush
Inclusion 2: Bluebunch wheatgrass, western juniper
Inclusion 3: Bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Reywat: 023XY039NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY024NV
Inclusion 3: 023XY016NV

1327--Reywat-Westbutte-Hapgood association

Composition

Major Components
Reywat stony loam, 4 to 15 percent slopes--50 percent
Westbutte stony loam, 4 to 30 percent slopes--25 percent
Hapgood very gravelly loam, 15 to 30 percent slopes--10 percent
Contrasting Inclusions
Inclusion 1: Devada very cobbly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Reywat very stony loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Hart Camp very stony loam, 15 to 30 percent slopes--5 percent

Map Unit Setting

Landscape position: Plateaus
Reywat--Landform: Plateaus; geomorphic position: backslope; aspect: south
Westbutte--Landform: Plateaus; geomorphic position: backslope; aspect: north
Hapgood--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: east

Major Component Description

Reywat Series
Elevation: 5,500 to 5,900 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 2 percent stones and boulders; 10 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Westbutte Series
Elevation: 5,500 to 5,900 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Hapgood Series
Elevation: 5,500 to 5,900 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Reywat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Westbutte: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Hapgood: Idaho fescue, mountain big sagebrush, needlegrass, snowberry
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Reywat: 023XY020NV
Westbutte: 023XY007NV
Hapgood: 023XY065NV
Inclusion 1: 023XY031NV
Inclusion 2: 023XY039NV
Inclusion 3: 023XY015NV

1328--Reywat-Fernpoint association

Composition

Major Components
Reywat stony loam, 4 to 15 percent slopes--50 percent
Fernpoint very gravelly sandy loam, 8 to 30 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Old Camp very stony loam, 2 to 15 percent slopes--8 percent
Inclusion 2: Langston very gravelly sandy loam, 2 to 8 percent slopes--6 percent
Inclusion 3: Orr sandy loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Reywat--Landform: Plateaus
Fernpoint--Landform: Beach terraces
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Longshore bars (relict)
Inclusion 3--Landform: Alluvial fans

Major Component Description

Reywat Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 2 percent stones and boulders; 10 percent cobbles; 15 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Fernpoint Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Reywat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Fernpoint: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Thurber needlegrass, big sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 3: Thurber needlegrass, big sagebrush, bluegrass

Ecological Site

Reywat: 023XY020NV
Fernpoint: 023XY020NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY020NV

1329--Reywat-Devada association

Composition

Major Components

Reywat very stony loam, 15 to 30 percent slopes--50 percent
Devada very stony loam, 8 to 30 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Uhaldi stony loam, 8 to 30 percent slopes--7 percent
Inclusion 2: Westbutte very stony loam, 15 to 30 percent slopes--5 percent
Inclusion 3: Old Camp very stony loam, 8 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus and hills
Reywat--Landform: Plateaus; geomorphic position: backslope
Devada--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Hills; geomorphic position: backslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; position on slope: lower

Major Component Description

Reywat Series

Elevation: 5,600 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Devada Series

Elevation: 5,600 to 6,200 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Reywat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Devada: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bluegrass

Ecological Site

Reywat: 023XY039NV
Devada: 023XY031NV
Inclusion 1: 023XY020NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY006NV

1335--Westbutte-Rock outcrop association

Composition

Major Components

Westbutte stony loam, 30 to 50 percent slopes--70 percent
Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Hackwood gravelly loam, 2 to 8 percent slopes--8 percent
Inclusion 2: Fiddler very stony loam, 15 to 50 percent slopes--4 percent
Inclusion 3: Madeline very stony loam, 8 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Westbutte--Landform: Plateaus; geomorphic position: backslope; aspect: north
Rock outcrop--Landform: Plateaus
Inclusion 1--Landform: Plateaus; geomorphic position: toeslope; shape of slope: concave
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: east

Major Component Description

Westbutte Series

Elevation: 5,500 to 5,700 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent stones and boulders; 10 percent cobbles; 20 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area

Elevation: 5,500 to 5,700 feet
Drainage class: Excessively drained

Dominant Present Vegetation

Westbutte: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Rock outcrop: None
Inclusion 1: Quaking aspen, willow
Inclusion 2: Big sagebrush, western juniper
Inclusion 3: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Westbutte: 023XY007NV
Rock outcrop: none
Inclusion 1: 023XY028NV
Inclusion 2: 023XY024NV
Inclusion 3: 023XY015NV

1336--Westbutte-Ashtre-Tusune association

Composition

Major Components

Westbutte very gravelly loam, 8 to 30 percent slopes--45 percent
Ashtre gravelly loam, 4 to 30 percent slopes--25 percent
Tusune stony loam, 30 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Westbutte extremely gravelly loam, 4 to 30 percent slopes--8 percent
Inclusion 2: Westbutte very gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 3: Nutzan very gravelly sandy loam, 4 to 30 percent slopes--3 percent
Inclusion 4: Ninemile very gravelly loam, 4 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus and mountains
Westbutte--Landform: Plateaus; geomorphic position: backslope; aspect: south
Ashtre--Landform: Plateaus; geomorphic position: shoulder; shape of slope: plane
Tusune--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: shoulder
Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Mountains; geomorphic position: backslope
Inclusion 4--Landform: Plateaus; geomorphic position: summit

Major Component Description

Westbutte Series

Elevation: 6,200 to 6,900 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Ashtre Series

Elevation: 6,200 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 90 days
Surface rock fragments: 25 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Tusune Series

Elevation: 6,200 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 70 days
Surface rock fragments: 1 percent stones and boulders; 2 percent cobbles; 25 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Westbutte: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Ashtre: Idaho fescue, mountain big sagebrush, needlegrass
Tusune: Idaho fescue, mountain big sagebrush
Inclusion 1: Idaho fescue, mountain big sagebrush, needlegrass
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, antelope bitterbrush, mountain big sagebrush, needlegrass
Inclusion 4: Idaho fescue, bluebunch wheatgrass, low sagebrush

Ecological Site

Westbutte: 023XY007NV
Ashtre: 023XY094NV
Tusune: 023XY054NV
Inclusion 1: 023XY061NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY066NV
Inclusion 4: 023XY017NV

1345--Layview-Hapgood association

Composition

Major Components

Layview very gravelly loam, 4 to 30 percent slopes--50 percent
Hapgood very gravelly loam, 4 to 30 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Lithic Argixerolls, loamy-skeletal, mixed, frigid extremely gravelly sandy loam, 2 to 8 percent slopes--8 percent

Inclusion 2: Badgercamp very stony loam, 4 to 30 percent slopes--4 percent
Inclusion 3: Hackwood gravelly loam, cold, 15 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Plateaus
Layview--Landform: Plateaus; geomorphic position: shoulder
Hapgood--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north

Major Component Description

Layview Series
Elevation: 6,800 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Hapgood Series
Elevation: 6,800 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Layview: Idaho fescue, low sagebrush
Hapgood: Idaho fescue, mountain big sagebrush, needlegrass
Inclusion 1: Idaho fescue, bluegrass, low sagebrush
Inclusion 2: Idaho fescue, mountain big sagebrush, curlleaf mountainmahogany, needlegrass
Inclusion 3: Quaking aspen

Ecological Site

Layview: 023XY014NV
Hapgood: 023XY065NV
Inclusion 1: 023XY008NV
Inclusion 2: 023XY026NV
Inclusion 3: 023XY027NV

1346--Layview-Westbutte-Hapgood association

Composition

Major Components
Layview very gravelly loam, 4 to 30 percent slopes--40 percent
Westbutte stony loam, 4 to 30 percent slopes--30 percent
Hapgood very gravelly loam, 4 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Layview extremely gravelly sandy loam, 4 to 15 percent slopes--8 percent
Inclusion 2: Badgercamp bouldery loam, 4 to 30 percent slopes--5 percent
Inclusion 3: Cumulic Cryaquolls, fine-loamy, mixed sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Layview--Landform: Plateaus; geomorphic position: shoulder
Westbutte--Landform: Plateaus; geomorphic position: backslope; aspect: south
Hapgood--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave; aspect: north
Inclusion 1--Landform: Plateaus; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Depressions

Major Component Description

Layview Series
Elevation: 6,800 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Westbutte Series
Elevation: 6,500 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent stones and boulders; 10 percent cobbles; 10 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Hapgood Series
Elevation: 6,500 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 60 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Layview: Idaho fescue, low sagebrush
Westbutte: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Hapgood: Idaho fescue, mountain big sagebrush, needlegrass
Inclusion 1: Idaho fescue, bluegrass, low sagebrush
Inclusion 2: Idaho fescue, big sagebrush, curlleaf mountainmahogany, needlegrass
Inclusion 3: Bluegrass

Ecological Site

Layview: 023XY014NV
Westbutte: 023XY007NV
Hapgood: 023XY065NV
Inclusion 1: 023XY008NV
Inclusion 2: 023XY026NV
Inclusion 3: 023XY013NV

1355--Badgercamp-Hackwood-Easte association, 4 to 30 percent slopes

Composition

Major Components
Badgercamp bouldery loam, 4 to 30 percent slopes--50 percent
Hackwood gravelly loam, 15 to 30 percent slopes--20 percent
Easte very gravelly sandy loam, 15 to 30 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Hackwood gravelly loam, cold, 15 to 50 percent slopes--6 percent
Inclusion 2: Westbutte very gravelly loam, 4 to 30 percent slopes--5 percent
Inclusion 3: Pachic Cryoborolls, loamy-skeletal, mixed very gravelly loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Welch clay loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Badgercamp--Landform: Plateaus; geomorphic position: summit
Hackwood--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Easte--Landform: Plateaus; geomorphic position: shoulder; position on slope: upper; shape of slope: concave
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: backslope
Inclusion 4--Landform: Inset fans

Major Component Description

Badgercamp Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 16 inches
Air temperature: About 40 degrees
Frost-free season: About 50 days
Surface rock fragments: 2 percent stones and boulders; 2 percent cobbles; 10 percent gravel
Surface layer texture: Bouldery loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hackwood Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 16 inches
Air temperature: About 41 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Easte Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 17 inches
Air temperature: About 44 degrees
Frost-free season: About 70 days
Surface rock fragments: 10 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Badgercamp: Idaho fescue, mountain big sagebrush, curlleaf mountainmahogany, needlegrass
Hackwood: Bluegrass, quaking aspen, snowberry
Easte: Snowbrush ceanothus, white fir
Inclusion 1: Bluegrass, quaking aspen, snowberry
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Mountain big sagebrush, mountain brome, needlegrass
Inclusion 4: Bluegrass, rush

Ecological Site

Badgercamp: 023XY026NV
Hackwood: 023XY028NV
Easte: 023XY092NV
Inclusion 1: 023XY027NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY019NV
Inclusion 4: 023XY025NV

1356--Badgercamp-Hackwood-Easte association, 30 to 70 percent slopes

Composition

Major Components
Badgercamp bouldery loam, 30 to 70 percent slopes--60 percent
Hackwood gravelly loam, 30 to 70 percent slopes--15 percent
Easte very gravelly sandy loam, 30 to 70 percent slopes--10 percent
Contrasting Inclusions
Inclusion 1: Hackwood very cobbly loam, cold, 15 to 70 percent slopes--6 percent
Inclusion 2: Hapgood very gravelly loam, 30 to 50 percent slopes--4 percent
Inclusion 3: Westbutte very gravelly loam, 30 to 50 percent slopes--3 percent
Inclusion 4: Pachic Cryoborolls, loamy-skeletal, mixed very gravelly loam, 15 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Badgercamp--Landform: Plateaus; geomorphic position: summit
Hackwood--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Easte--Landform: Plateaus; geomorphic position: shoulder; position on slope: upper; shape of slope: concave
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: east
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description

Badgercamp Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 16 inches
Air temperature: About 40 degrees
Frost-free season: About 50 days
Surface rock fragments: 2 percent stones and boulders; 2 percent cobbles; 10 percent gravel
Surface layer texture: Bouldery loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hackwood Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 16 inches
Air temperature: About 41 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Easte Series
Elevation: 6,000 to 7,000 feet
Precipitation: About 17 inches
Air temperature: About 44 degrees
Frost-free season: About 70 days
Surface rock fragments: 10 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Badgercamp: Idaho fescue, mountain big sagebrush, curlleaf mountainmahogany, needlegrass
Hackwood: Bluegrass, quaking aspen, snowberry
Easte: Snowbrush ceanothus, white fir
Inclusion 1: Quaking aspen
Inclusion 2: Idaho fescue, mountain big sagebrush, needlegrass
Inclusion 3: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Mountain big sagebrush, mountain brome, needlegrass

Ecological Site

Badgercamp: 023XY026NV
Hackwood: 023XY028NV
Easte: 023XY092NV
Inclusion 1: 023XY027NV
Inclusion 2: 023XY065NV
Inclusion 3: 023XY007NV
Inclusion 4: 023XY019NV

1358--Badgercamp-Hackwood association

Composition

Major Components
Badgercamp bouldery loam, 4 to 30 percent slopes--60 percent
Hackwood gravelly loam, 15 to 30 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Menbo very stony loam, 15 to 50 percent slopes--7 percent
Inclusion 2: Hapgood very gravelly loam, 15 to 50 percent slopes--4 percent
Inclusion 3: Hartig very gravelly loam, 8 to 30 percent slopes--4 percent

Map Unit Setting

Landscape position: Plateaus
Badgercamp--Landform: Plateaus; geomorphic position: summit
Hackwood--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: south

Major Component Description

Badgercamp Series
Elevation: 6,100 to 6,800 feet
Precipitation: About 16 inches
Air temperature: About 40 degrees
Frost-free season: About 50 days
Surface rock fragments: 2 percent stones and boulders; 2 percent cobbles; 10 percent gravel
Surface layer texture: Bouldery loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Hackwood Series
Elevation: 6,100 to 6,800 feet
Precipitation: About 16 inches
Air temperature: About 41 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Badgercamp: Idaho fescue, mountain big sagebrush, curlleaf mountainmahogany, needlegrass
Hackwood: Bluegrass, quaking aspen, snowberry
Inclusion 1: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue, mountain big sagebrush, needlegrass
Inclusion 3: Bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Badgercamp: 023XY026NV
Hackwood: 023XY028NV
Inclusion 1: 023XY007NV
Inclusion 2: 023XY065NV
Inclusion 3: 023XY016NV

1360--Welch clay loam, 0 to 4 percent slopes

Composition

Major Components
Welch clay loam, 0 to 4 percent slopes--90 percent
Contrasting Inclusions
Inclusion 1: Welch loam, 0 to 2 percent slopes, rarely flooded--8 percent
Inclusion 2: Cumulic Haploxerolls, fine-loamy, mixed, frigid fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Welch--Landform: Inset fans
Inclusion 1--Landform: Alluvial fans
Inclusion 2--Landform: Inset fans

Major Component Description

Welch Series
Elevation: 6,200 to 6,800 feet
Precipitation: About 14 inches
Air temperature: About 43 degrees
Frost-free season: About 60 days
Surface layer texture: Clay loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Welch: Bluegrass, rush, sedge
Inclusion 1: Nevada bluegrass
Inclusion 2: Basin big sagebrush, basin wildrye

Ecological Site

Welch: 023XY025NV
Inclusion 1: 023XY013NV
Inclusion 2: 023XY005NV

1361--Wetvit association

Composition

Major Components
Wetvit fine sandy loam, 0 to 2 percent slopes--50 percent
Wetvit fine sandy loam, 0 to 2 percent slopes, occasionally flooded--40 percent
Contrasting Inclusions
Inclusion 1: Weezweed loam, 0 to 2 percent slopes--5 percent
Inclusion 2: Updike silt loam, 0 to 2 percent slopes--3 percent
Inclusion 3: Skullwak silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Wetvit--Landform: Flood plains; position on slope: lower
Wetvit--Landform: Flood plains; position on slope: upper
Inclusion 1--Landform: Stream terraces
Inclusion 2--Landform: Lake terraces
Inclusion 3--Landform: Basin floors

Major Component Description

Wetvit Series
Elevation: 4,400 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Fine sandy loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Wetvit Series
Elevation: 4,400 to 5,600 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Fine sandy loam

Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Wetvit: Nevada bluegrass, rush, sedge
Wetvit: Nevada bluegrass, sedge
Inclusion 1: Basin big sagebrush, basin wildrye
Inclusion 2: Nevada bluegrass, basin wildrye, black greasewood, rubber rabbitbrush
Inclusion 3: Nevada bluegrass, alkaligrass, inland saltgrass

Ecological Site

Wetvit: 023XY089NV
Wetvit: 023XY013NV
Inclusion 1: 023XY005NV
Inclusion 2: 023XY010NV
Inclusion 3: 023XY002NV

1365--Rubble land-Dosie association

Composition

Major Components
Rubble land fragmental material, 30 to 50 percent slopes--60 percent
Dosie very stony loam, 30 to 50 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Pachic Argixerolls, loamy-skeletal, mixed, frigid very stony loam, 30 to 70 percent slopes--10 percent
Inclusion 2: Fiddler extremely stony loam, 30 to 50 percent slopes--2 percent
Inclusion 3: Westbutte extremely stony loam, 15 to 50 percent slopes--2 percent
Inclusion 4: Hackwood gravelly loam, 15 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Rubble land--Landform: Plateaus
Dosie--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; shape of slope: concave
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder; aspect: south
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 4--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: north

Major Component Description

Rubble land Miscellaneous Area
Elevation: 5,700 to 6,200 feet
Surface layer texture: Fragmental material
Drainage class: Excessively drained

Dosie Series
Elevation: 5,700 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 70 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 30 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Rubble land: None
Dosie: Antelope bitterbrush, basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Basin wildrye, big sagebrush, bluebunch wheatgrass
Inclusion 2: Big sagebrush, western juniper
Inclusion 3: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Quaking aspen

Ecological Site

Dosie: 023XY016NV
Rubble land: none
Inclusion 1: 023XY041NV
Inclusion 2: 023XY024NV
Inclusion 3: 023XY007NV
Inclusion 4: 023XY028NV

1366--Dosie very stony loam, 15 to 50 percent slopes

Composition

Major Components
Dosie very stony loam, 15 to 50 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Pachic Argixerolls, loamy-skeletal, mixed, frigid stony loam, 15 to 50 percent slopes--10 percent
Inclusion 2: Westbutte stony loam, 15 to 30 percent slopes--2 percent
Inclusion 3: Zymans very cobbly loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Hart Camp stony loam, 15 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus and hills
Dosie--Landform: Plateaus; geomorphic position: backslope
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: northeast
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 3--Landform: Hills; geomorphic position: backslope; position on slope: lower
Inclusion 4--Landform: Pediments

Major Component Description

Dosie Series
Elevation: 5,600 to 6,600 feet

Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 70 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 30 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Dosie: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush
Inclusion 2: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Dosie: 023XY016NV
Inclusion 1: 023XY041NV
Inclusion 2: 023XY007NV
Inclusion 3: 023XY020NV
Inclusion 4: 023XY015NV

1367--Dosie-Fiddler-Rubble land association

Composition

Major Components
Dosie very stony loam, 30 to 50 percent slopes--40 percent
Fiddler very stony loam, 30 to 50 percent slopes--25 percent
Rubble land fragmental material, 30 to 50 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Devada very stony loam, 15 to 50 percent slopes--6 percent
Inclusion 2: Bucklake very stony loam, 15 to 50 percent slopes--4 percent
Inclusion 3: Westbutte stony loam, 15 to 50 percent slopes--3 percent
Inclusion 4: Hart Camp stony loam, 15 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Plateaus
Dosie--Landform: Plateaus; geomorphic position: backslope
Fiddler--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Rubble land--Landform: Escarpments
Inclusion 1--Landform: Plateaus
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 4--Landform: Pediments; aspect: east

Major Component Description

Dosie Series
Elevation: 5,700 to 6,200 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 70 days
Surface rock fragments: 10 percent stones and boulders; 10 percent cobbles; 30 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Fiddler Series
Elevation: 5,700 to 6,200 feet
Precipitation: About 13 inches
Air temperature: About 45 degrees
Frost-free season: About 80 days
Surface rock fragments: 10 percent stones and boulders; 15 percent cobbles; 20 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Rubble land Miscellaneous Area
Elevation: 5,700 to 6,200 feet
Surface layer texture: Fragmental material
Drainage class: Excessively drained

Dominant Present Vegetation

Dosie: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush
Fiddler: Bluebunch wheatgrass, western juniper
Rubble land: None
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 2: Big sagebrush, bluebunch wheatgrass
Inclusion 3: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 4: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Dosie: 023XY016NV
Fiddler: 023XY024NV
Rubble land: none
Inclusion 1: 023XY031NV
Inclusion 2: 023XY039NV
Inclusion 3: 023XY007NV
Inclusion 4: 023XY015NV

1375--Cotant-Madeline association

Composition

Major Components
Cotant very gravelly loam, 4 to 15 percent slopes--60 percent

Madeline very cobbly loam, 4 to 15 percent slopes--25 percent
Contrasting Inclusions
Inclusion 1: Ninemile very cobbly loam, 4 to 15 percent slopes--8 percent
Inclusion 2: Newlands stony loam, 4 to 15 percent slopes--7 percent

Map Unit Setting
Landscape position: Plateaus
Cotant--Landform: Plateaus; geomorphic position: toeslope
Madeline--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; aspect: north

Major Component Description
Cotant Series
Elevation: 6,500 to 6,800 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Madeline Series
Elevation: 6,500 to 6,800 feet
Precipitation: About 13 inches
Air temperature: About 44 degrees
Frost-free season: About 80 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation
Cotant: Idaho fescue, bluebunch wheatgrass, low sagebrush
Madeline: Antelope bitterbrush, bluegrass, mountain big sagebrush
Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 2: Idaho fescue, mountain big sagebrush, needlegrass

Ecological Site
Cotant: 023XY017NV
Madeline: 023XY015NV
Inclusion 1: 023XY017NV
Inclusion 2: 023XY065NV

1380--Weimer-Boulder Lake association

Composition
Major Components
Weimer clay, 0 to 2 percent slopes--70 percent
Boulder Lake silty clay, 0 to 2 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Welch loam, 0 to 2 percent slopes, rarely flooded--8 percent
Inclusion 2: Macyflet silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting
Landscape position: Lake plains
Weimer--Landform: Lake plains; position on slope: lower
Boulder Lake--Landform: Lake plains
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Lake plains

Major Component Description
Weimer Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 60 days
Surface layer texture: Clay
Drainage class: Poorly drained
Dominant parent material: Alluvium derived from mixed rocks and lake sediments

Boulder Lake Series
Elevation: 5,500 to 6,500 feet
Precipitation: About 12 inches
Air temperature: About 43 degrees
Frost-free season: About 80 days
Surface layer texture: Silty clay
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from mixed rocks and lake sediments

Dominant Present Vegetation
Weimer: Rush, sedge
Boulder Lake: Bluegrass, silver sagebrush
Inclusion 1: Nevada bluegrass
Inclusion 2: Alkali sagebrush, bluegrass

Ecological Site
Weimer: 023XY023NV
Boulder Lake: 023XY003NV
Inclusion 1: 023XY013NV
Inclusion 2: 023XY090NV

1385--Fernpoint very gravelly sandy loam, 8 to 30 percent slopes

Composition
Major Components
Fernpoint very gravelly sandy loam, 8 to 30 percent slopes--85 percent

Contrasting Inclusions
Inclusion 1: Davey loamy fine sand, 2 to 8 percent slopes--6 percent
Inclusion 2: Schamp very gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Zymans very cobbly loam, 4 to 15 percent slopes--4 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Fernpoint--Landform: Beach terraces
Inclusion 1--Landform: Beach terraces
Inclusion 2--Landform: Hills; geomorphic position: backslope; position on slope: lower
Inclusion 3--Landform: Hills; geomorphic position: backslope; position on slope: upper

Major Component Description

Fernpoint Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Fernpoint: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Indian ricegrass, basin big sagebrush, needleandthread
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Fernpoint: 023XY020NV
Inclusion 1: 023XY051NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY020NV

1395--Orr-Fernpoint association

Composition

Major Components
Orr sandy loam, 2 to 8 percent slopes--65 percent
Fernpoint very gravelly sandy loam, 8 to 30 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Orr very gravelly sandy loam, 8 to 30 percent slopes--8 percent
Inclusion 2: Fernpoint very stony loam, 4 to 30 percent slopes--5 percent
Inclusion 3: Dugway silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Bolsons
Orr--Landform: Alluvial fans
Fernpoint--Landform: Beach terraces
Inclusion 1--Landform: Alluvial fans; geomorphic position: backslope
Inclusion 2--Landform: Beach terraces; position on slope: upper
Inclusion 3--Landform: Lake terraces; position on slope: lower

Major Component Description

Orr Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 49 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Fernpoint Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Orr: Thurber needlegrass, big sagebrush
Fernpoint: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Thurber needlegrass, big sagebrush, bluegrass
Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass, bluegrass
Inclusion 3: Big sagebrush, bottlebrush squirreltail, rabbitbrush

Ecological Site

Orr: 023XY020NV
Fernpoint: 023XY020NV
Inclusion 1: 023XY020NV
Inclusion 2: 023XY020NV
Inclusion 3: 023XY005NV

1400--Bombadil-Ceejay association

Composition

Major Components
Bombadil very stony loam, cool, 4 to 30 percent slopes--45 percent
Ceejay stony loam, 4 to 30 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Old Camp very stony sandy loam, 4 to 30 percent slopes--6 percent

Inclusion 2: Reywat very stony loam, 15 to 50 percent slopes--4 percent
Inclusion 3: Ceejay very stony sandy loam, 30 to 50 percent slopes--4 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Plateaus
Bombadil--Landform: Plateaus; geomorphic position: summit
Ceejay--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: backslope
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper
Inclusion 3--Landform: Plateaus; geomorphic position: backslope
Inclusion 4--Landform: Plateaus

Major Component Description

Bombadil Series
Elevation: 4,800 to 5,000 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent stones and boulders; 10 percent cobbles; 25 percent gravel
Surface layer texture: Very stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Ceejay Series
Elevation: 4,800 to 5,000 feet
Precipitation: About 9 inches
Air temperature: About 49 degrees
Frost-free season: About 100 days
Surface rock fragments: 2 percent stones and boulders; 10 percent cobbles; 40 percent gravel
Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Bombadil: Thurber needlegrass, Wyoming big sagebrush
Ceejay: Thurber needlegrass, bluegrass, sagebrush
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 2: Thurber needlegrass, big sagebrush
Inclusion 3: Thurber needlegrass, bluegrass, sagebrush
Inclusion 4: None

Ecological Site

Bombadil: 023XY006NV
Ceejay: 023XY093NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY039NV
Inclusion 3: 023XY093NV
Inclusion 4: none

1410--Fulstone-Saraph-Tuffo association

Composition

Major Components
Fulstone very gravelly sandy loam, 2 to 15 percent slopes--35 percent
Saraph very gravelly sandy loam, 4 to 30 percent slopes--30 percent
Tuffo very gravelly sandy loam, 15 to 50 percent slopes--20 percent
Contrasting Inclusions
Inclusion 1: Vitrixerandic Haplargids, Ashy, mesic sandy loam, 0 to 4 percent slopes--5 percent
Inclusion 2: Argidic Argidurids, loamy, mixed, mesic, shallow very gravelly sandy loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Ceejay very gravelly sandy loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Fulstone--Landform: Fan remnants; geomorphic position: summit
Saraph--Landform: Ash flows; geomorphic position: backslope
Tuffo--Landform: Ash flows; geomorphic position: backslope
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: summit

Major Component Description

Fulstone Series
Elevation: 5,300 to 5,800 feet
Precipitation: About 9 inches
Air temperature: About 51 degrees
Frost-free season: About 100 days
Surface rock fragments: 5 percent cobbles; 45 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Saraph Series
Elevation: 5,300 to 5,800 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 50 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from tuffaceous rocks

Tuffo Series
Elevation: 5,300 to 5,800 feet
Precipitation: About 10 inches
Air temperature: About 45 degrees
Frost-free season: About 100 days
Surface rock fragments: 35 percent gravel

Surface layer texture: Very gravelly sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Fulstone: Thurber needlegrass, bluegrass, sagebrush
Saraph: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Tuffo: Wyoming big sagebrush, needlegrass, sagebrush
Inclusion 1: Douglas rabbitbrush, basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 3: Thurber needlegrass, bluegrass, sagebrush

Ecological Site

Fulstone: 023XY093NV
Saraph: 023XY006NV
Tuffo: 023XY088NV
Inclusion 1: 023XY082NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY093NV

1412--Fulstone-Nellspring-Buffaran association

Composition

Major Components

Fulstone very gravelly sandy loam, 2 to 15 percent slopes--40 percent
Nellspring very gravelly fine sandy loam, 2 to 15 percent slopes--25 percent
Buffaran gravelly loam, 2 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Abruptic Xeric Argidurids, clayey, montmorillonitic, mesic, shallow very gravelly fine sandy loam, 4 to 15 percent slopes--6 percent
Inclusion 2: Aridic Haploxererts, fine, montmorillonitic, mesic cobbly clay, 0 to 4 percent slopes--5 percent
Inclusion 3: Aridic Haploxererts, fine, montmorillonitic, mesic cobbly clay, 0 to 4 percent slopes--3 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Plateaus and adjacent bolsons
Fulstone--Landform: Fan remnants; geomorphic position: summit
Nellspring--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave
Buffaran--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 1--Landform: Fan remnants; geomorphic position: summit
Inclusion 2--Landform: Plateaus; geomorphic position: toeslope; shape of slope: convex
Inclusion 3--Landform: Depressions
Inclusion 4--Landform: Plateaus

Major Component Description

Fulstone Series

Elevation: 5,500 to 5,900 feet
Precipitation: About 9 inches
Air temperature: About 51 degrees
Frost-free season: About 100 days
Surface rock fragments: 5 percent cobbles; 45 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Nellspring Series

Elevation: 5,500 to 5,900 feet
Precipitation: About 9 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent cobbles; 55 percent gravel
Surface layer texture: Very gravelly fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Buffaran Series

Elevation: 5,500 to 5,900 feet
Precipitation: About 10 inches
Air temperature: About 47 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent cobbles; 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Fulstone: Thurber needlegrass, bluegrass, sagebrush
Nellspring: Sandberg bluegrass, Thurber needlegrass, bottlebrush squirreltail, sagebrush
Buffaran: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 1: Thurber needlegrass, bluegrass, low sagebrush
Inclusion 2: Thurber needlegrass, bluegrass, sagebrush
Inclusion 3: Low sagebrush, rubber rabbitbrush
Inclusion 4: None

Ecological Site

Fulstone: 023XY093NV
Nellspring: 023XY047NV
Buffaran: 023XY006NV
Inclusion 1: 023XY059NV
Inclusion 2: 023XY093NV
Inclusion 3: 023XY001NV
Inclusion 4: none

1420--Hangrock very gravelly loam, 2 to 15 percent slopes

Composition

Major Components
Hangrock very gravelly loam, 2 to 15 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Saraph very gravelly sandy loam, 4 to 30 percent slopes--5 percent
Inclusion 2: Vitrixerandic Haplargids, Ashy, mesic sandy loam, 0 to 4 percent slopes--4 percent
Inclusion 3: Fulstone very gravelly sandy loam, 2 to 15 percent slopes--3 percent
Inclusion 4: Tuffo very gravelly sandy loam, 15 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
Hangrock--Landform: Fan remnants; geomorphic position: summit
Inclusion 1--Landform: Alluvial fans; geomorphic position: shoulder
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Fan remnants; geomorphic position: summit
Inclusion 4--Landform: Alluvial fans; geomorphic position: backslope

Major Component Description

Hangrock Series
Elevation: 5,400 to 5,800 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Hangrock: Thurber needlegrass, Wyoming big sagebrush, bottlebrush squirreltail
Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluegrass
Inclusion 2: Douglas rabbitbrush, basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 3: Thurber needlegrass, bluegrass, sagebrush
Inclusion 4: Wyoming big sagebrush, needlegrass, sagebrush

Ecological Site

Hangrock: 023XY006NV
Inclusion 1: 023XY006NV
Inclusion 2: 023XY082NV
Inclusion 3: 023XY093NV
Inclusion 4: 023XY088NV

1430--Grassycan association

Composition

Major Components
Grassycan very stony fine sandy loam, 2 to 15 percent slopes--45 percent
Grassycan extremely stony fine sandy loam, 0 to 8 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Ceejay very stony fine sandy loam, 4 to 15 percent slopes--6 percent
Inclusion 2: Bombadil stony sandy loam, cool, 4 to 15 percent slopes--4 percent
Inclusion 3: Devada very stony loam, 4 to 15 percent slopes--3 percent
Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Plateaus
Grassycan--Landform: Plateaus; geomorphic position: summit
Grassycan--Landform: Plateaus; geomorphic position: summit; shape of slope: convex
Inclusion 1--Landform: Plateaus; geomorphic position: summit; position on slope: lower
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder; position on slope: upper
Inclusion 4--Landform: Plateaus

Major Component Description

Grassycan Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 4 percent stones and boulders; 10 percent cobbles; 45 percent gravel
Surface layer texture: Very stony fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Grassycan Series
Elevation: 5,500 to 6,000 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 20 percent stones and boulders; 10 percent cobbles; 40 percent gravel
Surface layer texture: Extremely stony fine sandy loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Grassycan: Thurber needlegrass, bluegrass, low sagebrush
Grassycan: Bluegrass, low sagebrush
Inclusion 1: Thurber needlegrass, bluegrass, sagebrush
Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluegrass

Inclusion 3: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 4: None

Ecological Site

Grassycan: 023XY059NV
Grassycan: 023XY021NV
Inclusion 1: 023XY093NV
Inclusion 2: 023XY006NV
Inclusion 3: 023XY031NV
Inclusion 4: none

1431--Esmod-Powlow association

Composition

Major Components
Esmod very gravelly fine sandy loam, 2 to 15 percent slopes--50 percent
Powlow very gravelly loam, 2 to 15 percent slopes--35 percent
Contrasting Inclusions
Inclusion 1: Vitrixerandic Haplocambids, Ashy, mesic sandy loam, 0 to 4 percent slopes--7 percent
Inclusion 2: Wetvit loam, 0 to 4 percent slopes, occasionally flooded--3 percent
Inclusion 3: Uhaldi stony loam, 2 to 15 percent slopes--3 percent
Inclusion 4: Tunnison clay, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
Esmod--Landform: Fan remnants; geomorphic position: summit
Powlow--Landform: Fan remnants; geomorphic position: shoulder
Inclusion 1--Landform: Inset fans
Inclusion 2--Landform: Stream terraces
Inclusion 3--Landform: Pediments; geomorphic position: backslope
Inclusion 4--Landform: Depressions; shape of slope: concave

Major Component Description

Esmod Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent cobbles; 50 percent gravel
Surface layer texture: Very gravelly fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Powlow Series
Elevation: 5,800 to 6,300 feet
Precipitation: About 11 inches
Air temperature: About 45 degrees
Frost-free season: About 90 days
Surface rock fragments: 2 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from volcanic rocks

Dominant Present Vegetation

Esmod: Thurber needlegrass, bluegrass, low sagebrush
Powlow: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 1: Basin big sagebrush, basin wildrye
Inclusion 2: Nevada bluegrass, basin big sagebrush
Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
Inclusion 4: Low sagebrush, rubber rabbitbrush

Ecological Site

Esmod: 023XY059NV
Powlow: 023XY020NV
Inclusion 1: 023XY082NV
Inclusion 2: 023XY013NV
Inclusion 3: 023XY020NV
Inclusion 4: 023XY001NV

1440--Tusune-Hartig association

Composition

Major Components
Tusune stony loam, 30 to 50 percent slopes--50 percent
Hartig very gravelly sandy loam, 30 to 50 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Rubble land fragmental material--4 percent
Inclusion 2: Hart Camp stony loam, 15 to 30 percent slopes--3 percent
Inclusion 3: Ninemile stony loam, 15 to 30 percent slopes--2 percent
Inclusion 4: Cumulic Haploxerolls, fine-loamy, mixed, frigid loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Tusune--Landform: Plateaus; geomorphic position: backslope; aspect: north
Hartig--Landform: Plateaus; geomorphic position: backslope; aspect: south
Inclusion 1--Landform: Plateaus
Inclusion 2--Landform: Plateaus; geomorphic position: shoulder
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder
Inclusion 4--Landform: Inset fans

Major Component Description

Tusune Series
Elevation: 6,300 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 70 days
Surface rock fragments: 1 percent stones and boulders; 2 percent cobbles; 25 percent gravel

Surface layer texture: Stony loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from pyroclastic and extrusive volcanic rocks

Hartig Series
Elevation: 6,300 to 6,900 feet
Precipitation: About 14 inches
Air temperature: About 42 degrees
Frost-free season: About 50 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Colluvium derived from volcanic rocks

Dominant Present Vegetation

Tusune: Idaho fescue, mountain big sagebrush
Hartig: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
Inclusion 1: None
Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 4: Basin big sagebrush, basin wildrye

Ecological Site

Tusune: 023XY054NV
Hartig: 023XY016NV
Inclusion 1: none
Inclusion 2: 023XY015NV
Inclusion 3: 023XY017NV
Inclusion 4: 023XY009NV

1450--Emagert-Wetvit association

Composition

Major Components
Emagert loam, 0 to 2 percent slopes--70 percent
Wetvit fine sandy loam, 0 to 2 percent slopes--15 percent
Contrasting Inclusions
Inclusion 1: Weezweed loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Vitrixerandic Haplargids, Ashy, mesic fine sandy loam, 0 to 4 percent slopes--5 percent
Inclusion 3: Wetvit fine sandy loam, 0 to 2 percent slopes, occasionally flooded--3 percent

Map Unit Setting

Landscape position: Intermontane basins
Emagert--Landform: Stream terraces; position on slope: upper
Wetvit--Landform: Flood plains
Inclusion 1--Landform: Stream terraces; position on slope: upper
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Flood plains

Major Component Description

Emagert Series
Elevation: 5,000 to 5,700 feet
Precipitation: About 12 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface layer texture: Loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Wetvit Series
Elevation: 5,000 to 5,700 feet
Precipitation: About 10 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Fine sandy loam
Drainage class: Very poorly drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Emagert: Basin big sagebrush, basin wildrye, rubber rabbitbrush
Wetvit: Baltic rush, Nebraska sedge, Nevada bluegrass
Inclusion 1: Basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 2: Indian ricegrass, Thurber needlegrass, Wyoming big sagebrush, basin wildrye
Inclusion 3: Baltic rush, Nevada bluegrass, meadow barley

Ecological Site

Emagert: 023XY009NV
Wetvit: 023XY089NV
Inclusion 1: 023XY005NV
Inclusion 2: 023XY082NV
Inclusion 3: 023XY013NV

1460--Weezweed loam, 0 to 2 percent slopes

Composition

Major Components
Weezweed loam, 0 to 2 percent slopes--85 percent
Contrasting Inclusions
Inclusion 1: Emagert loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Vitrixerandic Haplargids, Ashy, mesic fine sandy loam, 0 to 4 percent slopes--5 percent
Inclusion 3: Wetvit fine sandy loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins
Weezweed--Landform: Stream terraces
Inclusion 1--Landform: Stream terraces; position on slope: lower
Inclusion 2--Landform: Inset fans
Inclusion 3--Landform: Flood plains; position on slope: lower

Major Component Description

Weezweed Series
Elevation: 5,000 to 5,700 feet
Precipitation: About 12 inches
Air temperature: About 46 degrees
Frost-free season: About 90 days
Surface rock fragments: 10 percent gravel
Surface layer texture: Loam
Drainage class: Moderately well drained
Dominant parent material: Alluvium derived from pyroclastic and extrusive volcanic rocks

Dominant Present Vegetation

Weezweed: Basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 1: Basin big sagebrush, basin wildrye, rubber rabbitbrush
Inclusion 2: Indian ricegrass, Thurber needlegrass, Wyoming big sagebrush, basin wildrye
Inclusion 3: Baltic rush, Nebraska sedge, Nevada bluegrass

Ecological Site

Weezweed: 023XY005NV
Inclusion 1: 023XY009NV
Inclusion 2: 023XY082NV
Inclusion 3: 023XY089NV

1470--Ninemile very cobbly loam, 2 to 15 percent slopes

Composition

Major Components
Ninemile very cobbly loam, 2 to 15 percent slopes--90 percent
Contrasting Inclusions
Inclusion 1: Devada very cobbly loam, 2 to 15 percent slopes--6 percent
Inclusion 2: Hart Camp stony loam, 4 to 15 percent slopes--3 percent
Inclusion 3: Crocan extremely stony loam, 2 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Plateaus
Ninemile--Landform: Plateaus; geomorphic position: summit
Inclusion 1--Landform: Plateaus; geomorphic position: summit; aspect: south
Inclusion 2--Landform: Plateaus; geomorphic position: backslope
Inclusion 3--Landform: Plateaus; geomorphic position: shoulder

Major Component Description

Ninemile Series
Elevation: 6,100 to 6,500 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 75 days
Surface rock fragments: 20 percent cobbles; 30 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Ninemile: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Inclusion 3: Idaho fescue, bluebunch wheatgrass, low sagebrush, western juniper

Ecological Site

Ninemile: 023XY017NV
Inclusion 1: 023XY031NV
Inclusion 2: 023XY015NV
Inclusion 3: 023XY095NV

9901--Playas

Composition

Major Components
Playas silty clay, 0 to 1 percent slopes--100 percent

Map Unit Setting

Landscape position: Bolsons

Major Component Description

Playas Miscellaneous Area
Elevation: 4,500 to 6,000 feet
Surface layer texture: Silty clay

Dominant Present Vegetation

Playas: None

Ecological Site

Playas: none

9902--Rock outcrop-Rubble land complex, 50 to 75 percent slopes

Composition

Major Components
Rock outcrop unweathered bedrock, 50 to 75 percent slopes--45 percent
Rubble land fragmental material, 50 to 75 percent slopes--40 percent
Contrasting Inclusions
Inclusion 1: Hackwood gravelly loam, 30 to 50 percent slopes--6 percent
Inclusion 2: Fiddler very stony loam, 30 to 50 percent slopes--5 percent
Inclusion 3: Dosie very stony loam, 30 to 50 percent slopes--4 percent

Map Unit Setting

Landscape position: Plateaus
Rock outcrop--Landform: Plateaus
Rubble land--Landform: Escarpments
Inclusion 1--Landform: Plateaus; geomorphic position: backslope; aspect: north
Inclusion 2--Landform: Plateaus; geomorphic position: backslope; position on slope: upper; aspect: south
Inclusion 3--Landform: Plateaus; geomorphic position: backslope; aspect: east

Major Component Description

Rock outcrop Miscellaneous Area
Elevation: 4,800 to 7,000 feet
Surface layer texture: Unweathered bedrock
Drainage class: Excessively drained

Rubble land Miscellaneous Area
Elevation: 4,800 to 7,000 feet
Surface layer texture: Fragmental material
Drainage class: Excessively drained

Dominant Present Vegetation

Rock outcrop: None
Rubble land: None
Inclusion 1: Quaking aspen
Inclusion 2: Bluebunch wheatgrass, western juniper
Inclusion 3: Basin wildrye, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Rubble land: none
Rock outcrop: none
Inclusion 1: 023XY028NV
Inclusion 2: 023XY024NV
Inclusion 3: 023XY016NV

W--Water

Composition

Major Components
Water--100 percent

Map Unit Setting

Landscape position: Intermontane basins

Major Component Description

Water Miscellaneous Area
Elevation: 4,400 to 6,300 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 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 2100 acres 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 would meet the criteria for prime farmland if irrigated with an adequate and dependable water supply:

1460 Weezweed loam, 0 to 2 percent slopes

In addition, the following map units would meet the criteria for prime farmland if irrigated and reclaimed to reduce excessive salinity and sodicity:

1140 Valmy very fine sandy loam, 0 to 2 percent slopes
1230 Raglan-Mazuma 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 4, "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 hava 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 alphabetic 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"(7). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy"(8). 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".

Aeric Epiaquents

The Aeric Epiaquents consists of very deep, very poorly drained soils that formed in mixed lacustrine sediments on lake plains. Slopes are 0 to 1 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Frigid, Aeric Epiaquents

Typical pedon: Aeric Epiaquents silt loam, in map unit 1311, rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; light brownish gray (2.5Y 6/2) silt loam, very dark grayish brown (2.5Y 3/2) moist; moderate thick platy structure; hard, friable, sticky and plastic; many very fine roots; common very fine vesicular

pores; strongly alkaline (pH 8.8); abrupt wavy boundary.
C1--4 to 12 inches; dark grayish brown (2.5Y 4/2) silty clay loam, very dark grayish brown (2.5Y 3/2) moist; moderate fine angular blocky structure; hard, friable, very sticky and very plastic; many very fine and fine roots; many very fine interstitial pores; strongly alkaline (pH 8.8); clear smooth boundary.
C2--12 to 19 inches; grayish brown (2.5Y 5/2) silty clay, very dark grayish brown (2.5Y 3/2) moist; strong medium prismatic structure; hard, friable, very sticky and very plastic; common very fine roots; common very fine interstitial pores; few fine distinct dark yellowish brown (10YR 4/4) redox concentrations, very dark brown (7.5YR 2/2) moist; slightly effervescent; strongly alkaline (pH 8.9); clear wavy boundary.
Ck1--19 to 26 inches; grayish brown (2.5Y 5/2) silty clay, dark grayish brown (2.5Y 4/2) moist; massive; hard, firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; strongly effervescent; strongly alkaline (pH 9.2); clear smooth boundary.
Ck2--26 to 31 inches; pale brown (10YR 6/3) silty clay loam, dark grayish brown (10YR 4/2) moist; massive; hard, friable, very sticky and very plastic; no roots observed; few very fine tubular pores; strongly effervescent; strongly alkaline (pH 8.8); clear smooth boundary.
Ck3--31 to 42 inches; pale brown (10YR 6/3) silty clay, dark grayish brown (10YR 4/2) moist; moderate thin platy structure; hard, friable, very sticky and very plastic; no roots observed; few very fine tubular pores; strongly effervescent; very strongly alkaline (pH 9.2); clear smooth boundary.
2C--42 to 60 inches; grayish brown (10YR 5/2) silty clay loam and silt loam, dark grayish brown (10YR 4/2) moist; massive; hard, friable, sticky and plastic; slightly effervescent; strongly alkaline (pH 9.0)

Type location: Washoe County, Nevada; at the north end of Mosquito Lake in Mosquito Valley; about 1,600 feet west and 2,000 feet south of the northeast corner of section 3, T. 45 N., R. 19 E.; (41 degrees, 51 minutes, 07 seconds north latitude and 119 degrees, 50 minutes, 01 second west longitude.)

Range in Characteristics:

Soil moisture: The soil is usually saturated at the surface for very long periods due to water ponding.
Soil temperature: 44 to 47 degrees F.
Reaction: Moderately alkaline to very strongly alkaline.
Control section:
Clay content--30 to 60 percent.
SAR--1 to 5.
Electrical conductivity--0 to 4 millimhos.

A horizon:
Value--6 or 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Effervescence--Noneffervescent to slightly effervescent.

C and Ck horizons:
Hue--10YR, 5Y or 2.5Y.
Chroma--2 through 4 in the upper part and 1 through 3 in the lower part.
Texture--Silty clay loam or silty clay.
Effervescence--Noneffervescent to strongly effervescent.

2C horizon:
Texture--stratified silty clay loam and silt loam with strata of very fine sandy loam.

Ashcamp Series

The Ashcamp series consists of shallow and very shallow, well drained soils formed in residuum and colluvium from andesitic tuff and pyroclastic rocks. The Ashcamp soils are on plateaus. Slopes are 2 to 15 percent. The mean annual precipitation is about 13 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Ashy, mesic, shallow Vitritorrandic Argixerolls

Typical pedon: Ashcamp sandy loam, in map unit 1164, rangeland (Colors are for dry soil unless otherwise noted.)
A--0 to 3 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine tubular and few very fine interstitial pores; 15 percent pebbles; neutral (pH 7.0); clear smooth boundary.
Bt--3 to 7 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine tubular pores; common thin clay films on faces of peds and lining pores; 10 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.
Cr--7 to 23 inches; very pale brown (10YR 7/3) soft, weathered andesitic tuff, brown (10YR 5/3) moist; breaks into 2 to 6 centimeter thick plates; many roots and some soil in fractures; many thin glass coats in matrix.

Type location: Washoe County, Nevada. About 1,600 feet south and 1,600 feet west of the northeast corner of section 1, T. 42 N., R. 23 E.; (41 degrees, 35 minutes, 10 seconds north latitude and 119 degrees, 19 minutes, 34 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July through October.
Soil temperature: 47 to 51 degrees F.
Depth to bedrock: 7 to 14 inches.
Thickness of mollic: 7 to 14 inches.
Mineralogy: 35 to 60 percent glass in the very fine and fine sand size throughout.

Control section:
Clay content--12 to 18 percent.
Rock fragments--Less than 15 percent pebbles (tuff fragments).

A horizon:
Value--2 or 3 moist.
Chroma--2 or 3.

Bt horizon:
Hue--10YR or 7.5YR.
Value--2 or 3 moist.
Chroma--2 or 3
Structure--Angular blocky or subangular blocky.
Rock fragments--Less than 15 percent (tuff fragments).
Consistence--Slightly hard or hard dry.
Other features--Many roots are present within bedrock fractures.

Ashdos Series

The Ashdos series consists of moderately deep, well drained soils formed in residuum and colluvium of andesitic tuff and pyroclastic rocks. The Ashdos soils are on plateaus, mountains and hills. Slopes are 4 to 50 percent. The mean annual precipitation is about 13 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Ashy, frigid Vitritorrandic Argixerolls

Typical pedon: Ashdos very gravelly fine sandy loam, in map unit 1250, rangeland (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; 40 percent pebbles; neutral (pH 6.8); clear wavy boundary.

A2--2 to 7 inches; brown (10YR 5/3) gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky, slightly plastic; many very fine and common fine roots; common very fine tubular pores; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.

A3--7 to 12 inches; brown (10YR 5/3) gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; strong fine and medium subangular blocky structure; hard, very friable, slightly sticky, slightly plastic; common very fine and fine roots; many very fine and common fine tubular pores; 20 percent pebbles; neutral (pH 7.2); clear wavy boundary.

Bt1--12 to 19 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark brown (10YR 4/3) moist; strong fine and medium angular blocky structure; very hard, very friable, sticky, plastic; common very fine, few fine roots; many very fine tubular pores; common thin and few moderately thick clay films on peds and lining pores; 20 percent pebbles; neutral (pH 7.2); gradual smooth boundary.

Bt2--19 to 24 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse angular blocky structure; very hard, very friable, sticky, plastic; common very fine roots; common very fine tubular pores; common thin and few moderately thick clay films on peds and lining pores; 30 percent pebbles; slightly alkaline (pH 7.4); gradual smooth boundary.

Cr--24 to 60 inches; very pale brown (10YR 7/3) weathered andesitic tuff, brown (10YR 5/3) moist; digs with difficulty; hard, firm; few thin clay films bridging mineral grains near upper boundary; few thin silica coats appearing as glassy luster.

Type location: Washoe County, Nevada in an unsectioned area, about 1,900 feet south and 2,200 feet east of the projected northwest corner of section 5, T. 42 N., R. 19 E.; (41 degrees, 35 minutes, 32 seconds north latitude and 119 degrees, 52 minutes, 45 seconds west longitude.)

Range in Characteristics:

Soil moisture: moist in winter and spring; dry from July through October.
Soil temperature: 45 to 47 degrees F.
Depth to bedrock: 20 to 40 inches.
Thickness of mollic: 8 to 16 inches.
Minerology: 35 to 60 percent glass in the very fine and fine sand size throughout.
Reaction: neutral or slightly alkaline.
Control section:
Clay content--18 to 25 percent.
Rock fragments--15 to 30 percent, when mixed, mainly pebbles.

A horizons:
Value--5 or 6 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4
Structure--Angular blocky or subangular blocky.

Ashone Series

The Ashone series consists of moderately deep, well drained soils formed in residuum and colluvium from andesitic tuff and pyroclastic rocks. The Ashone soils are on plateaus, mountains, and hills. Slopes are 4 to 50 percent. The mean annual precipitation is about 13 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Ashy, mesic Vitritorrandic Argixerolls

Typical pedon: Ashone very gravelly fine sandy loam, in map unit 1250, rangeland (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly fine sandy loam, very dark grayish brown

(10YR 3/2) moist; moderate thin and medium platy structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial and vesicular pores; 50 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.
A2--2 to 8 inches; brown (10YR 5/3) gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, slightly sticky, slightly plastic; common very fine and fine, few medium roots; many very fine tubular pores; 20 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.
Bt1--8 to 12 inches; brown (10YR 5/3) gravelly sandy clay loam, dark brown (10YR 3/3) moist; strong fine and medium angular blocky structure; very hard, very friable, sticky, plastic; common very fine, fine and medium roots; common very fine tubular pores; common thin and few moderately thick clay films on peds and lining pores; 20 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.
Bt2--12 to 22 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse angular blocky structure; very hard, very friable, sticky, plastic; few very fine and few fine roots; few very fine tubular pores; common thin and few moderately thick clay films on peds and lining pores; 30 percent pebbles; slightly alkaline (pH 7.6); gradual smooth boundary.
Cr--22 to 60 inches; very pale brown (10YR 7/3) weathered andesitic tuff, brown (10YR 5/3) moist; digs with difficulty; hard, firm; few very fine and fine roots in pockets.

Type location: Washoe County, Nevada in an unsectioned area, about 2,800 feet east and 3,200 feet south of the projected northwest corner of section 5, T. 42 N., R. 19 E.; (41 degrees, 35 minutes, 19 seconds north latitude and 119 degrees, 52 minutes, 37 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring; dry from July through October.
Soil temperature: 47 to 51 degrees F.
Depth to bedrock: 20 to 40 inches.
Thickness of mollic: 8 to 16 inches.
Mineralogy: 35 to 60 percent glass in the very fine and fine sand size throuthout.
Reaction: Neutral or slightly alkaline.
Control section:
Clay content--22 to 30 percent.
Rock fragments--15 to 30 percent, when mixed, mainly pebbles.

A horizons:
Value--5 or 6 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 through 4.
Structure--Angular blocky or subangular blocky.

Ashtre Series

The Ashtre series consists of moderately deep, well drained soils that formed in residuum and colluvium of andesitic tuff and pyroclastic rocks. The Ashtre soils are on plateau shoulder slopes and side slopes. 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: Ashy, frigid Vitritorrandic Argixerolls

Typical pedon: Ashtre very gravelly loam, in map unit 1251, rangeland (Colors are for dry soil unless otherwise noted.)
A1--0 to 2 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; 2 percent cobbles, 40 percent pebbles; slightly acid (pH 6.4); clear wavy boundary.
A2--2 to 7 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine tubular pores; 10 percent pebbles, 1 percent cobbles; neutral (pH 6.6); clear wavy boundary.
Bt1--7 to 11 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; common very fine and few fine tubular pores; common thin clay films on faces of peds and lining pores; 10 percent pebbles; neutral (pH 6.8); clear wavy boundary.
Bt2--11 to 17 inches; light yellowish brown (10YR 6/4) clay loam, dark brown (10YR 4/3) moist; strong medium subangular blocky structure; very hard, very friable, sticky and plastic; common very fine and few fine and medium roots; many very fine tubular pores; common thin and moderately thick clay films on faces of peds, lining pores and bridging mineral grains; 10 percent pebbles, 1 percent cobbles; neutral (pH 6.8); clear wavy boundary.
Bt3--17 to 26 inches; light brown (7.5YR 6/4) clay loam, strong brown (7.5YR 4/6) moist; moderate medium and coarse subangular blocky structure; very hard, friable, sticky and plastic; common very fine and few fine roots; many very fine and common fine tubular pores; common thin and few moderately thick clay films on faces of peds, lining pores and bridging mineral grains; 10 percent pebbles, 3 percent cobbles; neutral (pH 7.0); abrupt wavy boundary.
Cr--26 to 60 inches; pink (7.5YR 7/4) soft, weathered andesitic tuff, strong brown (7.5YR 5/6) moist; can be dug with difficulty; hard, firm; thin glass coatings of ash over bedrock.

Type location: Washoe County, Nevada. In Little Basin in an unsectioned area, T. 43 N., R. 20 E.; (41 degrees, 40 minutes, 44 seconds north latitude and 119 degrees, 43 minutes, 27 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July through October.
Soil temperature: 45 to 47 degrees F.
Depth to bedrock: 20 to 40 inches.
Mollic epipedon: 10 to 16 inches.
Mineralogy: 35 to 60 percent glass in the whole sand fraction throughout.
Reaction: Neutral or slightly acid.
Control section:
Clay content--27 to 35 percent when mixed.
Rock fragments--5 to 15 percent pebbles when mixed.

A horizons:
Value--5 or 6 dry, 2 or 3 moist. Dry value of 6 is only in the surface 3 inches. The surface 7 inches when mixed has a dry value of less than 5.5.
Chroma--2 or 3.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 through 6.
Clay content--20 to 25 percent in the Bt1, 27 to 35 percent in the lower Bt horizons.
Structure--Angular blocky or subangular blocky.
Consistence--Hard or very hard dry, very friable or friable moist.
Rock fragments--5 to 15 percent, mainly pebbles.
Other features--The bedrock is covered with a thin glass coating of ash over bedrock.

Badgercamp Series

The Badgercamp series consists of shallow, well drained soils that formed in residuum from soft tuffaceous bedrock. The Badgercamp soils are on summits and shoulders of plateaus. Slopes are 4 to 70 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 40 degrees F.

Taxonomic class: Loamy-skeletal, mixed, shallow Argic Cryoborolls

Typical pedon: Badgercamp bouldery loam, in map unit 1358, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 2 percent boulders, 2 percent cobbles, and 10 percent pebbles.
A1--0 to 5 inches; dark grayish brown (10YR 4/2) bouldery loam, very dark brown (10YR 2/2) moist; weak very fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 2 percent boulders, 1 percent cobbles, 5 percent pebbles; neutral (pH 6.8); clear smooth boundary.
Bt--5 to 15 inches; dark grayish brown (10YR 4/2) 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; many very fine tubular pores; few thin clay films on faces of peds; 1 percent stones, 5 percent cobbles, 40 percent pebbles; neutral (pH 6.8); abrupt wavy boundary.
Cr--15 to 19 inches; soft volcanic rock.

Type location: Washoe County, Nevada; about 0.25 miles northeast of Barrel Springs road; about 1,100 feet west and 1,700 feet south of the northeast corner of section 33, T. 46 N., R. 19 E.; (41 degrees, 52 minutes, 02 seconds north latitude and 119 degrees, 51 minutes, 07 seconds west longitude.)

Range in Characteristics:

Soil temperature: 40 to 42 degrees F.
Average summer soil temperature: 54 to 59 degrees F.
Mollic epipedon thickness: 7 to 15 inches.
Depth to paralithic contact: 14 to 20 inches.
Control section:
Clay content--12 to 18 percent.
Rock fragments--40 to 80 percent.

A horizon:
Value--3 through 5 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt horizon:
Value--4 or 5 dry, 3 or 4 moist.
Chroma--2 through 4.
Clay content--12 to 18 percent.
Consistence--Very friable or friable, slightly sticky or sticky, slightly plastic or plastic.

Bearbutte Series

The Bearbutte series consists of deep, well drained soils that formed in alluvium and colluvium from tuffaceous rocks. The Bearbutte soils are on side slopes of mountains, hills, and plateaus. Slopes are 4 to 15 percent. The mean annual precipitation is about 13 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Coarse-loamy, mixed, frigid Pachic Argixerolls

Typical pedon: Bearbutte fine sandy loam, in map unit 1020, rangeland. (Colors are for dry soil unless otherwise noted.)
A1--0 to 2 inches; dark grayish brown (10YR 4/2) fine sandy loam, very dark brown (10YR 2/2) moist; weak very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine tubular pores; 10 percent pebbles; neutral (pH 6.6); clear smooth boundary.
A2--2 to 9 inches; dark grayish brown (10YR 4/2) fine sandy loam, very dark brown (10YR 2/2) moist; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic, many very fine roots; many very fine tubular pores; 10 percent pebbles; neutral (pH 6.8); clear smooth boundary.
Bt1--9 to 19 inches; brown (10YR 4/3) gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium

subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; many very fine tubular pores; few thin clay films on faces of peds; 20 percent pebbles; neutral (pH 6.8); abrupt smooth boundary.
Bt2--19 to 24 inches; dark grayish brown (10YR 4/2) gravelly sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine and medium roots; many very fine and fine tubular pores; few thin clay films on faces of peds and bridging mineral grains; 30 percent pebbles; neutral (pH 6.8); clear smooth boundary.
C1--24 to 40 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 4/3) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine, fine and medium roots; many very fine tubular pores; 10 percent pebbles, 5 percent cobbles; neutral (pH 7.0); clear smooth boundary.
C2--40 to 53 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; 10 percent pebbles, 5 percent cobbles; neutral (pH 7.0); clear wavy boundary.
Cr--53 to 57 inches; soft weathered tuff.

Type location: Washoe County, Nevada; approximately 0.25 miles north of Forty Nine Summit in an unsectioned area, T. 42 N., R. 19 E.; (41 degrees, 35 minutes, 43 seconds north latitude and 119 degrees, 53 minutes, 12 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry from late June through October.
Soil temperature: 42 to 45 degrees.
Mollic epipedon thickness: 20 to 40 inches.
Depth to paralithic contact: 40 to 60 inches.
Control section:
Clay content--10 to 18 percent.
Rock fragments--Averages 5 to 30 percent.

A horizon:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Chroma--2 or 3.
Texture--Sandy loam or loam.
Clay content--10 to 18 percent.
Rock fragments--Averages 5 to 30 percent, mostly pebbles.
Structure--Weak, fine and medium subangular blocky.
Organic matter content--3 to 5 percent

C horizons:
Value--4 or 5 dry, 3 or 4 moist.
Chroma--2 through 4.
Clay content--3 to 15 percent.
Rock fragments--Averages 15 to 30 percent.

Bidrim Series

Bidrim series are shallow, well drained soils that formed in residuum from basalt, andesite and tuff. The Bidrim soils are on plateau rims. Slopes are 2 to 15 percent. The mean annual precipitation is about 12 inches and the mean annual air temperature is about 45 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic Lithic Argixerolls

Typical pedon: Bidrim extremely stony loam, in map unit 1165, woodland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 15 percent stones and boulders, 20 percent cobbles, and 20 percent pebbles.
A1--0 to 1 inch; very dark brown (10YR 2/2) extremely stony loam, black (10YR 2/1) moist; moderate very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; 15 percent stones; 20 percent cobbles; 20 percent pebbles; neutral (pH 6.8); clear wavy boundary.
A2--1 to 3 inches; dark grayish brown (10YR 4/2) very stony loam, very dark brown (10YR 2/2) moist; moderate very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; 15 percent stones; 20 percent cobbles; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bt--3 to 8 inches; brown (7.5YR 4/2) clay loam, dark brown (7.5YR 3/2) moist; moderate fine subangular blocky structure; hard, very friable, very sticky and plastic; many very fine, common fine and few medium roots; common fine tubular pores; many moderately thick clay films on faces of peds and lining pores; vertical cracks 5 millimeters to 16 millimeters wide and 5 to 7 inches apart extend from a depth of 3 to 13 inches; 10 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Btss--8 to 13 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate medium and coarse angular blocky structure; extremely hard, very firm, very sticky and very plastic; common very fine and few fine, medium and coarse roots; common very fine tubular pores; many moderately thick and thick clay films on faces of peds and lining pores; common slickensides; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary.
R--13 to 17 inches; hard massive vesicular basalt; rounded into stone size; few fractures.

Type location: Washoe County, Nevada; 1.2 miles north of Barrel Springs road and about 400 feet east of power line road; about 200 feet west and 1,600 feet south of the northeast corner of section 11, T. 46 N., R.18 E.; (41 degrees, 55 minutes, 33 seconds north latitude and 119 degrees, 55 minutes, 35 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July through October.
Soil temperature: 47 to 51 degrees F.

Thickness of mollic: 7 to 11 inches and includes all or part of the argillic horizon.
Depth to bedrock: 10 to 14 inches
Control section:
Clay content--38 to 45 percent when mixed.

A horizons:
Value--2 through 4 dry, 2 or 3 moist.
Chroma--1 or 2.
Organic matter--6 to 8 percent in the A1 horizon and 3 to 4 percent in the A2 horizon.

Bt horizon:
Hue--10YR or 7.5YR
Value--4 through 5 dry, 2 or 3 moist
Chroma--2 through 4
Clay content--33 to 38 percent.
Rock fragments--5 to 15 percent, mainly pebbles.
Other features--Vertical cracks 5 to 20 millimeters wide.

Btss horizon:
Hue--10YR or 7.5YR.
Value--3 or 4 moist.
Chroma--2 through 4.
Clay content--55 to 65 percent.
Rock fragments--5 to 10 percent, mainly pebbles.

Bieber Series

The Bieber series consists of shallow and very shallow to hardpan, well and moderately well drained soils on fan terraces. Slopes are 2 to 15 percent. Mean annual precipitation is about 12 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Argiduridic Durixerolls

Typical pedon: Bieber very gravelly loam, in map unit 1166, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate very thin and thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine vesicular pores; 50 percent pebbles ; neutral (pH 7.0); clear wavy boundary.

A2--2 to 6 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine roots; many very fine tubular pores; 25 percent pebbles ; neutral (pH 7.0); clear wavy boundary.

Bt1--6 to 10 inches; brown (10YR 5/3) gravelly clay loam, dark brown (7.5YR 3/2) moist; strong fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine tubular pores; common thin and few moderately thick clay films on faces of peds and in pores; 15 percent pebbles; neutral (pH 7.3); abrupt wavy boundary.

Bt2--10 to 13 inches; brown (7.5YR 5/4) gravelly clay, dark brown (7.5YR 3/4) moist; strong fine and medium angular blocky structure; very hard, very friable, very sticky and plastic; common very fine and fine and few medium roots; many very fine tubular pores; 15 percent pebbles; many thin and moderately thick clay films on faces of peds and in pores; slightly alkaline (pH 7.6); abrupt wavy boundary.

Bt3--13 to 16 inches; brown (7.5YR 5/4) gravelly clay, dark brown (7.5YR 3/4) moist; strong medium and coarse angular blocky structure; very hard, friable, very sticky and very plastic; common very fine and few fine roots; many very fine and few fine tubular pores; 20 percent pebbles; many thin and moderately thick clay films on faces of peds and in pores; slightly alkaline (pH 7.6); abrupt wavy boundary.

2Bqkm1--16 to 22 inches; light brown (7.5YR 6/4) continuous silica lamanae capped indurated duripan, brown (7.5YR 5/4) moist; strong medium and thick platy structure; extremely hard, extremely firm; 40 percent cemented pebbles; abrupt smooth boundary.

2Bqkm2--22 to 31 inches; light brown (7.5YR 6/4); indurated and strongly cemented duripan, brown (7.5YR 5/4) moist; massive; extremely hard, very firm; few silica pendants and lime coats on underside of rock fragments; 60 percent rounded pebbles and 10 percent cobbles; clear smooth boundary.

2Bqk--31 to 60 inches; light brown (7.5YR 6/4) stratified cobbly sandy loam to very gravelly sandy loam, brown (7.5YR 5/4) moist; hard and very hard, friable and firm; no roots observed; many very fine interstitial pores; 40 percent rounded pebbles and 10 percent cobbles; common fine lime and silica coats on underside of rock fragments; moderately alkaline (pH 8.0).

Type location: Washoe County, Nevada; about 700 feet west and 1,900 feet north of the southeast corner section 24, T. 47 N., R.18 E.; (41 degrees, 58 minutes, 44 seconds north latitude and 119 degrees, 54 minutes, 29 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 50 to 55 degrees F.
Depth to duripan: 8 to 20 inches.

A horizons:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3
Reaction--Slightly acid or neutral

Bt1 horizon:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 2 or 3 moist
Chroma--2 or 3
Clay content--27 to 36 percent
Texture--Clay loam or gravelly clay loam
Rock fragments--10 to 35 percent pebbles
Reaction--Slightly acid or neutral

Bt2 and Bt3 horizons:
Hue--10YR or 7.5YR
Value--4 through 6 dry, 3 or 4 moist
Chroma--2 through 4
Clay content--35 to 45 percent
Rock fragments--5 to 30 percent pebbles
Structure--Prismatic or angular blocky
Reaction--Slightly acid to moderately alkaline

Bighat Series

The Bighat series consists of very deep, well drained soils that formed in mixed alluvium. The Bighat soils are on lake shore terraces and beach terraces. Slopes are 4 to 30 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine-loamy over sandy or sandy-skeletal, mixed, mesic Typic Natrargids

Typical pedon: Bighat very stony sandy loam, in map unit 1210, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent stones, 20 percent cobbles, and 15 percent pebbles.

A1--0 to 2 inches; light gray (10YR 7/2) very stony sandy loam, dark brown (10YR 4/3) moist; strong thick and very thick platy structure; hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine and fine vesicular pores; 5 percent stones, 20 percent cobbles; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary.

A2--2 to 6 inches; white (10YR 8/2) stony loam, yellowish brown (10YR 5/4) moist; strong medium and thick platy structure; hard, very friable, sticky and slightly plastic; common very fine and few fine roots; many very fine vesicular pores; 10 percent stones, 5 percent cobbles, 15 percent pebbles; strongly effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary.

A3--6 to 9 inches; very pale brown (10YR 7/3) and white (10YR 8/2) stony loam, dark yellowish brown (10YR 4/4) moist; strong very thick platy structure; hard, very friable, very sticky and plastic; common very fine and fine roots; many very fine tubular pores; 5 percent stones, 5 percent cobbles, 20 percent pebbles; slightly effervescent; strongly alkaline (pH 8.5); abrupt wavy boundary.

Btn--9 to 16 inches; light yellowish brown (10YR 6/4) stony sandy clay loam, yellowish brown (10YR 5/4) moist; moderate fine and medium prismatic structure parting to strong medium and coarse angular blocky; very hard, friable, sticky and plastic; common very fine, few fine roots; few very fine tubular pores; common thin and moderately thick clay films on faces of peds and lining pores; 10 percent stones, 5 percent cobbles, 15 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary.

2Bqk1--16 to 31 inches; brown (10YR 5/3) extremely stony coarse sand, brown (10YR 4/3) moist; massive; hard, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; 25 percent stones, 15 percent cobbles, 35 percent pebbles; common thin silica coats bridging mineral grains; continuous 0.5 millimeter thick lime and silica coats on underside of rock fragments; 5 percent large soft masses of lime in pockets in soil surrounding some cobbles and some 2 inch pebbles and on sides of stones; few 0.5 to 1.0 millimeter thick discontinuous silica lamanae; violently effervescent; strongly alkaline (pH 8.5); gradual wavy boundary.

3Bqk2--31 to 60 inches; brown (10YR 5/3) extremely gravelly coarse sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; no roots observed; many very fine interstitial pores; 5 percent stones, 10 percent cobbles, 60 percent pebbles; few thin silica coats bridging mineral grains; common 0.5 millimeter thick lime and silica coats on underside of rock fragments; 2 percent large soft masses of lime in pockets; violently effervescent; strongly alkaline (pH 9.0).

Type location: Washoe County, Nevada. About 10 miles southeast of Cedarville, California; about 3,500 feet south of Bull Creek; about 1,800 feet east and 2,400 feet north of the southwest corner of section 16, T. 41 N., R.18 E.; (41 degrees, 28 minutes, 24 seconds north latitude and 119 degrees, 58 minutes, 45 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry; moist for brief periods in winter, dry from late May through November. Aridic moisture regime.
Soil temperature: 47 to 53 degrees F.
Depth to sandy or sandy-skeletal layers: 15 to 27 inches.
Control section:
Clay content--upper part averages 25 to 35 percent; the lower part (Bkq horizons) averages 0 to 2 percent.
Rock fragments--20 to 30 percent stones, cobbles and pebbles in the upper part, 60 to 75 percent stones, cobbles and pebbles in the lower part.

A horizons:
Hue--10YR or 2.5Y
Reaction--Moderately alkaline or strongly alkaline

Btn horizon:
Value--6 or 7 dry, 4 or 5 moist
Chroma--3 or 4
Texture--Stony clay loam or stony sandy clay loam
Reaction--Moderately alkaline or strongly alkaline.
Effervescence--Slightly effervescent to violently effervescent; few fine and medium soft masses of lime are in some pedons.
SAR--13 to 45 percent

Bqk horizons:
Value--5 through 8 dry, 4 through 6 moist
Chroma--3 or 4
Reaction--Mildly alkaline or moderately alkaline

Bitner Series

The Bitner series consists of moderately deep, well drained soils that formed in residuum and colluvium from tuff breccia and pyroclastic rocks. The Bitner soils are on plateau shoulder slopes. Slopes are 4 to 30 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Ashy, mesic Vitritorrandic Haploxerolls

Typical pedon: Bitner gravelly sandy loam, in map unit 1195, rangeland (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 20 percent pebbles, including cinders, obsidian and rhyollitic pebbles.

A1--0 to 2 inches; brown (10YR 5/3) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; 20 percent cinders, volcanic glass and rhyolitic pebbles; slightly acid (pH 6.1); clear wavy boundary.

A2--2 to 7 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine interstitial pores; 15 percent cinders and glassy vitric pyroclastic pebbles; slightly acid (pH 6.4); clear wavy boundary.

Bw--7 to 13 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; many very fine tubular and interstitial pores; 15 percent cinders and glassy vitric pyroclastic pebbles; 5 percent rhyolitic pebbles; neutral (pH 7.2); clear wavy boundary.

Bq1--13 to 19 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; weak coarse subangular blocky structure; slightly hard and hard, very friable, nonsticky and nonplastic; common very fine and few fine roots; many very fine interstitial and common very fine tubular pores; 20 percent cinders and glassy vitric pyroclastic pebbles; 5 percent rhyolitic pebbles; 5 percent 5 to 20 millimeter hard, firm durinodes with few fine strong brown (7.5YR 4/6) iron stains, black (10YR 2/1)moist; 15 percent hard, firm and brittle 2 to 5 centimeter nodules that slake in water; slightly alkaline (pH 7.4); clear wavy boundary.

Bq2--19 to 27 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium and coarse subangular blocky structure; slightly hard and hard, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial and common very fine tubular pores; 25 percent cinders and glassy vitric pyroclastic pebbles; 5 percent rhyolitic pebbles; 5 percent 5 to 20 millimeter hard, firm durinodes with few fine strong brown (7.5YR 4/6) iron stains, black (10YR 2/1) moist; 15 percent hard, firm and brittle 2 to 5 centimeter nodules that slake in water; slightly alkaline (pH 7.6); abrupt wavy boundary.

Cr--27 to 35 inches; highly weathered and fractured tuff breccia with few fine roots in some fractures; many 1 to 5 millimeter glass and vitric pyroclastic pebbles in matrix; many moderately thick glass coats.

Type location: Washoe County, Nevada. On the east side of Massacre Mountain in an unsectioned area, T. 42 N., R. 22 E.; (41 degrees, 33 minutes, 23 seconds north latitude and 119 degrees, 32 minutes, 30 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July through October.
Soil temperature: 47 to 51 degrees F.
Depth to bedrock: 20 to 40 inches.
Mollic epipedon: 10 to 20 inches.
Mineralogy: 60 to 80 percent glass in the very fine and fine sand size throughout.
Reaction: Slightly acid or neutral in the upper part, neutral or slightly alkaline in the lower part.
Control section:
Clay content--12 to 18 percent.
Rock fragments--15 to 25 percent pebbles that are dominantly cinders when mixed.

A horizons:
Value--5 or 6 dry, 2 or 3 moist. Dry value of 6 is only in the surface 2 inches of some pedons.
Chroma--2 or 3.

Bw horizon:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.

Bq horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.
Other features--2 to 10 percent 2 to 10 centimeter durinodes. Some pedons have 1 to 2 inch thick 2C horizons immediately above the Cr that are extremely gravelly sandy loam.

Blizzard Series

The Blizzard series consists of shallow, well drained soils that formed in colluvium over residuum from basalt and tuff. Blizzard soils are on plateaus. Slopes range from 2 to 15 percent. The mean annual precipitation is about 14 inches and the annual temperature is about 43 degrees F.

Taxonomic class: Clayey, montmorillonitic Argic Lithic Cryoborolls

Typical pedon: Blizzard very cobbly silty clay loam, in

map unit 1296, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with about 1 percent stones, 20 percent cobbles, and 30 percent pebbles.

A--0 to 2 inches; brown (7.5YR 5/2) very cobbly silty clay loam, brown (7.5YR 4/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine, fine, and coarse roots; few very fine vesicular pores; 1 percent stones, 20 percent cobbles, 30 percent pebbles; slightly alkaline (pH 7.6); clear boundary.

Bt1--2 to 5 inches; brown (7.5YR 5/2) silty clay, dark brown (7.5YR 3/2) moist; strong medium subangular blocky structure; very hard, friable, very sticky and very plastic; common very fine and fine roots; few very fine tubular pores; common thin clay films on faces of peds and in pores; 10 percent cobbles; slightly alkaline (pH 7.4); clear wavy boundary.

Bt2--5 to 19 inches; brown (7.5YR 5/2) cobbly clay, brown (7.5YR 4/2) moist; strong medium angular blocky structure; extremely hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine tubular pores; common thin and moderately thick clay films on faces of peds and in pores; 20 percent cobbles; slightly alkaline (pH 7.4); abrupt smooth boundary.

R--19 to 23 inches; slightly fractured basalt.

Type location: Washoe County, Nevada; east of Coleman Valley; about 1,000 feet east and 200 feet south of the northwest corner of section 15 T. 47 N., R. 20 E.; (41 degrees, 59 minutes, 45 seconds north latitude and 119 degrees, 43 minutes, 43 seconds west longitude.)

Range in Characteristics:

Soil moisture: Dry during July to October
Soil temperature: 43 to 47 degrees F.
Average summer soil temperature: 54 to 59 degrees F.
Depth to bedrock: 10 to 20 inches.
Thickness of mollic: 7 to 10 inches and includes part or all of the argillic.
Reaction: Neutral or slightly alkaline
Control section:
Clay content--45 to 60 percent.
Rock fragments--0 to 25 percent, mainly cobbles and pebbles.

A horizon:
Hue--7.5YR or 10YR.
Value--4 or 5 dry, 3 or 4 moist.
Chroma--2 or 3.

Bt horizon:
Value--4 or 5 dry, 3 or 4 moist.
Chroma--2 or 3.
Texture--Silty clay, cobbly clay or clay.
Rock fragments--0 to 20 percent cobbles, 0 to 15 percent pebbles.
Other features--Some pedons have Bk horizons below the Bt.

Boltz Series

The Boltz series consists of moderately deep, well drained soils formed in residuum and colluvium from andesitic tuff and pyroclastic rocks. The Boltz soils are on plateau shoulder slopes and side slopes. Slopes are 4 to 30 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Ashy, frigid Vitritorrandic Haploxerolls

Typical pedon: Boltz gravelly sandy loam, in map unit 1278, rangeland (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine roots; many very fine interstitial pores; 10 percent cinders, 5 percent volcanic glass and rhyolitic pebbles, 1 percent cobbles; slightly acid (pH 6.4); clear wavy boundary.

A2--3 to 11 inches; brown (7.5YR 5/2) gravelly sandy loam, dark brown (7.5YR 3/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; many very fine tubular pores; 15 percent cinders and glassy vitric pyroclastic pebbles; neutral (pH 6.8); clear wavy boundary.

Bw--11 to 20 inches; brown (7.5YR 5/4) gravelly sandy loam, dark brown (7.5YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine and common fine tubular pores; 10 percent cinders and 5 percent glassy vitric pyroclastic pebbles; neutral (pH 6.8); clear wavy boundary.

C--20 to 34 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots; many very fine interstitial and common very fine tubular pores; few thin clay films in pockets around some pebbles; 20 percent cinders and glassy vitric pyroclastic pebbles; neutral (pH 7.0); clear wavy boundary.

Cr--34 to 60 inches; very pale brown (10YR 7/4) soft, weathered pyroclastic tuff, yellowish brown (10YR 5/4) moist; many pyroclastic pumiceous gravel size; many moderately thick glass coats; can be dug with difficulty.

Type location: Washoe County, Nevada. On the east side of Massacre Mountain in an unsectioned area, T. 42 N., R. 22 E.; (41 degrees, 32 minutes, 30 seconds north latitude and 119 degrees, 32 minutes, 27 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July

through October.
Soil temperature: 45 to 47 degrees F.
Depth to bedrock: 20 to 40 inches.
Mollic epipedon: 10 to 16 inches.
Mineralogy: 60 to 80 percent glass in the very fine and fine sand size throughout.
Reaction: Neutral or slightly acid.
Control section:
Clay content--10 to 18 percent when mixed.
Rock fragments--15 to 25 percent pebbles that are dominantly cinders when mixed.

A horizons:
Value--5 or 6 dry, 2 or 3 moist. Dry value of 6 is only in the surface 2 inches of some pedons.
Chroma--2 or 3.

Bw horizon:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.

C horizons:
Chroma--3 or 4
Texture--Sandy loam or loam.
Clay content--10 to 20 percent.
Glass and glass aggregates--60 to 90 percent of the fine earth fraction.

Bombadil Series

The Bombadil series consists of very shallow and shallow, well drained soils that formed in residuum from weathered basic igneous rock. Bombadil soils are on hills, plateaus, and mountains. Slopes are 4 to 30 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic Lithic Xeric Haplargids

Typical pedon: Bombadil very stony loam, in map unit 1060, rangeland. (Colors are for dry soil unless otherwise noted.) The surface is partially covered by 5 percent stones, 10 percent cobbles, 25 percent pebbles.
A--0 to 3 inches; light brownish gray (10YR 6/2) very stony loam, dark brown (10YR 4/3) moist; strong very thin and thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; very few fine roots; many fine vesicular pores; 5 percent stones, 10 percent cobbles and 25 percent pebbles; slightly alkaline (pH 7.4); abrupt smooth boundary.
Bt1--3 to 6 inches; brown (10YR 5/3) loam, dark brown (10YR 4/3) moist; strong very fine and fine subangular blocky; slightly hard, very friable, sticky and plastic; many very fine, fine, medium and coarse roots; many very fine interstitial, and many very fine, fine and medium tubular pores; common thin clay films on faces of peds and in pores; 10 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.
Bt2--6 to 14 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, fine, medium and coarse roots; many very fine tubular pores; common thin and few moderately thick clay films on faces of peds and in pores; 20 percent pebbles; slightly alkaline (pH 7.8); abrupt wavy boundary.
R--14 to 18 inches; hard basalt; highly fractured in the upper 4 inches with common very fine and fine roots, soil, and discontinuous silica and lime coatings in fractures.

Type location: Washoe County, Nevada; about 10 feet east of the Nevada-California state line and 50 feet south of trail; about 600 feet south and 10 feet east of the northwest corner of section 8, T. 42 N., R. 18 E.; (41 degrees, 34 minutes, 52 seconds north latitude and 119 degrees, 59 minutes, 53 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring, dry in summer and early autumn.
Soil temperature: 47 to 53 degrees F.
Depth to bedrock: 7 to 14 inches.
Reaction: Neutral or slightly alkaline.
Control section:
Percent clay--18 to 27.
Rock fragments--10 to 25 percent.

A horizon:
Hue--10YR, 7.5YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.

Bt1 horizon:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--3 or 4 except 2 in the upper part of some pedons.
Texture--Loam or clay loam
Clay content--18 to 35 percent.
Rock fragments--10 to 25 percent by average.

Bt2 horizon:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 4 or 5 moist.
Chroma--3 or 4.
Clay content--25 to 35 percent.
Consistence--Very friable or friable, slightly sticky or sticky, slightly plastic or plastic.
Rock fragments--10 to 20 percent by average.

Boulder Lake Series

The Boulder Lake series consists of very deep, somewhat poorly drained soils that formed in clayey lacustrine sediments derived mainly from tuff, basalt, and andesite. The Boulder Lake soils are on flat interplateau basins, and lake plains. Slopes are 0 to 2 percent. The mean annual

precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Xeric Epiaquerts

Typical pedon: Boulder Lake silty clay, in map unit 1010, rangeland. (Colors are for moist soil unless otherwise noted.)

A--0 to 2 inches; very dark grayish brown (10YR 3/2) silty clay, grayish brown (10YR 5/2) dry; strong very fine and fine granular structure; slightly hard, friable, very sticky and very plastic; few very fine roots; many very fine and fine interstitial pores; vertical cracks 10 to 30 millimeters wide and 3 to 6 inches apart; slightly acid (pH 6.4); abrupt smooth boundary.

Bw--2 to 6 inches; dark grayish brown (10YR 4/2) silty clay, grayish brown (10YR 5/2) dry; moderate medium prismatic structure; slightly hard, friable, very sticky and very plastic; few very fine, fine and medium roots; many very fine and fine interstitial pores; vertical cracks 10 to 30 millimeters wide and about 3 to 6 inches apart; neutral (pH 6.6); abrupt wavy boundary.

Bwss1--6 to 12 inches; dark grayish brown (10YR 4/2) clay, grayish brown (10YR 5/2) dry; moderate coarse prismatic structure parting to strong very fine and fine angular blocky; slightly hard, friable, very sticky and very plastic; many very fine, few fine and medium roots; few very fine and fine tubular pores; vertical cracks 10 to 50 millimeters wide and about 3 to 6 inches apart; few slickensides; neutral (pH 6.6); clear wavy boundary.

Bwss2--12 to 29 inches; dark grayish brown (10YR 4/2) clay, light brownish gray (10YR 6/2) dry; moderate medium prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; few very fine, fine and medium roots; few very fine tubular pores; vertical cracks 10 to 20 millimeters wide and about 3 to 6 inches apart; common wedge-shaped aggregates tilted 30 degrees from horizontal; common slickensides; few fine and medium distinct brown (7.5YR 4/4) and very dark brown (7.5YR 2/2) iron and manganese masses on faces of peds and in pores; neutral (pH 6.8); gradual smooth boundary.

Bwss3--29 to 60 inches; dark grayish brown (10YR 4/2) clay, light brownish gray (10YR 6/2) dry; weak coarse prismatic structure parting to strong medium to very coarse angular blocky; hard, friable, very sticky and very plastic; few fine and medium roots; few fine tubular pores; common slickensides; common fine distinct brown (7.5YR 4/4) and dark brown (7.5YR 3/4) iron masses on faces of peds and in pores; few fine and medium distinct very dark brown (10YR 2/2) manganese masses on faces of peds; neutral (pH 6.8).

Type location: Washoe County, Nevada; at the south end of Macy Flat; about 1,800 feet west and 1,900 feet north of the southeast corner of Sec. 32, T 47 N., R. 21 E.; (41 degrees, 57 minutes, 00 seconds north latitude and 119 degrees, 38 minutes, 30 seconds west longitude.)

Range in Characteristics:

Soil moisture: Ponded for less than 45 consecutive days in most years, mainly in the spring; brief ponding occurs after intensive rainfall.
Soil temperature: 43 to 47 degrees F.
Average summer soil temperature: 62 to 64 degrees F.
Effervescence: Noncalcareous or slightly effervescent but ranges to strongly effervescent in some pedons where few to common, very fine to medium lime segregations occur below depths of 20 inches.
Other features: Cracks at the surface are up to 3 inches wide and are 3 to 6 inches apart. These decrease in width as depth increases. Cracks remain open for fewer than 180 consecutive days.

A horizon:
Hue--10YR or 2.5Y.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--2 or 3 moist, 1 through 3 dry.
Reaction--Slightly acid to slightly alkaline.

Bw and Bwss horizon:
Hue--10YR or 2.5Y.
Chroma--2 or 3. (Some pedons have dry chromas of 1 in the upper Bw)
Texture--Clay or silty clay, some pedons have clay loam in the immediate surface layer.
Structure--Moderate or strong, medium to very coarse prismatic and very fine to very coarse angular blocky in the upper part; weak to strong, medium to very coarse prismatic and moderate or strong, medium to very coarse angular in the lower subhorizons.
Consistence--Very hard or extremely hard, dry; firm or very firm, moist; may be slightly hard and friable in subhorizons.
Mottles--Few or common, very fine to medium, distinct or prominent, redoximorphic concentrations with reddish, yellowish and brownish colors.
Reaction--Neutral to moderately alkaline.
Other features--Few to many slickensides and many pressure faces. Soil is interpreted as having reduced matrix colors due to saturation.

Bucklake Series

The Bucklake series consists of moderately deep, well drained soils that formed in material weathered from basalt or andesite. Bucklake soils are on mountain back slopes and escarpments. Slopes range from 15 to 50 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Aridic Argixerolls

Typical pedon: Bucklake very stony loam, in map unit 1081, rangeland. (Colors are for dry soil unless otherwise noted). The surface is covered with 5 percent stones, 20 percent cobbles, and 20 percent gravel.

A1--0 to 3 inches; brown (7.5YR 5/2) very stony loam, dark brown (7.5YR 3/2) moist; weak medium and thick platy structure; hard, very friable, sticky and plastic; many very fine and fine, few coarse roots; many very fine tubular pores; 5 percent stones, 20 percent cobbles, 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
A2--3 to 8 inches; brown (7.5YR 5/2) very stony loam, dark brown (7.5YR 3/2) moist; weak medium and coarse subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and fine, few coarse roots; many very fine tubular pores; 10 percent stones, 15 percent cobbles and 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bt1--8 to 12 inches; brown (7.5YR 5/2) gravelly clay loam, dark brown (7.5YR 3/2) moist; moderate medium and coarse subangular blocky structure; hard, very friable, sticky and plastic; common very fine and few fine roots; many very fine tubular pores; common thin and moderately thick clay films on peds; 25 percent pebbles; slightly alkaline (pH 7.5); clear wavy boundary.
Bt2--12 to 18 inches; brown (7.5YR 5/4) gravelly clay, dark brown (7.5YR 3/4) moist; moderate medium and coarse subangular blocky structure; hard, friable, very sticky and very plastic; common very fine roots; many very fine tubular pores; many thin and moderately thick clay films on peds; 25 percent pebbles; slightly alkaline (pH 7.5); clear wavy boundary.
Bt3--18 to 24 inches; brown (7.5YR 5/4) gravelly clay, dark reddish brown (5YR 3/4) moist; weak medium and coarse angular blocky structure; hard, friable, very sticky and very plastic; common very fine roots; many very fine tubular pores; many thin and moderately thick clay films on peds; 25 percent pebbles; slightly alkaline (pH 7.5); clear wavy boundary.
R--24 to 28 inches; hard basalt with some fractures.

Type location: Washoe County, Nevada; about 2,500 feet south and 1,700 feet west of the northeast corner of section 15, T. 43 N., R.18 E.; (41 degrees, 38 minutes, 53 seconds north latitude and 119 degrees, 57 minutes, 02 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 52 degrees F.
Depth to bedrock: 20 to 40 inches.
Thickness of mollic: 10 to 20 inches and includes part of the Bt horizons.

A horizons:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 2 or 3 moist
Chroma--2 or 3

Bt horizons:
Hue--10YR or 7.5YR dry, 10YR, 7.5YR or 5YR moist
Value--3 or 4 moist
Chroma--2 through 4, moist chroma of 4 is only in Bt2 or Bt3 horizons
Texture--Clay loam in the upper part, clay or clay loam in the lower part
Clay content--27 to 35 percent in the upper part, 35 to 50 percent in the lower part
Rock fragments--5 to 30 percent, mainly pebbles
Reaction--Neutral or slightly alkaline

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 2 to 15 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 Xeric Argidurids

Typical pedon: Buffaran very stony loam, in map unit 1110, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered by approximately 20 percent pebbles, 15 percent cobbles, and 10 percent stones.
A--0 to 2 inches; light brownish gray (10YR 6/2) very stony loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and nonplastic; common very fine roots; 10 percent stones, 15 percent cobbles, 20 percent pebbles; neutral (pH 7.3); clear wavy boundary.
Bt1--2 to 6 inches; brown (10YR 5/3) gravelly clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; few very fine and fine roots; common very fine tubular pores; few thin clay films bridging sand grains; 15 percent pebbles; neutral (pH 7.3); clear wavy boundary.
Bt2--6 to 10 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, very friable, sticky and plastic; common very fine and few fine roots; common very fine tubular pores; common thin clay films on faces of peds and bridging sand grains; 10 percent pebbles; neutral (pH 7.3) clear wavy boundary.
Bt3--10 to 14 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate very fine and fine angular blocky; slightly hard, very friable, sticky and plastic; common very fine and few fine roots; common very fine tubular pores; many moderately thick clay films on faces of peds; 15 percent pebbles; neutral (pH 7.3); clear wavy boundary.
Bq--14 to 16 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, sticky and plastic; few very fine and fine roots; common very fine tubular pores; 25 percent 1 to 4 centimeter pieces of strongly silica-cemented duripan; slightly alkaline (pH 7.5); abrupt wavy boundary.
Bqm--16 to 27 inches; indurated duripan; massive; extremely hard, extremely firm; alternate strong

cementation and indurated silica laminae; 60 percent pebbles.
Bqkm--27 to 60 inches; light gray (10YR 7/2) strongly cemented duripan consisting of many thin laminae with weakly cemented material between the laminae; 30 percent pebbles, 30 percent cobbles; violently effervescent; moderately alkaline (pH 8.2).

Type location: Washoe County, Nevada; northwest of Rye Creek Reservoir; about 900 feet west and 1,000 feet north of the southeast corner of section 36, T. 47 N., R. 21 E.; (41 degrees, 56 minutes, 51 seconds north latitude and 119 degrees, 33 minutes, 38 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 52 degrees F.
Depth to duripan: 14 to 20 inches.

A horizon:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 3 or 4 moist, (after mixing 7 inches value 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).
Structure--Subangular blocky or granular.
Consistence--Slightly hard or hard dry, very friable or friable moist, slightly plastic or plastic wet.
Rock fragments--5 to 40 percent, mainly pebbles.
Reaction--Neutral to moderately alkaline.

Bq horizon:
Texture--Loam or clay loam.
Consistence--Slightly hard or hard dry, very friable or friable or firm moist, slightly sticky to sticky and slightly plastic to plastic, wet.
Rock fragments--20 to 40 percent strongly cemented duripan fragments.
Reaction--Neutral to moderately alkaline
Effervescence--Noneffervescent to strongly effervescent.

Ceejay Series

The Ceejay series consists of shallow, well drained soils that formed in residuum weathered from basalt. Ceejay soils are on plateaus. Slopes are 4 to 50 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic Lithic Xeric Haplargids

Typical pedon: Ceejay stony loam, in map unit 1400, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with approximately 2 percent stones, 10 percent cobbles, and 40 percent pebbles.
A1--0 to 4 inches; light brownish gray (10YR 6/2) stony loam, dark grayish brown (10YR 4/2) moist; moderate medium platy structure; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine and fine vesicular and common very fine tubular pores; 2 percent stones, 5 percent cobbles, 35 percent pebbles; neutral (pH 6.8); clear smooth boundary.
A2--4 to 6 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 4/3) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine and fine roots; common fine tubular and interstitial pores; 15 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.
Bt1--6 to 10 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine prismatic structure parting to strong angular blocky; hard, friable, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; many moderately thick clay films on faces of peds; 5 percent cobbles; 20 percent pebbles; neutral (pH 7.0); clear smooth boundary.
Bt2--10 to 15 inches; brown (7.5YR 5/4) gravelly clay loam, brown (7.5YR 4/4) moist; moderate fine prismatic structure parting to moderate fine angular blocky; hard, friable, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; common moderately thick clay films on faces of peds; 15 percent pebbles, 5 percent cobbles; neutral (pH 7.0); abrupt irregular boundary.
R--15 to 19 inches; hard basalt, fractured in some areas. Thin lime and silica coatings in rock fractures.

Type location: Washoe County, Nevada in an unsectioned area, T. 41 N., R. 23 E.; (41 degrees, 25 minutes, 58 seconds north latitude, and 119 degrees, 21 minutes, 05 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, dry in the summer and fall, moist in winter and spring.
Soil temperature: Averages 54 to 59 degrees F.
Depth to bedrock: 14 to 20 inches.
Reaction: Neutral to moderately alkaline.
Control section:
Clay content--35 to 45 percent.
Rock fragments--Averages 15 to 30 percent, mainly pebbles and cobbles.

A horizon:
Value--5 through 7 dry, 4 or 5 moist.
Chroma--2 or 3.

Bt horizons:
Hue--10YR or 7.5YR.
Value--4 or 5 moist or dry.

Chroma--3 or 4 moist or dry.
Texture--Clay loam, or clay.
Clay content--35 to 45 percent.
Rock fragments--Averages 15 to 30 percent, mainly pebbles and cobbles.
Structure--Prismatic parting to platy or angular blocky.
Consistence--Slightly hard to extremely hard, sticky or very sticky and plastic or very plastic.
Other features--Lime coatings may be absent on bedrock in some pedons.

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 upland plateaus and fan piedmont remnants with a rock core. Slopes are 2 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 Durinodic Xeric Haplargids

Typical pedon: Chime gravelly loam, in map unit 1235, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; common fine and very fine vesicular pores; 20 percent pebbles; slightly alkaline (pH 7.6); abrupt smooth boundary.

A2--3 to 7 inches; light gray (10YR 7/2) gravelly loam, brown (10YR 4/3) moist; moderate medium platy structure; hard, very friable, slightly sticky and slightly plastic; few medium, fine, and very fine roots; few fine and very fine vesicular pores; 20 percent pebbles; slightly alkaline (pH 7.6); abrupt smooth boundary.

Bt--7 to 16 inches; pale brown (10YR 6/3) clay loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few fine and very fine roots; common very fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 10 percent pebbles; slightly alkaline (pH 7.8); clear wavy boundary.

Bq--16 to 25 inches; very pale brown (10YR 8/3) gravelly loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; hard, firm, sticky and plastic; few fine and very fine roots; few fine tubular pores; 60 percent discontinuous silica cementation; 20 percent pebbles; continuous brittle matrix; slightly alkaline (pH 7.8); abrupt wavy boundary.

Cr--25 to 29 inches; weathered tuffaceous sandstone.

Type location: Washoe County, Nevada; about 2,300 feet east and 1,700 feet south of the northwest corner of section 28 T. 42 N., R. 18 E.; (41 degrees, 32 minutes, 04 seconds north latitude and 119 degrees, 58 minutes, 39 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 horizon: 14 to 20 inches.
Control section:
Clay content--27 to 35 percent.
Rock fragments--Up to 20 percent, mainly pebbles.

A horizons:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 3 or 4 moist.
Chroma--2 or 3.

Bt horizon:
Hue--10YR or 2.5Y.
Value--5 through 7 dry.
Chroma--3 or 4.
Structure--Moderate or strong, fine to coarse angular or subangular blocky.
Total thickness--9 to 12 inches.

Bq horizon:
Hue--10YR or 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.
Cementation--Continuous brittle matrix and some pedons contain 20 to 60 percent discontinuous silica cementation.

Corral Series

The Corral series consists of shallow, well drained soils that formed in material weathered from tuffaceous sandstone or diatomaceous earth. Corral soils are on terrace pediments or plateau escarpments. 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: Loamy, mixed, mesic, shallow Xeric Haplargids

Typical pedon: Corral very stony loam, in map unit 1095, rangeland. (Colors are for dry soil unless otherwise stated). The soil surface is partially covered with 10 percent stones, 15 percent cobbles, and 20 percent pebbles.

A1--0 to 3 inches; pale brown (10YR 6/3) very stony loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine vesicular pores; 10 percent stones, 15 percent cobbles and 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.

A2--3 to 7 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine

and medium subangular blocky structure; hard, very friable, sticky and plastic; common very fine roots; many very fine interstitial and common very fine tubular pores; 15 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bt--7 to 16 inches; yellowish brown (10YR 5/4) sandy clay loam, dark brown (10YR 4/3) moist; strong very fine and medium subangular blocky ; hard, very friable, sticky and plastic; common very fine, fine and medium roots; common very fine tubular pores; many thin and moderately thick clay films on faces of peds and in pores; slightly alkaline (pH 7.4); abrupt wavy boundary.
Cr--16 to 20 inches; soft tuffaceous sandstone; common fine and medium roots are along cracks and fractures. Common thin and moderately thick clay films in the upper part along fractures.

Type location: Washoe County, Nevada; about 600 feet north and 600 feet west of the southeast corner of section 26, T. 43 N., R.18 E.; (41 degrees, 36 minutes, 47 seconds north latitude and 119 degrees, 55 minutes, 41 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and sprint, dry mid June through October.
Soil temperature: 47 to 53 degrees F.
Depth to paralithic: 12 to 20 inches.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.

Bt horizon:
Hue--10YR or 7.5YR.
Value--4 through 6 dry.
Texture--Loam, sandy clay loam or clay loam
Sand content--20 to 50 percent
Reaction--Neutral or slightly alkaline
Rock fragments--0 to 15 percent, mainly pebbles
Structure--Prismatic, angular blocky or subangular blocky.

Cotant Series

The Cotant series consists of shallow, well drained soils that formed in residuum and colluvium from welded tuffs, tuff, rhyolite and mixed sedimentary rocks. Cotant soils are on crests and sideslopes of hills, mountains, and rock pediment remnants. Slopes are 4 to 30 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid, shallow Aridic Argixerolls

Typical pedon: Cotant very gravelly loam, in map unit 1375, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 40 percent pebbles and 5 percent cobbles.
A--0 to 2 inches; brown (10YR 5/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine roots; many very fine interstitial and vesicular pores; 40 percent pebbles and 5 percent cobbles; slightly alkaline (pH 7.6); clear wavy boundary.
Bt1--2 to 9 inches; dark grayish brown (10YR 4/2) clay, very dark brown (10YR 2/2) moist; strong very fine subangular blocky structure; hard, friable, very sticky and very plastic; common medium and fine roots; common fine and very fine tubular pores; many moderately thick clay films on faces of peds and lining pores; 10 percent pebbles; common thin pale brown (10YR 6/3) uncoated sand grains on horizontal faces of peds, dark brown (10YR 3/3) moist; slightly alkaline (pH 7.6); abrupt wavy boundary.
Bt2--9 to 14 inches; dark grayish brown (10YR 4/2) clay, very dark grayish brown (10YR 3/2) moist; strong fine and medium prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; common fine and medium roots concentrated along vertical faces of peds; common medium and fine tubular pores; 10 percent pebbles; many moderately thick clay films on faces of peds and in pores; slightly alkaline (pH 7.8); clear wavy boundary.
Bt3--14 to 19 inches; light yellowish brown (10YR 6/4) clay, dark yellowish brown (10YR 4/4) moist and brown (10YR 5/3) exped, dark brown (10YR 4/3) moist; strong medium prismatic structure parting to strong medium and coarse angular blocky; hard, friable, very sticky and very plastic; common fine and medium roots; common very fine tubular pores; 10 percent pebbles; 10 percent brown (10YR 4/3) clay films, very dark grayish brown (10YR 3/2) moist on faces of peds and in pores; slightly alkaline (pH 7.8); clear smooth boundary.
Cr--19 to 23 inches; very pale brown (10YR 7/4) weathered tuff, dark yellowish brown (10YR 4/4) moist; few medium and fine roots along weak fracture planes; common moderately thick clay films in upper 2 inches; 5 percent hard pebbles in matrix; moderately alkaline (pH 8.0).

Type location: Washoe County, Nevada; about 600 feet west and 900 feet north of the southeast corner of section 13, T. 43 N., R. 18 E.; (41 degrees, 38 minutes, 35 seconds north latitude, and 119 degrees, 54 minutes, 31 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually moist; moist in winter and spring, dry July through October. Aridic Xeric soil moisture regime.
Soil temperature: 42 to 47 degrees F.
Mollic epipedon thickness: 7 to 14 inches, including all or part of argillic horizon.
Depth to paralithic contact: 12 to 20 inches.
Profile reaction: Neutral or slightly alkaline.

A horizon:
Value--5 or 6 dry (5.5 or darker after mixing the surface 7 inches)
Chroma--2 or 3.
Value--5 or 6 dry (5.5 or darker after mixing the surface 7 inches.)

Bt horizons:
Value--4 through 6 dry, 3 through 5 moist. The upper subhorizon is 4 or 5 dry and 3 moist.
Chroma--2 through 4, with 4 only in the lower subhorizons.
Texture--Clay, some pedons have clay loam 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.
Consistence--Very friable to firm, moist; sticky or very sticky and plastic or very plastic, wet.

Crocan Series

Crocan series consist of shallow, well drained soils that formed in residuum from basalt, andesite and tuff. The Crocan soils are on plateau rims. Slopes are 2 to 15 percent. The mean annual precipitation is about 14 inches and the mean annual air temperature is about 43 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Crocan extremely stony loam, in map unit 1186, woodland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 15 percent stones and boulders, 15 percent cobbles, and 20 percent pebbles.

A1--0 to 1 inch; very dark brown (10YR 2/2) extremely stony loam, black (10YR 2/1) moist; moderate very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; 15 percent stones and boulders; 15 percent cobbles; 20 percent pebbles; neutral (pH 6.8); clear wavy boundary.

A2--1 to 3 inches; very dark grayish brown (10YR 3/2) very cobbly loam, very dark brown (10YR 2/2) moist; moderate very fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine interstitial pores; 10 percent stones; 15 percent cobbles; 20 percent pebbles; neutral (pH 6.8); clear wavy boundary.

Bt--3 to 5 inches; very dark grayish brown (10YR 3/2) clay loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and fine and common medium roots; common fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 10 percent pebbles; neutral (pH 7.0); clear wavy boundary.

Btss1--5 to 10 inches; dark brown (7.5YR 4/2) clay, dark brown (7.5YR 3/2) moist; strong fine and medium angular blocky structure; very hard, very friable, very sticky and very plastic; common very fine and few fine, medium and coarse roots; common very fine tubular pores; many thin and common moderately thick and thick clay films on faces of peds and lining pores; vertical cracks 2 to 5 millimeters wide and 4 to 6 inches apart extend from 5 to 14 inches; common slickensides; 10 percent pebbles; neutral (pH 7.0); abrupt smooth boundary.

Btss2--10 to 14 inches; brown (7.5YR 5/4), and dark brown (10YR 3/3) exped clay, dark brown (7.5YR 4/4) and (10YR 3/3) on exteriors of peds, moist; strong medium prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; common very fine and fine roots; common very fine tubular pores; many moderately thick and thick clay films on faces of peds and lining pores; common slickensides; 10 percent pebbles; neutral (pH 7.0); abrupt irregular boundary.

R--14 to 18 inches; hard massive vesicular basalt; rounded into stone size; few fractures.

Type location: Washoe County, Nevada; South of Barrel Springs road along power line; about 1,700 feet west and 2,000 feet north of the southeast corner of section 31, T. 46 N., R.19 E.; (41 degrees, 51 minutes, 47 seconds north latitude and 119 degrees, 53 minutes, 33 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July through October.
Soil temperature: 44 to 47 degrees F.
Thickness of mollic: 7 to 14 inches and includes all or part of the argillic horizon.
Depth to bedrock: 10 to 14 inches
Control section:
Rock fragments--10 to 35 percent.
Clay content--38 to 45 percent when mixed.

A horizons:
Value--2 or 3 dry, 2 or 3 moist.
Chroma--1 or 2.
Organic matter --8 to 10 percent in the A1, 3 to 4 percent in the A2.

Bt and Btss1 horizons:
Hue--10YR or 7.5YR
Value--3 or 4 dry, 2 or 3 moist
Clay content--33 to 38 percent.
Rock fragments--5 to 15 percent, mainly pebbles.

Btss2 horizon:
Hue--10YR or 7.5YR.
Value--3 through 5 dry, 3 or 4 moist.
Chroma--2 through 4.
Clay content--50 to 65 percent.
Rock fragments--5 to 10 percent, mainly pebbles.
Other features--Vertical cracks 5 to 10 millimeters wide; none to common slickensides.

Davey Series

The Davey series consists of very deep, somewhat excessively drained soils that formed in alluvium from mixed rock sources. Davey soils are on sand sheets, alluvial fans, lagoons, lake plain terraces and fan skirts. Slopes are 2 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Sandy, mixed, mesic Xeric Haplocambids

Typical pedon: Davey loamy fine sand, in map unit 1205, rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 6 inches; light brownish gray (10YR 6/2) loamy fine sand, very dark grayish brown (10YR 3/2) moist; weak very thin platy structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; neutral (pH 7.3); clear wavy boundary.

Bw--6 to 16 inches; pale brown (10YR 6/3) fine sandy loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; neutral (pH 7.3); clear wavy boundary.

C--16 to 30 inches; pale brown (10YR 6/3) loamy fine sand, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; moderately alkaline (pH 7.9); clear wavy boundary.

Ck1--30 to 41 inches; pale brown (10YR 6/3) loamy fine sand, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; slightly effervescent; lime is disseminated; slightly effervescent; lime is disseminated; moderately alkaline (pH 7.9); clear wavy boundary.

Ck2--41 to 60 inches; pale brown (10YR 6/3) fine sand, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; slightly effervescent; lime is disseminated; moderately alkaline (pH 8.0).

Type location: Washoe County, Nevada; about 3 miles north of Road 8A and 3.5 miles northwest of Painted Point in an unsectioned area. (41 degrees, 37 minutes, 39 seconds north latitude and 119 degrees, 44 minutes, 57 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry; moist in winter and spring; dry May through October.
Soil temperature: 47 to 53 degrees F.
Thickness of A and Bw horizons: 11 to 23 inches.
Depth to lime: 0 to 30 inches.
Control section:
Clay content--5 to 10 percent.
Rock fragments--Up to 30 percent in any one horizon but average is less than 15 percent.
Gypsum: Gypsum crystals are below a depth of 20 inches in some pedons.

A horizon:
Hue--10YR or 2.5Y.
Value--5 through 7 dry (greater than 5.5 when the surface 7 inches are mixed), 3 through 6 moist.
Chroma--1 through 3.
Reaction--Neutral or slightly alkaline.

Bw horizon:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 3 through 5 moist.
Chroma--2 through 4.
Texture--Fine sandy loam or sandy loam, some pedons have subhorizons that are gravelly sandy loam.
Structure--Prismatic, subangular blocky or it is massive.
Reaction--Neutral to moderately alkaline.

C and Ck horizons:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 4 through 6 moist.
Chroma--2 through 4.
Texture--Fine sand, loamy fine sand, loamy sand, but thin strata of fine sandy loam or coarse sand are in some pedons.
Reaction--Slightly alkaline to strongly alkaline.
Effervescence--Slightly effervescent to violently effervescent in the Ck horizon. Segregated lime occur as few or common filaments or as partial coats on rock fragments, or lime is disseminated.

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 plateaus side slopes. Slopes are 2 to 15 percent. Mean annual precipitation is 11 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Xeric Haplargids

Typical pedon: Deseed silt loam, in map unit 1163, rangeland. (Colors are for dry soil unless otherwise noted.).

A--0 to 3 inches; pale brown (10YR 6/3) silt 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; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary.

Bt1--3 to 9 inches; pale brown (10YR 6/3) 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 faces of peds and lining pores; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary.

Bt2--9 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 faces of peds; 25 percent pebbles, 5 percent cobbles; neutral (pH 7.0); clear smooth boundary.
Bt3--17 to 25 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 faces of peds; 20 percent pebbles, 5 percent cobbles; neutral (pH 7.2); abrupt smooth boundary.
C--25 to 28 inches; light yellowish brown (10YR 6/4) gravelly loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, sticky and plastic; few very fine roots; few very fine tubular pores; 5 percent cobbles, 20 percent pebbles; slightly alkaline (pH 7.5); abrupt irregular boundary
R--28 to 32 inches; hard basalt.

Type location: Washoe County, Nevada; about 2.5 miles west of Coleman Valley near the Nevada-Oregon state line; about 1,450 feet east and 400 feet south of the northwest corner of section 14, T. 47 N., R. 19 E.; (41 degrees, 59 minutes, 48 seconds north latitude and 119 degrees, 49 minutes, 23 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 slightly alkaline.

Bt2, 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 slightly alkaline.

C horizons:
Hue--10YR
Value--6 through 8 dry, 5 through 7 moist.
Chroma--2 or 4
Texture--Cobbly loam or gravelly loam.
Reaction--Slightly alkaline or moderately alkaline.

Devada Series

The Devada series consists of shallow, well drained soils that formed in residuum weathered dominantly from volcanic rock with additions of loess and volcanic ash. Devada soils are on footslopes, sideslopes, shoulders, ridges and summits of plateaus, mountains and hills. Slopes are 2 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic Lithic Argixerolls

Typical pedon: Devada very cobbly loam, in map unit 1325, rangeland. (Colors are for dry soil, unless otherwise stated.) The soil surface is partially covered with 30 percent cobbles and 20 percent pebbles.
A1--0 to 2 inches; grayish brown (10YR 5/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine interstitial pores; 30 percent cobbles and 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
A2--2 to 6 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, very friable, sticky and plastic; many very fine and common fine roots; many very fine interstitial pores; 30 percent pebbles, 20 percent cobbles; neutral (pH 7.0); abrupt smooth boundary.
Bt1--6 to 11 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; strong fine and medium subangular blocky structure; hard, very friable, very sticky and plastic; few fine roots; very few fine tubular pores; common moderately thick clay films on faces of peds and in pores; neutral (pH 7.0); clear wavy boundary.
Bt2--11 to 17 inches; yellowish brown (10YR 5/4) gravelly clay, dark brown (10YR 4/3) moist; strong medium and coarse angular blocky structure; hard, friable, very sticky and very plastic; few fine roots; few fine tubular pores; many moderately thick clay films on faces of peds and in pores; 15 percent pebbles; neutral (pH 7.3); abrupt irregular boundary.
R--17 to 21 inches; hard basalt; few fractures in upper 1 inch; few fine and medium roots in fractures; common thin silica coats on underside of fractured pieces; dark yellowish brown (10YR 4/4) clay, very dark brown (10YR 2/2) moist; weathered in place in some fractures.

Type location: Washoe County, Nevada; about 1 mile northwest of Vya; about 1,800 feet west and 2,000 feet north of the southeast corner of section 32, T. 43 N., R. 19 E.; (41 degrees, 36 minutes, 11 seconds north latitude and 119 degrees, 52 minutes, 29 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 53 degrees.
Mollic epipedon: 7 to 20 inches thick, includes all or part of the argillic horizon.
Combined thickness of A and Bt horizons: 12 to 20 inches.
Depth to bedrock: 12 to 20 inches.
Control section:
Clay content--40 to 60 percent.
Rock fragments--0 to 30 percent, mainly pebbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist. Some pedons have a thin surface layer with value of 6 dry, but when the upper 7 inches are mixed, value is less than 5.5 dry.
Chroma--2 or 3.
Reaction--Slightly acid to slightly alkaline.

Bt horizons:
Hue--5YR, 7.5YR or 10YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Dominantly clay or gravelly clay, commonly with thin subhorizons of clay loam.
Structure--Prismatic, angular blocky, subangular blocky. Consistence--Slightly hard to very hard, dry; sticky to very sticky, wet.
Reaction--Neutral or slightly alkaline.
Other features--Some pedons have thin silica coats on peds and rock fragments in the lower part of the Bt horizon.

Devoy Series

The Devoy series consist of moderately deep well drained soils that formed in residuum from volcanic rock. Devoy soils are on plateaus. Slopes are 2 to 15 percent. The mean annual precipitation is about 13 inches, and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic Argic Cryoborolls

Typical pedon: Devoy cobbly loam, in map unit 1295, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with about 15 percent cobbles and 15 percent pebbles.
A1--0 to 5 inches; grayish brown (10YR 5/2) cobbly loam, dark brown (10YR 3/3) moist; weak very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine and fine vesicular pores; 15 percent cobbles; 15 percent pebbles; neutral (pH 7.2); clear smooth boundary.
A2--5 to 10 inches; grayish brown (10YR 5/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, fine and medium roots; many very fine and fine tubular pores; 20 percent cobbles; 20 percent pebbles; neutral (pH 6.8); clear smooth boundary.
A/B--10 to 17 inches; light yellowish brown (10YR 6/4) very cobbly clay loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; many very fine and fine tubular pores; 20 percent cobbles; 20 percent pebbles; neutral (pH 6.8); clear wavy boundary.
Bt--17 to 30 inches; yellowish brown (10YR 5/4) very cobbly clay, dark yellowish brown (10YR 4/4) moist; strong coarse angular blocky structure; very hard, friable, very sticky and very plastic; few very fine roots; common very fine tubular pores; 20 percent cobbles; 20 percent pebbles; common moderately thick clay film on faces of peds and in pores; neutral (pH 6.8); abrupt wavy boundary.
R--30 to 34 inches; hard basalt.

Type location: Washoe County, Nevada; east of Coleman Valley; about 2,900 feet east and 300 feet south of the northwest corner of section 15, T. 47 N., R. 20 E.; (41 degrees, 59 minutes, 44 seconds north latitude and 119 degrees, 43 minutes, 19 seconds west longitude.)

Range in Characteristics:

Soil moisture: Dry during July to October in most years.
Soil temperature: 44 to 47 degrees F.,
Mean summer temperature: 57 to 59 degrees F.
Depth to bedrock: 20 to 40 inches.
Control section:
Rock fragment--35 to 60 percent.
Clay content--35 to 60 percent
Reaction--Slightly acid or neutral.

A horizons:
Value--2 or 3 moist, 4 or 5 dry.
Chroma--1 through 3.
Consistence--Soft to slightly hard.
Other features--9 to 16 inches thick with thickness increasing with elevation. A/B, B/A, or thin weak E horizons occur in some pedons.

Bt horizon:
Hue 10YR or 7.5YR
Value--4 through 6 dry, 3 through 5 moist,
Chroma--3 or 4.
Texture--Sandy clay, clay or clay loam
Rock fragment--35 to 60 percent.
Structure--Angular blocky or prismatic.
Other features--Thin zones of carbonate accumulation occur below 36 inches and overlie bedrock in some pedons.

Dosie Series

The Dosie series consists of deep, well drained soils that formed in residuum and colluvium weathered from basalt. The Dosie soils are on plateau and mountain side slopes. Slopes are 15 to 50 percent. The mean annual

precipitation is about 13 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Pachic Argixerolls

Typical pedon: Dosie very stony loam, in map unit 1365, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 10 percent stones, 10 percent cobbles, and 30 percent pebbles.

A1--0 to 2 inches; brown (10YR 5/3) very stony loam, dark brown (10YR 3/3) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine roots; common very fine tubular pores; 10 percent stones, 10 percent cobbles, 30 percent pebbles; neutral (pH 7.0); clear smooth boundary.

A2--2 to 6 inches; brown (10YR 5/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; 45 percent pebbles, 15 percent cobbles; neutral (pH 7.0); clear wavy boundary.

Bt1--6 to 13 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (7.5YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; common thin and moderately thick clay films on faces of peds and in pores; 40 percent pebbles, 10 percent cobbles; neutral (pH 6.6); clear wavy boundary.

Bt2--13 to 22 inches; brown (7.5YR 5/2) very gravelly clay, dark brown (7.5YR 3/2) moist; strong fine and medium subangular blocky structure; hard, very friable, very sticky and very plastic; few very fine, fine and medium roots; common very fine tubular pores; common thin and moderately thick clay films on faces of peds and in pores; 25 percent pebbles, 10 percent cobbles; neutral (pH 6.8); clear wavy boundary.

Bt3--22 to 33 inches; brown (7.5YR 4/4) very gravelly clay, dark brown (7.5YR 3/2) moist; moderate coarse subangular blocky structure; hard, very friable, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; many thin and moderately thick clay films on faces of peds and in pores; 50 percent pebbles; neutral (pH 6.8); clear wavy boundary.

Bt4--33 to 42 inches; brown (7.5YR 4/4) extremely gravelly clay, dark reddish brown (5YR 3/3) moist; strong very fine and fine angular blocky structure; hard, friable, very sticky and very plastic; few very fine and fine roots; few fine tubular pores; continuous moderately thick pressure faces; 50 percent pebbles, 15 percent cobbles; neutral (pH 7.2).

R--42 to 46 inches; hard basalt; weathered in a few pocket.

Type location: Washoe County, Nevada; west of Long Valley; about 1,300 feet north and 1,700 feet east of the southeast corner of section 19, T. 44 N., R. 19 E.; (41 degrees, 42 minutes, 57 seconds north latitude and 119 degrees, 53 minutes, 35 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually moist, moist in winter, spring and late fall, dry in summer, early and mid fall.
Soil temperature: Averages 47 to 53 degrees F.
Mollic epipedon thickness: 20 to 30 inches, includes upper part of Bt horizons. Organic carbon is less then 1 percent below this depth.
Depth to bedrock: 40 to 60 inches.
Control section:
Clay content--Averages 35 to 50 percent, Bt1 horizon: Typically has less than 35 percent.
Effervescence--Noneffervescent throughout.
Texture--Clay loam, or clay.
Rock fragments--35 to 60 percent average.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.
Reaction--Slightly acid or neutral.

Bt horizons:
Hue--10YR, 7.5YR, or 5YR.
Value--3 or 4, moist and dry.
Chroma--2 through 4 moist and dry.
Texture--Clay loam, or clay.
Clay content--35 to 50 percent average.
Rock fragments--35 to 65 percent in any subhorizon
Structure--Subangular blocky or angular blocky.

Dugway Series

The Dugway series consists of moderately deep, moderately well drained soils that formed in mixed lacustrine sediments influenced by volcanic ash. The Dugway soils are on remnant lake terraces. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Natraxeralfic Natridurids

Typical pedon: Dugway fine sandy loam, in map unit 1320, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; pale brown (10YR 6/3) fine sandy loam, dark brown (10YR 3/3) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky, slightly plastic; many very fine roots; many very fine vesicular pores; moderately alkaline (pH 8.0); abrupt wavy boundary.

A2--2 to 5 inches; light brownish gray (10YR 6/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, very friable, slightly sticky, slightly plastic; many very fine, common very fine roots; many very fine vesicular and interstitial pores; moderately alkaline (pH 8.0); abrupt wavy boundary.

Btn--5 to 11 inches; pale brown (10YR 6/3) clay, dark brown (10YR 3/3) moist; strong fine and medium

prismatic structure; very hard, firm, very sticky, very plastic; many very fine and common fine roots; common very fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; common thin light gray (10YR 7/2) bleached sand grains on prism tops, brown (10YR 5/3) moist; strongly alkaline (pH 8.6); clear wavy boundary.

Btnk--11 to 18 inches; pale yellow (2.5Y 7/4) silty clay loam, olive brown (2.5Y 4/4) moist; moderate very fine and fine prismatic structure parting to strong very fine and fine angular blocky; hard, friable, sticky, plastic; many very fine, common fine and few medium roots; common very fine tubular pores; common thin and moderately thick clay films on faces of peds and lining pores; few fine soft masses of lime; strongly alkaline (pH 8.6); clear wavy boundary.

Bqk1-18 to 25 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 4/3) moist; strong very fine and fine angular blocky structure; hard, friable, sticky, plastic; many very fine roots; many very fine tubular pores; common thin silica coats bridging mineral grains; 30 percent discontinuous weak silica and lime cementation; common fine soft masses of lime; strongly effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Bqk2--25 to 35 inches; light gray (2.5Y 7/2) silt loam, light olive brown (2.5Y 5/4) moist; strong thin and medium platy structure; hard and very hard, friable and firm, sticky, plastic; common very fine roots; common very fine tubular pores; 60 percent discontinuous weak silica and lime cementation; common thin silica coats bridging mineral grains and lining pores; common fine soft masses of lime; strongly effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

Bqkm--35 to 52 inches; pale yellow (2.5Y 7/3) continuous strongly cemented duripan, brown (10YR 5/3) moist; strong thin and medium platy structure; very hard, very firm, brittle; very common very fine and fine roots in horizontal root mat at upper boundary; few very fine tubular pores; few fine soft masses of lime; noneffervescent matrix; strongly alkaline (pH 9.0); abrupt smooth boundary.

2C--52 to 61 inches; light gray (2.5Y 7/2) stratified silt loam and silty clay loam, dark grayish brown (2.5Y 4/2) moist; massive; hard, friable, sticky, plastic; no roots observed; few very fine tubular pores; slightly effervescent; strongly alkaline (pH 9.0).

Type location: Washoe County, Nevada. About 2,000 feet west, 900 feet south of the northeast corner of section 33, T. 43 N., R.19 E.; (41 degrees, 36 minutes, 33 seconds north latitude and 119 degrees, 51 minutes, 21 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from mid-June through October. These soils have a seasonal water table at depth between 5 and 6 feet.
Soil temperature: 47 to 51 degrees F.
Depth to duripan: 20 to 40 inches.
Depth to carbonates: 11 to 24 inches.
Control section:
Clay content--35 to 50 percent.

A horizons:
Value--6 or 7 dry.
Chroma--2 or 3.

Btn horizons:
Value--5 through 7 dry; 3 through 5 moist.
Chroma--2 through 4.
Clay content--35 to 50 percent
Texture--Silty clay loam, silty clay, clay.
SAR--13 to 45.
Effervescence--Noneffervescent to strongly effervescent in the upper part; slightly effervescent to violently effervescent in the lower part.
Reaction--Moderately alkaline or strongly alkaline.

Bqk horizon:
Value--6 through 8 dry; 4 or 5 moist.
Chroma--2 through 4.
Clay Content--20 to 30 percent.
Texture--Loam, silt loam, silty clay loam.
Structure--Platy, angular blocky or subangular blocky.
Consistence--Hard or very hard dry, very friable to firm moist.
Reaction--Moderately alkaline or strongly alkaline.
Effervescence--Strongly effervescent or violently effervescent; few or common fine soft masses of lime.
Cementation--20 to 70 percent weak discontinuous silica cementation.
Other features--Few or common silica coats bridging mineral grains.

Bqkm horizon:
Cementation--Continuous strong silica cemented duripan.

2C horizon:
Texture--Usually stratified; dominantly silt loam, silty clay loam, but includes strata of loam, clay loam or fine sandy loam.
Structure--Platy or is massive.
Consistence--Hard or very hard dry, very friable to very firm moist.

Easte Series

The Easte series consists of deep, well drained soils that formed in material weathered from basalt, andesite and volcanic ash. Easte soils are on mountains. Slopes range from 15 to 70 percent. Mean annual precipitation is about 18 inches, and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Pachic Xerumbrepts

Typical pedon: Easte very gravelly sandy loam, in map unit 1355, forested. (Colors are for dry soil unless otherwise noted).

Oi--2 inches to 0; fresh and decomposing fir needles, twigs and sticks; abrupt smooth boundary.

A1--0 to 5 inches; brown (10YR 5/3) very gravelly sandy loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine tubular pores; 10 percent cobbles and 40 percent pebbles; slightly acid (pH 6.3); clear wavy boundary.
A2--5 to 10 inches; brown (10YR 4/3) very gravelly sandy loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine and medium roots; many very fine tubular pores; 10 percent cobbles, 40 percent pebbles; slightly acid (pH 6.3); clear wavy boundary.
Bw1--10 to 13 inches; brown (10YR 5/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and coarse roots; many very fine tubular pores; 5 percent cobbles, 40 percent pebbles; medium acid (pH 5.6); clear wavy boundary.
Bw2--13 to 20 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and medium and few coarse roots; many very fine and fine tubular pores; 5 percent cobbles, 50 percent pebbles; medium acid (pH 5.6); clear irregular boundary.
Bw3--20 to 42 inches; brown (10YR 5/3) extremely gravelly loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine and few medium roots; many very fine and fine tubular pores; 5 percent cobbles, 60 percent pebbles; medium acid (pH 5.6); abrupt irregular boundary.
Cr--42 to 52 inches; soft weathered andesitic tuff.

Type location: Washoe County, Nevada; about 100 feet west and 800 feet north of the southeast corner of section 28, T. 47 N., R. 19 E.; (41 degrees, 57 minutes, 41 seconds north latitude and 119 degrees, 50 minutes, 52 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 46 degrees F.
Thickness of umbric: 20 to 40 inches.
Depth to paralithic: 40 to 60 inches.
Control section:
Clay content--8 to 18 percent
Rock fragments--60 to 75 percent
Base saturation--35 to 50 percent to a depth of 20 to 40 inches and up to 65 percent below this depth

A horizons:
Hue--10YR or 7.5YR.
Value--3 through 5 dry, 2 or 3 moist.
Chroma--1 through 3.
Reaction--Medium acid or slightly acid.

Bw horizons:
Value--4 or 5 dry.
Chroma--2 or 3.
Reaction--Slightly acid to strongly acid.
Rock fragments--40 to 70 percent, mainly pebbles.

Emagert Series

The Emagert series consists of very deep, moderately well drained soils that formed in alluvium from volcanic rocks and pyroclastic materials. Emagert soils are on stream terraces. Slopes are 0 to 2 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Ashy, mesic Vitritorrandic Haploxerolls

Typical pedon: Emagert loam, in map unit 1450, rangeland (Colors are for dry soil unless otherwise noted).
A1--0 to 2 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine interstitial pores; neutral (pH 6.6); clear smooth boundary.
A2--2 to 14 inches; gray (10YR 5/1) loam, very dark brown (10YR 2/2) moist; moderate coarse prismatic parting to moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; common very fine interstitial pores; slightly alkaline (pH 7.6); clear wavy boundary.
A3--14 to 24 inches; dark gray (10YR 4/1) finely stratified loam, black (10YR 2/1) moist; weak medium and coarse prismatic parting to moderate medium platy structure; hard, very friable, sticky and plastic; common very fine through coarse roots; many very fine and fine tubular pores; few fine distinct dark yellowish brown (10YR 3/4) moist, relict redox masses; slightly alkaline (pH 7.6); clear wavy boundary.
A4--24 to 38 inches; gray (10YR 5/1) finely stratified loam, very dark gray (10YR 3/1) moist; moderate fine and medium prismatic parting to moderate medium angular blocky structure; very hard, friable, sticky and plastic; few very fine through coarse roots; common very fine and fine tubular pores; few fine and medium distinct dark yellowish brown (10YR 3/4) moist, relict redox masses; slightly alkaline (pH 7.4); clear wavy boundary.
2C--38 to 48 inches; gray (10YR 6/1) silty clay loam, dark gray (10YR 4/1) moist; moderate fine and medium prismatic parting to moderate medium angular blocky structure; very hard, firm, very sticky and plastic; few very fine through coarse roots; common very fine and fine tubular pores; few fine distinct dark yellowish brown (10YR 3/4) moist, relict redox masses; neutral (pH 7.3); abrupt wavy boundary.
3Ab--48 to 60 inches; gray (5Y 5/1) finely stratified loam, very dark gray (5Y 3/1) moist; moderate fine and medium prismatic parting to moderate medium angular blocky structure; very hard, firm, sticky and plastic; few

very fine through coarse roots; common very fine and fine tubular pores; few fine distinct dark yellowish brown (10YR 3/4) moist, and black (N 2/) moist, redox masses; neutral (pH 7.2).

Type location: Washoe County, Nevada; about 2 miles southeast of Stevens Camp; about 1.4 miles south of the Area of Critical Environmental Concern boundary; about 400 feet east and 100 feet south of the northwest corner of section 13, T. 41 N., R. 22 E.; (41 degrees, 28 minutes, 27 seconds north latitude and 119 degrees, 27 minutes, 29 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from mid-June through October; saturated below 5 feet during late winter and early spring.
Soil temperature: 47 to 50 degrees F.
Thickness of mollic epipedon: 24 to 48 inches, organic matter decreases irregularly with depth.
Mineralogy: 35 to 60 percent glass in the very fine and fine sand size throughout.
Control section:
Clay content--18 to 27 percent.
Texture--Dominantly stratified loam and sandy clay loam with stratified textures of sandy loam to silty clay loam in some pedons.
Rock fragments--Less than 10 percent.

A horizons:
Hue--10YR or 2.5Y.
Value--4 or 5 dry, 2 or 3 moist.
Chroma--0 through 2.
Structure--Weak to moderate fine through coarse prismatic parting to platy or blocky.
Reaction--Neutral or slightly alkaline.
Redox features--Relic redox features are present in most pedons.

C horizon:
Hue--10YR, 2.5Y or 5Y.
Value--6 through 8 dry, 4 or 5 moist.
Chroma--1 or 2.
Structure--Weak or moderate fine to medium prismatic parting to platy or blocky, or is massive.
Texture--Usually stratified gravelly loamy sand to silty clay loam. Dominantly loam or sandy clay loam when mixed.

Esmod Series

The Esmod series consists of shallow to duripan, well drained soils that formed in alluvium derived from volcanic rocks. The Esmod soils are on alluvial fans and remnant fan piedmont summits. Slopes are 2 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Abruptic Xeric Argidurids.

Typical pedon: Esmod very gravelly fine sandy loam, in map unit 1431, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 50 percent pebbles.
A1--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; strong medium and thick platy structure; hard, very friable, nonsticky and nonplastic; very fine roots; many very fine and fine vesicular pores; 40 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.
A2--2 to 6 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 3/3) moist; strong very thin and thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; neutral (pH 7.2); abrupt wavy boundary.
Bt--6 to 15 inches; light brown (7.5YR 6/4) gravelly clay, dark brown (7.5YR 4/4) moist; strong fine and medium subangular blocky structure; very hard, very friable, very sticky and very plastic; common very fine, few fine and medium roots; common fine tubular pores; common thin and moderately thick clay films on faces of peds and lining pores; 15 percent pebbles; slightly alkaline (pH 7.8); abrupt wavy boundary.
Bqm--15 to 21 inches; pink (7.5YR 8/4) strongly silica cemented duripan, strong brown (7.5YR 5/6) moist; strong medium and thick platy structure; extremely hard, extremely firm; common very fine roots matted on plate surfaces; alternate horizontal light brown (7.5YR 6/4) 1 to 2 millimeter thick silica laminae on tops of plates, dark brown (7.5YR 4/4) moist; moderately alkaline (pH 8.0); clear smooth boundary.
Bqkm1--21 to 28 inches; pink (7.5YR 8/4) continuous strongly silica and lime cemented duripan, strong brown (7.5YR 5/6) moist; moderate thick and very thick platy structure; extremely hard, extremely firm; many fine and medium horizontal masses of lime; many less than 0.5 millimeter lime and silica coats on underside of pebbles; violently effervescent; moderately alkaline (pH 8.0); clear wavy boundary.
Bqkm2--28 to 36 inches; very pale brown (10YR 7/4) strongly and weakly silica and lime cemented duripan, dark yellowish brown (10YR 4/6) moist; weak medium and thick platy structure; very hard, extremely firm and very firm; alternate horizontal discontinuous 0.5 to 2 millimeter silica laminae; common fine and medium horizontal lime masses; strongly effervescent; moderately alkaline (pH 8.0); clear wavy boundary.
Bqkm3--36 to 60 inches; very pale brown (10YR 8/3) weakly and strongly silica and lime cemented duripan, brown (7.5YR 5/4) moist; massive; very hard, very firm; common less than 0.5 millimeter discontinuous silica laminae; many 1 to 5 millimeter horizontal soft lime masses; moderately alkaline (pH 8.0).

Type location: Washoe County, Nevada; near the Sheldon Antelope Refuge in an unsectioned area. T. 43 N., R. 22 E.; (41 degrees, 38 minutes, 03 seconds

north latitude and 119 degrees, 28 minutes, 44 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring, dry mid-June through October. Anidic bordering on Xeric moisture regime.
Soil temperature: 47 to 51 degrees F.
Depth to duripan: 14 to 20 inches.
Control section:
Clay content--40 t 50 percent.
Rock fragments--Less than 20 percent, mainly pebbles.
Other features--A clay increase of 15 to 25 percent occurs within a distance of 1 inch between the A and Bt horizons.

A horizons:
Value--5 through 7 dry, 2 or 3 moist.
Reaction--Neutral or slightly alkaline.
Chroma--2 or 3.

Bt horizon:
Hue--5YR, 7.5YR or 10YR.
Value--4 through 6 dry, 3 or 4 moist.
Reaction--Neutral or slightly alkaline.
Chroma--3 through 6.
Texture--Clay or gravelly clay.
Rock fragments--Less than 20 percent, dominantly pebble-sized.
Structure--Subangular blocky, angular blocky or prismatic parting to subangular or angular blocky.

Bqm horizons:
Hue--7.5YR or 10YR.
Value--6 through 8 dry, 4 or 5 moist.
Chroma--4 through 6.

Fernpoint Series

The Fernpoint series consists of very deep, well drained soils formed in mixed alluvium. The Fernpoint soils are on lake shore terraces. Slopes are 8 to 30 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Aridic Argixerolls

Typical pedon: Fernpoint very gravelly sandy loam, in map unit 1385, rangeland (Colors for dry soil unless otherwise noted).
A1--0 to 2 inches; pale brown (10YR 6/3) very gravelly sandy loam, dark brown (10YR 3/3) moist; moderate very thin and thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine vesicular and interstitial pores; 50 percent pebbles; neutral (pH 7.3); clear wavy boundary.
A2--2 to 7 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; weak very fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; common very fine tubular and interstitial pores; 30 percent pebbles; neutral (pH 7.3); clear wavy boundary.
Bt1--7 to 13 inches; brown (10YR 5/3) gravelly sandy clay loam; dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine tubular pores; common thin clay films on faces of peds and lining pores; 20 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.
Bt2--13 to 17 inches; pale brown (10YR 6/3) gravelly sandy clay loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine tubular pores; common thin clay films on faces of peds and lining pores; 20 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.
C1--17 to 23 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; massive; hard, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine and fine tubular pores; few thin clay films bridging mineral grains; 25 percent pebbles; 1 percent cobbles; slightly alkaline (pH 7.8); clear wavy boundary.
2C1--23 to 32 inches; light yellowish brown (10YR 6/4) extremely gravelly sand, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine roots; many very fine interstitial pores; 50 percent pebbles; 10 percent cobbles; slightly alkaline (pH 7.8); gradual wavy boundary.
2C2--32 to 48 inches; light yellowish brown (10YR 6/4) extremely gravelly sand, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; 50 percent pebbles; 20 percent cobbles; 1 percent stones; slightly alkaline (pH 7.8); gradual wavy boundary.
2C3--48 to 60 inches; variegated colored stratified extremely gravelly sand and extremely cobbly sand; single grain; loose; few very fine roots; many very fine and fine interstitial pores; 50 percent pebbles; 20 percent cobbles; 5 percent stones; about 10 percent of rock fragments have 10 percent less than 0.5 millimeter thick lime coats on underside; noneffervescent matrix; moderately alkaline (pH 8.0).

Type location: Washoe County, Nevada. About 7.5 miles northeast of Vya; about 1 mile east of Nevada Route 34 in an unsectioned area, T. 43 N., R.20 E.; (41 degrees, 40 minutes, 55 seconds north latitude and 119 degrees, 46 minutes, 09 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July through October
Soil temperature: 47 to 51 degrees F.
Thickness of mollic: 10 to 16 inches; includes part or all

of Bt horizon
Depth to contrasting layers: 20 to 30 inches
Depth to carbonates: 40 to 50 inches
Control section:
Clay content--18 to 25 percent
Rock fragments--15 to 35 percent pebbles

A horizons:
Value--5 or 6 dry; 3 or 4 moist. Value of 6 only in upper 2 inches
Chroma--2 or 3

Bt horizons:
Value--5 or 6 dry; 3 or 4 moist
Chroma--2 or 3
Reaction--Neutral or slightly alkaline

C horizons:
Textures--stratified extremely gravelly or extremely cobbly sand, coarse sand with strata of loamy sand, loamy coarse sand. Some pedons have strata of extremely stony sand
Reaction--Slightly alkaline or moderately alkaline
Effervescence--Noneffervescent or slightly effervescent matrix; few or common less than 0.5 millimeter thick lime coats on underside of rock fragments

Ferver Series

Ferver series consists of moderately deep to duripan, well drained soils formed in alluvium from basalt and andesite. The Ferver soils are on interplateau alluvial fans. Slopes are 2 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Very-fine, montmorillonitic, mesic Vertic Argidurids.

Typical pedon: Ferver very gravelly loam, in map unit 1175, rangeland (Colors are for dry soil unless otherwise noted.) The soil surface is covered with about 45 percent pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; strong very thin and thin platy structure; hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine and common medium vesicular pores; 1 percent cobbles and 45 percent pebbles; slightly alkaline (pH 7.6); abrupt wavy boundary.

A2--2 to 5 inches; light brownish gray (10YR 6/2) silt loam, dark brown (10YR 3/3) moist; strong very thick and thick platy structure; very hard, very friable, sticky and plastic; common very fine roots; many very fine and fine vesicular pores; 5 percent pebbles; slightly alkaline (pH 7.6); abrupt wavy boundary.

Btss1--5 to 15 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; strong medium and coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; common very fine and fine and few medium and coarse horizontal roots; few very fine tubular pores; many moderately thick clay films on faces of peds and lining pores; vertical cracks 8 millimeters to 1 centimeter wide and 3 to 4 inches apart extend from a depth of 5 to 15 inches; few slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; 10 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.

Btss2--15 to 22 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/3) moist; strong fine and medium prismatic structure parting to strong very fine and fine angular blocky; very hard, firm, very sticky and very plastic; common very fine and few fine roots; common very fine tubular pores; many thin and moderately thick clay films on faces of ped and lining pores; few slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; 10 percent pebbles; slightly alkaline (pH 7.8); clear wavy boundary.

Btk--22 to 28 inches; pale brown (10YR 6/3) clay, dark brown (10YR 4/3) moist; moderate fine and medium prismatic structure parting to strong fine and medium angular blocky; very hard, friable, very sticky and very plastic; common very fine roots; common very fine tubular pores; common thin and moderately thick clay films on faces of ped and lining pores; 10 percent pebbles; few slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; few fine soft masses of lime; moderately alkaline (pH 8.0); gradual wavy boundary.

Bqk--28 to 35 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium prismatic structure parting to strong fine and medium angular blocky; hard, friable, very sticky and very plastic; few very fine roots; common very fine tubular pores; common thin and few moderately thick silica coats bridging mineral grains; 10 percent pebbles; 5 percent 10 to 20 millimeter hard, firm durinodes; 5 percent medium and large vertical soft masses of lime along prism faces; 30 percent weak discontinuous silica cementation; moderately alkaline (pH 8.2); abrupt wavy boundary.

Bqkm--35 to 46 inches; light yellowish brown (10YR 6/4) continuous strongly silica and lime cemented duripan yellowish brown (10YR 5/4) moist; strong thin and medium platy structure; extremely hard, extremely firm; alternate medium horizontal plates with 1 to 2 millimeter discontinuous horizontal silica laminae on top of plates; horizontal root mat at upper boundary with many very fine, fine, and few medium roots; violently effervescent lime coats on underside of some plates; gradual wavy boundary.

Cr--46 to 53 inches; weathered fractured basalt with silica and lime in fractures.

Type location: Washoe County, Nevada. About 0.75 miles east of the Nevada-California state line and 0.4 miles north of the Barrel Springs Road; about 100 feet west and 2,100 feet north of the southeast corner of section 20, T. 46 N., R.18 E.; (41 degrees, 53 minutes, 32 seconds north latitude and 119 degrees, 59 minutes, 03 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from mid-June through October. Xeric-Andic moisture regime.
Soil temperature: 47 to 51 degrees F.
Depth to duripan: 20 to 40 inches
Depth to bedrock: 40 to 60 inches
Control section:
Clay content--60 to 70 percent
Rock fragments--Less than 15 percent, mainly pebbles

A horizons:
Value--5 or 6 dry, 2 or 3 moist.
Chroma--2 or 3
Reaction--Neutral or slightly alkaline

Btss and Btk horizons:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 4 or 5 moist
Chroma--3 or 4
Clay content--60 to 70 percent in the upper part; 55 to 65 percent in the lower part; when mixed, 60 to 70 percent.
Rock fragments--10 to 15 percent.
Consistence--Very hard through extremely hard dry, friable through very firm moist.
Effervescence--Noneffervescent or slightly effervescent in the lower part; few fine or medium soft masses of lime in the lower part.
Other features: Vertical cracks 5 to 30 millimeters wide, few to common slickensides and wedge-shaped aggregates. A clay increase of 35 to 45 percent occurs within a vertical distance of 1 inch between the A and Bt horizons.

Bqk horizon:
Value--6 or 7 dry, 3 through 5 moist.
Chroma--3 or 4
Effervescence--Noneffervescent or slightly effervescent; few to many fine to large soft masses of lime.
Other--20 to 50 percent weak discontinuous silica cementation; 5 to 10 percent 5 to 15 millimeter durinodes.

Bqkm horizon:
Value--6 through 8 dry, 4 through 6 moist.
Chroma--3 or 4.
Cementation--Strongly cemented or moderately cemented

Fiddler Series

The Fiddler series consists of moderately deep, well drained soils that formed in residuum weathered from extrusive igneous rock. Fiddler soils are on hills and mountains. Slopes range from 15 to 50 percent. The annual precipitation is about 14 inches and the annual temperature is about 50 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Typic Argixerolls

Typical pedon: Fiddler very stony loam, in map unit 1081. Western juniper woodland. (Colors are for dry soil unless otherwise stated). The surface is partially covered with 10 percent stones, 15 percent cobbles, and 20 percent pebbles.
A1--0 to 2 inches; grayish brown (10YR 5/2) very stony loam, very dark brown (10YR 2/2) moist; moderate very fine and fine subangular blocky structure; soft, friable, sticky and plastic; many very fine and fine roots; common very fine tubular pores; 10 percent stones, 15 percent cobbles and 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
A2--2 to 7 inches; dark grayish brown (10YR 4/2) very stony loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine and fine and common medium roots; common very fine tubular pores; 20 percent stones, 15 percent cobbles and 10 percent pebbles; neutral (pH 7.0); gradual wavy boundary.
Bt1--7 to 11 inches; brown (7.5YR 5/2) very stony clay loam, dark brown (7.5YR 3/2) moist; strong fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, fine, medium and coarse roots; common very fine tubular pores; many thin and moderately thick clay films on faces of peds and in pores; 20 percent stones, 15 percent cobbles, 15 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bt2--11 to 20 inches; brown (7.5YR 5/4) very stony clay, dark brown (7.5YR 4/4) moist; strong fine and medium subangular blocky structure; very hard, friable, very sticky and very plastic; many very fine, common fine and medium and few coarse roots; few very fine tubular pores; many moderately thick and thick clay films on faces of peds and in pores; 25 percent stones, 10 percent cobbles, 15 percent pebbles; neutral (pH 6.8); gradual wavy boundary.
Bt3--20 to 28 inches; strong brown (7.5YR 5/6) very stony clay, brown (7.5YR 4/4) moist; moderate medium and coarse angular blocky structure; very hard, friable, very sticky and very plastic; common very fine and few fine and medium roots; few very fine tubular pores; many moderately thick and thick clay films on faces of peds and in pores; 20 percent stones, 10 percent cobbles, 10 percent pebbles; slightly acid (pH 6.5); clear irregular boundary.
R--28 to 32 inches; dark gray (N 4/0) hard fractured basalt.

Type location: Washoe County, Nevada; about 2 miles north of Barrel Springs road; about 2,300 feet east and 2,000 feet south of the northeast corner of section 31, T. 47 N., R.19 E.; (41 degrees, 57 minutes, 14 seconds north latitude and 119 degrees, 53 minutes, 41 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually moist, moist in winter and spring, dry late summer and fall.
Soil temperature: 50 to 56 degrees F.
Thickness of mollic: 8 to 20 inches.

Depth to bedrock: 20 to 40 inches
Reaction: Slightly acid or neutral

A horizons:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 2 or 3 moist
Chroma--2 or 3
Clay content--18 to 27 percent

Bt horizons:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 3 or 4 moist
Chroma--2 through 6
Texture--Very stony clay loam, very cobbly clay loam or very stony clay
Clay content--35 to 55 percent
Rock fragments--35 to 55 percent, mainly stones and cobbles

Fitzwater Series

The Fitzwater series consists of very deep, well drained soils that formed in colluvium and residuum from basalt and tuff. Fitzwater soils are on plateau side slopes. Slopes are 30 to 50 percent. The mean annual precipitation is about 14 inches and the annual temperature is about 45 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Aridic Haploxerolls

Typical pedon: Fitzwater extremely stony loam, in map unit 1265, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with about 15 percent stones, 20 percent cobbles, and 20 percent pebbles.

A1--0 to 4 inches; grayish brown (10YR 5/2) extremely stony loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, very friable, slightly sticky and nonplastic; many very fine and fine roots; many very fine vesicular pores; 15 percent stones, 20 percent cobbles, and 20 percent pebbles; neutral (pH 6.6); clear smooth boundary.

A2--4 to 10 inches; grayish brown (10YR 5/2) extremely stony loam, very dark grayish brown (10YR 3/2) moist; moderate medium and fine subangular blocky structure; soft, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine tubular pores; 20 percent stones, 30 percent cobbles and 15 percent pebbles; neutral (pH 6.6); clear smooth boundary.

2Bw--10 to 19 inches; brown (7.5YR 5/4) extremely cobbly clay loam, 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; 5 percent stones, 45 percent cobbles and 25 percent pebbles; neutral (pH 7.0); clear wavy boundary.

2C--19 to 60 inches; pale brown (10YR 6/3) extremely cobbly loam, brown (10YR 4/3) moist; massive; slightly hard, firm, sticky and plastic; few very fine roots; common very fine tubular pores; 20 percent stones, 45 percent cobbles, and 25 percent pebbles; neutral (pH 7.0).

Type location: Washoe County, Nevada; east of Coleman Valley near the Nevada-Oregon state line; about 4,700 feet west and 400 feet south of the northeast corner of section 16, T. 47 N., R. 20 E.; (41 degrees, 59 minutes, 44 seconds north latitude and 119 degrees, 44 minutes, 57 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 44 to 47 degrees F.
Mollic epipedon: 7 to 12 inches thick.
Control section:
Clay content--18 to 25 percent.
Rock fragments--60 to 90 percent, mainly cobbles and stones.
Sand content--30 to 50 percent.

A horizons:
Value--3 through 5 dry, 2 or 3 moist.

2Bw horizon:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 or 4 moist.
Texture--Loam or clay loam.
Rock fragments--5 to 10 percent stones, 30 to 50 percent cobbles, and 20 to 30 percent pebbles.

2C horizon:
Hue--10YR or 7.5YR.
Value--5 or 6 dry.
Chroma--3 or 4.
Rock fragments--10 to 40 percent stones, 30 to 50 percent cobbles, and 15 to 30 percent pebbles.

Frentera Series

The Frentera series consists of moderately deep, well drained soils that formed in colluvium weathered from volcanic rocks and ash. Frentera soils are on side slopes of hills and plateaus. Slopes are 15 to 30 percent. The mean annual precipitation is 11 inches and the mean annual temperature is 44 degrees F.

Taxonomic class: Ashy, frigid Vitritorrandic Haploxerolls

Typical pedon: Frentera gravelly sandy loam, in map unit 1245, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 30 percent pyroclastic pebbles.

A1--0 to 2 inches; brown (10YR 5/3) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many

very fine interstitial pores; 30 percent pebbles; neutral (pH 6.6); clear wavy boundary.
A2--2 to 9 inches; grayish brown (10YR 5/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium and few coarse roots; many very fine tubular pores; 15 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bw1--9 to 16 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; soft, very friable and nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine tubular pores; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bw2--16 to 22 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark brown (10YR 4/3) moist; moderate coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine roots, many very fine interstitial pores; 25 percent pebbles; neutral (pH 7.0); abrupt irregular boundary.
R--22 to 26 inches; brownish yellow (10YR 6/6) hard tuff, yellowish brown (10YR 5/6) moist.

Type location: Washoe County, Nevada in an unsectioned area, T. 42 N., R. 22 E.; (41 degrees, 35 minutes, 21 seconds north latitude and 119 degrees, 32 minutes, 48 seconds west longitude.)

Range in Characteristics:

Soil moisture: usually moist in winter and spring, dry June through October. They are warmer than 41 degrees F. from April 15 to November 1, and they are dry within this period after July 1.
Soil temperature: 44 to 47 degrees F.
Depth to bedrock: 20 to 40 inches.
Mollic epipedon: 10 to 20 inches thick.
Volcanic ash: 30 to 60 percent volcanic ash.
Reaction: Neutral in the upper part and neutral to moderately alkaline in the lower part.
Control section:
Clay content 12 to 18 percent
Rock fragments--15 to 35 percent.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.

Bw horizons:
Value--4 through 6 dry, 3 or 4 moist.
Structure--Weak to moderate subangular blocky structure.
Texture--Loam and sandy loam.
Rock fragments--15 to 35 percent.

Freznik Series

The Freznik series consist of moderately deep, moderately well drained soils that formed in residuum from tuff and basalt. Freznik soils are on plateaus. Slopes are 2 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Xeric Palearglds

Typical pedon: Freznik very stony loam, in map unit 1105, rangeland. (Colors are for dry soil unless otherwise noted.) The surface is covered with about 10 percent stones, 15 percent cobbles, and 20 percent pebbles.
A--0 to 3 inches; pale brown (10YR 6/3) very stony loam, dark brown (10YR 3/3) moist; moderate thin and medium platy structure; slightly hard, very friable, sticky and plastic; many very fine and common fine roots; many very fine vesicular pores; 10 percent stones; 15 percent cobbles; 20 percent pebbles; slightly alkaline (pH 7.4); abrupt wavy boundary.
Bt1--3 to 9 inches; yellowish brown (10YR 5/4) gravelly clay, dark brown (10YR 4/3) moist; weak fine and medium prismatic structure parting to strong fine and medium subangular blocky; very hard, firm, very sticky and very plastic; common very fine and fine and few medium roots; few very fine tubular pores; many moderately thick and thick clay films on faces of peds and in pores; many pressure faces on faces of peds; 20 percent pebbles; slightly alkaline (pH 7.4); clear wavy boundary.
Bt2--9 to 15 inches; yellowish brown (10YR 5/4) clay, dark brown (10YR 4/3) moist; moderate medium prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; common very fine and fine roots; few very fine tubular pores; many moderately thick and thick clay films on faces of peds and in pores; many pressure faces of peds; 5 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.
Bt3--15 to 23 inches; light yellowish brown (10YR 6/4) clay, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse angular blocky structure; hard, very friable, very sticky and very plastic; few very fine, fine and medium roots; few very fine tubular pores; common thin and moderately thick clay films on faces of peds and in pores; many pressure faces on faces of peds; 10 percent pebbles; moderately alkaline (pH 8.0); abrupt wavy boundary.
R--23 to 27 inches; hard basalt with few thin silica and lime coats in some fractures.

Type location: Washoe County Nevada; about 6 miles north of Barrel Springs Road along power line; about 1,600 feet east and 300 feet south of the northwest

corner of section 15 and the Nevada-Oregon state line, T. 47 N., R. 18 E.; (41 degrees, 59 minutes, 45 seconds north latitude and 119 degrees, 57 minutes, 31 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 44 to 47 degrees F.
Depth to bedrock: 20 to 40 inches.
Other features: A clay increase of 15 to 25 percent occurs within a vertical distance of 1 inch between the A and Bt horizon.
Control section:
Clay content--40 to 60 percent.
Rock fragments--0 to 15 percent, mainly pebbles.

A horizon:
Value--4 through 6 dry, 3 or 4 moist.
Chroma--1 through 3.
Reaction--Slightly alkaline or moderately alkaline.

Bt horizons:
Hue--7.5YR or 10YR.
Value--4 through 6 dry, 3 through 5 moist.
Chroma--3 through 6.
Structure--Prismatic, angular blocky or subangular blocky in the upper part and blocky or massive in the lower part.
Reaction--Slightly alkaline or moderately alkaline, increasing with depth.
Effervescence--Noneffervescent in the upper part and noneffervescent or slightly effervescent in the lower part. Some pedons have a BCt horizon 2 to 7 inches thick. It is clay loam or clay with 30 to 45 percent clay.

Fulstone Series

The Fulstone series consists of shallow over duripan, well drained soils that formed in alluvium from mixed rocks. Fulstone soils are on fan piedmonts remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 51 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Abruptic Xeric Argidurids

Typical pedon: Fulstone very gravelly sandy loam, in map unit 1410, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 5 percent cobbles and 40 percent pebbles.
A--0 to 4 inches; light brownish gray (10YR 6/2 very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and nonplastic; few very fine and fine roots; common fine and very fine interstitial and tubular pores; 5 percent cobbles, 40 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.
Bt1--4 to 10 inches; brown (7.5YR 5/4) clay, brown (7.5YR 4/4) moist; strong medium prismatic structure parting to strong fine and medium angular blocky; very hard, firm, very sticky and very plastic; common fine and very fine roots; few fine and very fine tubular pores; continuous pressure faces; neutral (pH 7.0); clear wavy boundary.
Bt2--10 to 16 inches; brown (7.5YR 5/4) clay, brown (7.5YR 4/4) moist; moderate medium prismatic structure parting to strong fine angular blocky ; hard, firm, very sticky and very plastic; few fine and very fine roots; few fine and very fine tubular pores; many moderately thick clay films on faces of peds and in pores; neutral (pH 7.0); abrupt wavy boundary.
Bqkm--16 to 26 inches; light yellowish brown (10YR 6/4) indurated duripan, brown (10YR 4/3) moist; very thick platy structure; extremely hard, extremely firm; root mat on surface; strongly effervescent; slightly alkaline (pH 7.6); gradual wavy boundary.
2Bqk--26 to 60 inches; light gray (10YR 7/2) very cobbly sandy loam, brown (10YR 5/3) moist; massive; slightly hard; friable, nonsticky and nonplastic; 40 percent thin to thick weakly silica-lime cemented horizontal layers and masses; 20 percent cobbles, 30 percent pebbles; strongly effervescent; slightly alkaline (pH 7.8).

Type location: Washoe County, Nevada; about 0.6 miles northeast of Stevens Camp; about 2,200 feet north and 300 feet west of the southeast corner of section 3, T. 41 N., R. 22 E.; (41 degrees, 29 minutes, 42 seconds north latitude and 119 degrees, 28 minutes, 47 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry from June through October.
Soil temperature: 47 to 53 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.
Control section:
Clay content--45 to 60 percent.
Rock fragments--0 to 15 percent with individual horizon ranging up to 20 percent.

A horizon:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--1 through 3.
Reaction--Slightly acid to slightly alkaline.

Bt horizons:
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 to moderately alkaline.

Bqkm horizon:
Other features--Essentially continuously cemented, but broken in some places by burrowing animals.

2Bqk horizon:
Rock fragments--50 to 85 percent pebbles and cobbles.
Reaction--Slightly alkaline to strongly alkaline.

Grassycan Series

The Grassycan series consists of very shallow and shallow, well drained soils that formed in residuum and colluvium derived from volcanic rocks. The Grassycan soils are on plateau summits and shoulders. Slopes are 0 to 15 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 Abruptic Xeric Argidurids.

Typical pedon: Grassycan very stony fine sandy loam, in map unit 1430, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 5 percent stones, 10 percent cobbles, and 40 percent pebbles.

A1--0 to 1 inches; grayish brown (10YR 5/2) very stony fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine roots; common very fine interstitial pores; 5 percent stones, 10 percent cobbles and 40 percent pebbles; neutral (pH 7.0); abrupt smooth boundary.

A2--1 to 4 inches; light brownish gray (10YR 6/2) gravelly loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; 15 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

Bt1--4 to 7 inches; pinkish gray (7.5YR 6/2) clay loam, dark brown (7.5YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; many thin and few moderately thick clay films on faces of peds; 10 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

Bt2--7 to 12 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate fine prismatic structure parting to strong fine angular blocky; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; common moderately thick clay films on faces of peds; 10 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

Bqm--12 to 13 inches; continuous indurated silica cemented duripan; extremely hard, extremely firm.

R--13 to 16 inches; hard basalt.

Type location: Washoe County, Nevada; about 3 miles southeast of Stevens Camp and 2.5 miles east of Grassy Canyon; about 1,500 feet south and 2,600 feet east of northwest corner of section 21; T. 41 N.; R. 22 E.; (41 degrees, 27 minutes, 12 seconds north latitude; 119 degrees, 30 minutes, 28 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring, dry mid-June through October
Soil temperature: 47 to 51 degrees F.
Depth to duripan and bedrock: 7 to 14 inches.
Control section:
Clay content--35 to 50 percent.
Rock fragments: Averages 5 to 25 percent, dominantly pebbles, when mixed.

A horizons:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Consistence--Soft or slightly hard, dry.

Bt horizons:
Hue--5YR, 7.5YR or 10YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Clay or clay loam.
Clay content--35 to 60 percent.
Rock fragments--Averages 5 to 25 percent, dominantly pebbles.
Structure--Subangular blocky or angular blocky in the upper part, prismatic parting to blocky in the lower part.
Other features--A clay increase of at least 15 percent occurs within a distance of 1 inch either between the A horizon and Bt horizons, or between the Bt1 and Bt2 horizons.

Bqm horizon:
Other features--Continuous 1 to 25 millimeter thick indurated silica laminar duripan.

Hackwood Series

The Hackwood series consists of very deep, well drained soils that formed in alluvium and colluvium derived from quartzite, conglomerate and igneous rocks with a component of loess. Hackwood soils are on hills and mountain side slopes. Slopes are 4 to 70 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 41 degrees F.

Taxonomic class: Fine-loamy, mixed Pachic Cryoborolls

Typical pedon: Hackwood gravelly loam, in map unit 1258, aspen woodland. (Colors are for dry soil unless otherwise noted.)

Oi--0.5 to 0 inches; aspen leaf litter. (0.5 to 4 inches thick)

A1--0 to 4 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; strong medium and coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and coarse roots; many very

fine and fine interstitial pores; 20 percent pebbles; slightly acid (pH 6.5); clear smooth boundary.
A2--4 to 13 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and coarse roots; many very fine tubular pores; 20 percent pebbles; slightly acid (pH 6.4); clear wavy boundary.
A3--13 to 20 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and coarse roots; many very fine tubular pores; 25 percent pebbles; neutral (pH 6.8); clear wavy boundary.
AC--20 to 32 inches; brown (10YR 5/3) gravelly loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine and many medium and coarse roots; common very fine tubular pores; 30 percent pebbles; slightly acid (pH 6.3); clear wavy boundary.
2C1--32 to 43 inches; pale brown (10YR 6/3) very gravelly clay loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine and many medium and coarse roots; common very fine tubular pores; 40 percent pebbles; slightly acid (pH 6.3); gradual smooth boundary.
2C2--43 to 60 inches; light brownish gray (10YR 6/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, sticky and plastic; few fine and common medium and coarse roots; few very fine tubular pores; few very thin silt coatings line pores; 45 percent pebbles; slightly acid (pH 6.2).

Type location: Washoe County, Nevada; in an aspen grove on the south side of Barrel Springs road; west of Balley Mountain; about 1,100 feet west and 1,350 feet north of the southeast corner of section 20, T. 46 N., R. 19 E.; (41 degrees, 53 minutes, 25 seconds north latitude and 119 degrees, 52 minutes, 16 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist late fall through summer, dry September and October.
Additional soil moisture: Supplied by lateral water movement in lower part of the control section or substratum. This additional moisture is transitory and dependent on snowpack and is sporadic.
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 2C horizon: 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.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 through 3 dry, 1 or 2 moist.

AC horizon:
Hue--2.5Y or 10YR.
Value--5 through 7 dry, 4 or 5 moist.
Chroma--2 or 3.
Texture--Silt loam, loam, gravelly silt loam, and gravelly 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.

2C horizons:
Hue--2.5Y or 10YR.
Value--6 through 7 dry, 4 or 5 moist.
Chroma--2 or 3.
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.
Texture--Commonly very gravelly loam, very gravelly clay loam, gravelly clay loam, gravelly silty clay loam.
Other features-- Pores are 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.

Halvert Series

Halvert series consists of moderately deep, well drained soils that formed in colluvium and alluvium from basalt and andesite. The Halvert soils are on interplateau side slopes. Slopes are 0 to 8 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Very-fine, montmorillonitic, mesic Vertic Durixerolls

Typical pedon: Halvert gravelly loam, in map unit 1125, rangeland (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; strong thin and medium platy structure; hard, very friable, sticky, plastic; many very fine roots; many very fine vesicular and interstitial pores; 5 percent cobbles, 15 percent pebbles; slightly alkaline (pH 7.6); abrupt smooth boundary.
A2--2 to 5 inches; brown (7.5YR 5/2) gravelly clay loam, dark brown (7.5YR 3/2) moist; strong very fine and fine subangular blocky structure; hard, very friable, sticky, plastic; many very fine, common fine roots; many very fine tubular, common very fine vesicular pores; 5 percent cobbles, 15 percent pebbles; common thin pinkish gray (7.5YR 7/2) uncoated sand grains on

horizontal faces of peds; slightly alkaline (pH 7.6); abrupt wavy boundary.
Btss--5 to 21 inches; dark brown (7.5YR 4/3) clay, dark brown (7.5YR 3/3) moist; moderate fine and medium prismatic structure parting to strong very fine and fine angular blocky; extremely hard, very firm, very sticky, very plastic; common very fine and few fine roots; few very fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; vertical cracks 8 milimeters to 1 centimeter wide and 4 to 6 inches apart extend from a depth of 5 to 18 inches; few slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; 10 percent pebbles; slightly alkaline (pH 7.8); clear wavy boundary.
Btqk--21 to 27 inches; pink (7.5YR 7/4) gravelly clay, brown (7.5YR 5/4) moist; strong medium and coarse angular blocky structure; hard, friable, very sticky, very plastic; common very fine roots; common very fine tubular pores; many moderately thick and thick clay films on faces of peds and lining pores; 5 percent cobbles, 15 percent pebbles; 0.5 to 1.0 milimeter thick silica and lime coats on 50 percent of underside of rock fragments; few fine soft masses of lime; moderately alkaline (pH 8.4); abrupt wavy boundary.
Bqkm--27 to 32 inches; continuous 2 to 3 milimeter silica lamanae capped indurated duripan; strong thin and medium platy structure; extremely hard, extremely firm; alternate medium horizontal plates with lamanar cap; horizontal root mat at upper boundary with many very fine, fine and few medium roots; violently effervescent in few places; clear smooth boundary.
Cr--32 to 40 inches; fractured basalt with clay and silica in fractures

Type location: Washoe County, Nevada. On the Barrel Springs road at the Nevada-California state line; about 1,700 feet north and 75 feet east of the southwest corner of section 20, T. 46 N., R.18 E.; (41 degrees, 53 minutes, 30 seconds north latitude and 119 degrees, 59 minutes, 52 seconds west longitude.)

Range in Characteristics:

Soil moisture: moist in winter and spring; dry from July through October.
Soil temperature: 47 to 51 degrees F.
Thickness of mollic: 12 to 24 inches
Depth to duripan: 20 to 32 inches
Depth to bedrock: 24 to 40 inches
Control section:
Clay content--60 to 70 percent
Rock fragments--10 to 25 percent, mainly pebbles

A horizons:
Value--5 or 6 dry, 2 or 3 moist. Value of 6 only in upper 2 inches or uncoated sand grains
Chroma--2 or 3
Reaction: Neutral or slightly alkaline

Btss horizon:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 3 or 4 moist
Chroma--3 or 4
Clay content--60 to 70 percent in the upper part
Texture--Clay or gravelly clay
Rock fragments--10 to 25 percent, mainly pebbles
Consistence--Hard through extremely hard dry, friable to very firm moist
Reaction--Slightly alkaline or moderately alkaline
Other features--Vertical cracks 5 to 25 milimeters wide, few to common slickensides and wedge-shaped aggregates

Btqk horizon:
Hue--10YR or 7.5YR
Value--5 through 7 dry, 4 through 6 moist
Chroma--3 or 4
Clay content--55 to 65 percent
Reaction--slightly or moderately alkaline
Effervescence--Noneffervescent or slightly effervescent; few fine or medium soft masses of lime

Bqkm horizon:
Cementation--Continuous 2 to 3 millimeter silica laminae capped indurated duripan

Hangrock Series

The Hangrock series consists of shallow to a duripan, well drained soils that formed in alluvium derived from volcanic rocks and vitric pyroclastic materials. Hangrock soils are on fan piedmonts often overplaced on pediments. Slopes are 2 to 15 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Ashy, mesic, shallow Haploxeralfic Argidurids

Typical pedon: Hangrock very gravelly loam, in map unit 1150, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered by approximately 5 percent cobbles, 40 percent pebbles.
A--0 to 4 inches; light brownish gray (10YR 6/2) very gravelly loam, dark brown (10YR 3/3) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine interstitial pores; 5 percent cobbles, 35 percent pebbles; neutral (pH 6.6); clear smooth boundary.
Bt1--4 to 9 inches; pale brown (10YR 6/3) gravelly clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; common thin clay films on faces of peds; 15 percent pebbles; neutral (pH 6.6); clear smooth boundary.
Bt2--9 to 17 inches; light yellowish brown (10YR 6/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine prismatic parting to strong medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; common moderately thick clay films on faces of peds; 15 percent pebbles; neutral (pH 6.8) abrupt wavy boundary.

Bqm--17 to 24 inches; strongly cemented duripan with fractured discontinuous lenses of very rigid material; massive; extremely hard, extremely firm; 30 percent pebbles; slightly alkaline (pH 7.4); gradual wavy boundary.
Bqkm--24 to 60 inches; strongly cemented duripan consisting of many strongly cemented plates with weakly cemented material between the plates; 30 percent pebbles; thin lime coatings on some rock fragments and duripan fragments; strongly effervescent matrix; slightly alkaline (pH 7.6).

Type location: Washoe County, Nevada; about 1 1/2 miles southeast of Hanging Rock Canyon; 2,200 feet north and 200 feet east of the southwest corner of section 31, T. 42 N., R. 23 E.; (41 degrees, 30 minutes, 35 seconds north latitude and 119 degrees, 26 minutes, 18 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.
Mineralogy: 35 to 60 percent glass in the very fine and fine sand size throughout.

A horizon:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 3 or 4 moist, (after mixing 7 inches value greater than 5.5 dry)
Chroma--2 or 3.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--2 through 4 or 6.
Texture--Loam or clay loam.
Clay content--25 to 35 percent.
Rock fragments--15 to 35 percent, dominantly pebbles.

Bqm horizon:
Cementation--Most fragments will fail at 1 joule; very rigid pieces will typically fail at 3 joules.

Hapgood Series

The Hapgood series consists of deep, well drained soils that formed in colluvium from mixed rocks with a component of loess and mixed volcanic ash. Hapgood soils are dominantly on hills and mountain sideslopes. Slopes are 4 to 70 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed Pachic Cryoborolls

Typical pedon: Hapgood very gravelly loam, in map unit 1345, rangeland. (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; moderate thin and medium platy structure; soft, very friable, nonsticky and slightly plastic; few fine and many very fine roots; many fine interstitial and few very fine tubular pores; 40 percent pebbles; slightly acid (pH 6.4); clear smooth boundary.
A2--3 to 8 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine and medium and many very fine roots; many very fine interstitial and common very fine tubular pores; 40 percent pebbles; neutral (pH 6.6); clear smooth boundary.
A3--8 to 26 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine, and many very fine roots; many very fine interstitial, and common very fine tubular pores; 30 percent pebbles; neutral (pH 6.6); clear smooth boundary.
AC--26 to 36 inches; grayish brown (10YR 5/2) very gravelly loam, dark brown (10YR 3/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; few fine and many very fine roots; many very fine interstitial and common very fine tubular pores; 50 percent pebbles; neutral (pH 6.8); abrupt wavy boundary.
C--36 to 50 inches; very pale brown (10YR 7/3) very cobbly loam, brown (10YR 5/3) moist; many fine and medium faint brown (10YR 5/3) iron stains along vertical cleavage planes; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine, and common very fine roots; common very fine tubular pores; 20 percent cobbles and 20 percent pebbles; neutral (pH 6.8); abrupt wavy boundary.
R--50 to 54 inches; hard, fractured andesite.

Type location: Washoe County, Nevada; approximately 60 miles west of Denio Junction; 300 feet north and 450 feet east of the southwest corner of section 10, T. 46 N., R. 19 E.; (41 degrees, 54 minutes, 59 seconds north latitude and 119 degrees, 50 minutes, 46 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring, dry late July through early October.
Mean annual 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 60 inches.
Control section:
Clay content--18 to 27 percent.
Rock fragments--35 to 50 percent, dominantly pebbles.
Reaction--Slightly acid or neutral.

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.
Other features--A4 horizons may replace AC horizon in some pedons.

C horizon:
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.
Other features--Some pedons lack C horizons where the mollic epipedon rests on the bedrock at depths less than 48 inches.

Hart Camp Series

The Hart Camp series consists of shallow, well drained soils that formed in residuum weathered from tuff. The Hart Camp soils are on rock pediment remnants, plateaus, mountains and hills. Slopes are 4 to 30 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy, mixed, frigid, shallow Aridic Argixerolls

Typical pedon: Hart Camp stony loam, in map unit 1275, rangeland. (Colors are for dry soil unless otherwise noted.) The surface is partially covered with 2 percent stones, 5 percent cobbles, and 15 percent pebbles.
A--0 to 3 inches; brown (10YR 5/3) stony 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 and fine vesicular and interstitial pores; 2 percent stones, 5 percent cobbles and 15 percent pebbles; neutral (pH 7.0); clear smooth boundary.
BA--3 to 8 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine roots; many very fine tubular pores; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bt1--8 to 12 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine and fine roots; common very fine tubular pores; 25 percent pebbles; many thin clay films on faces of peds and in pores; neutral (pH 7.0); clear wavy boundary.
Bt2--12 to 16 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; many very fine and fine roots; many very fine tubular pores; 25 percent pebbles; common thin and moderately thick clay films on faces of peds and in pores; neutral (pH 6.7); abrupt irregular boundary.
Cr--16 to 20 inches; light yellowish brown (10YR 6/4) weathered tuff; common thin and few moderately thick clay films at the upper boundary and in few places.

Type location: Washoe County, Nevada; approximately 2,000 feet north of Barrel Springs road; about 2,000 feet east and 1,300 feet south of the northwest corner of section 20, T. 46 N., R. 19 E.; (41 degrees, 53 minutes, 50 seconds north latitude and 119 degrees, 52 minutes, 44 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry; moist winter and spring, dry late June through October.
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 7 to 15 inches, includes part or all of argillic horizon.
Profile reaction: Slightly acid to neutral.
Depth to weathered bedrock: 10 to 20 inches.
Control section:
Clay content--Averages 18 to 35 percent.
Rock fragments--Averages 15 to 35 percent.

A horizon:
Value--4 through 6 dry, 2 or 3 moist. When the surface 7 inches are mixed, its value is less than 5.5.
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--Gravelly sandy clay loam, gravelly clay loam, gravelly loam.
Clay content--20 to 35 percent. Subhorizons of clay occur in some pedons.
Rock fragments--Averages 15 to 35 percent.
Structure--Weak to strong, fine to coarse subangular or angular blocky or has moderate or strong, fine or medium prismatic in some pedons.

Hartig Series

The Hartig series consists of deep, well drained soils that formed in colluvium from andesite, dacite, rhyolite and volcanic tuff. The Hartig soils are on mountain sideslopes. Slopes are 8 to 70 percent. The mean annual precipitation is about 14 inches and the mean annual temperature 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Aridic Haploxerolls

Typical pedon: Hartig gravelly loam, in map unit 1272, rangeland. (Colors are for dry soil unless otherwise noted.)
A--0 to 10 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak very fine and fine platy structure; soft, very friable, nonsticky and nonplastic; many fine roots; many fine and very

fine interstitial pores; 15 percent pebbles; slightly acid (pH 6.4); abrupt smooth boundary.
Bw--10 to 21 inches; light brownish gray (10YR 6/2) very gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many fine roots; common very fine tubular pores; 40 percent fine pebbles; neutral (pH 6.8); gradual smooth boundary.
C--21 to 42 inches; light yellowish brown (10YR 6/4) very gravelly loam, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; common fine roots; many very fine interstitial pores; 55 percent pebbles and cobbles; neutral (pH 7.0); abrupt wavy boundary.
R--42 to 46 inches--unweathered bedrock.

Type location: Washoe County, Nevada; approximately 1,000 feet southeast of the northwest corner of section 9, T. 46 N., R. 19 E.; (41 degrees, 55 minutes, 42 seconds north latitude and 119 degrees, 51 minutes, 52 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry from June through mid October.
Soil temperature: 44 to 47 degrees F.
Mollic epipedon: 10 to 20 inches thick, may include upper part of cambic horizon.
Effervescence: Noneffervescent throughout profile.
Depth to bedrock: 40 to 60 inches.
Control section:
Clay content--12 to 18 percent.
Rock fragments--35 to 60 percent.

A horizon:
Hue--10YR or 7.5YR.
Value--4 or 5 dry.
Chroma--2 or 3 moist.
Consistence--Soft or slightly hard, dry.
Reaction--Slightly acid or neutral.

Bw horizon:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3.
Texture--Loam, sandy loam.
Clay content--12 to 20 percent.
Rock fragments--35 to 60 percent.
Reaction--Slightly acid or neutral.

C horizon:
Hue--10YR or 7.5YR.
Value--6 or 7 dry, 3 or 4 moist.
Chroma--3 or 4.
Texture--Loam or sandy loam.
Clay content--10 to 18 percent.
Rock fragments--35 to 60.
Structure--Subangular blocky or massive.
Consistence--Very friable and friable, moist.

Indian Creek Series

The Indian Creek series consists of shallow well drained soils that formed in mixed alluvium. The Indian Creek soils are on terraces and dissected alluvial fans. Slopes are 4 to 15 percent. The mean annual precipitation is about 10 inches and the mean annual air temperature is about 5O degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Xeric Argidurids

Typical pedon: Indian Creek very cobbly loam, in map unit 1285, rangeland. (Colors are for dry soil unless otherwise noted.) The surface is partially covered with 20 percent cobbles and 15 percent pebbles.
A1--0 to 2 inches; pale brown (10YR 6/3) very cobbly loam, dark brown (10YR 3/3) moist; moderate thin platy structure; slightly hard, very friable, sticky and plastic; many very fine roots; common fine and very fine vesicular pores; few uncoated sand grains; 20 percent cobbles and 15 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.
A2--2 to 5 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 3/3) moist; moderate very fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, common fine, and few medium roots; many fine and very fine interstitial pores; many uncoated sand grains; 25 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bt1--5 to 10 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark brown (7.5YR 3/4) moist; strong fine and medium subangular blocky structure; hard, very friable, very sticky and very plastic; many very fine, common fine, and few medium roots; common very fine tubular pores; many moderately thick clay films on faces of peds and in pores; 25 percent pebbles; slightly alkaline (pH 7.4); clear wavy boundary.
Bt2--10 to 18 inches; strong brown (7.5YR 5/6) gravelly clay, dark brown (7.5YR 4/4) moist; strong fine and medium angular blocky structure; hard, very friable, very sticky and very plastic; common very fine and few fine and medium roots; few very fine tubular pores; many moderately thick clay films on faces of peds and in pores; 20 percent pebbles; moderately alkaline (pH 7.4); abrupt wavy boundary.
Bqkm--18 to 25 inches; white (10YR 8/2) indurated duripan, light yellowish brown (10YR 6/4) moist; strong thick and very thick platy structure; extremely hard, extremely firm and very firm; few very fine and fine roots in horizontal root mat at upper boundary and between some plates; 70 percent cemented pebbles; continuous 1 to 2 millimeter thick horizontal silica laminae; many moderately thick and thick silica coats; strongly effervescent between plates and surface of plates; moderately alkaline (pH 8.0); abrupt wavy boundary.
2Ck1--25 to 36 inches; light gray (10YR 7/2) extremely gravelly loamy coarse sand, dark grayish brown (10YR 4/2) moist; massive; hard, very friable, nonsticky and nonplastic; few very fine and fine roots; many fine

interstitial pores; 60 percent pebbles; common fine and medium lime coats on underside of pebbles; slightly alkaline (pH 7.8); clear wavy boundary.
3Ck2--36 to 60 inches; light brownish gray (10YR 6/2) very gravelly loamy coarse sand, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable; few very fine roots; many fine interstitial pores; 50 percent pebbles; common fine and medium lime coats on underside of pebbles; slightly alkaline (pH 7.4).

Type location: Washoe County, Nevada; about 500 feet west and 100 feet north of the southeast corner of section 21, T. 43 N., R.18 E.; (41 degrees, 37 minutes, 33 seconds north latitude and 119 degrees, 57 minutes, 55 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist during winter and spring.
Soil temperature: 50 to 53 degrees F.
Depth to duripan: 14 to 20 inches.
Control section:
Clay content--35 to 55 percent.

A horizons:
Value--5 or 6 dry, 2 or 3 moist.
Chroma--2 or 3
Reaction--Slightly acid or neutral
Other features--It commonly has a desert pavement of pebbles, cobbles and stones lightly coated with desert varnish.

Bt horizons:
Hue--10YR, 7.5YR or 5YR
Value--4 through 6 dry, 3 through 5 moist
Chroma--4 through 6
Texture--Clay, sandy clay or gravelly clay
Clay content--35 to 55 percent
Rock fragments--5 to 35 percent, mainly pebbles
Reaction--Slightly acid to slightly alkaline

Bqkm horizon:
Cementation--Continuous indurated cap or plates with strong silica cementation below

C horizons:
Texture--Loamy coarse sand, coarse sandy loam, sandy loam or sandy clay loam
Rock fragments--40 to 80 percent, mainly pebbles and some cobbles with a few stones
Secondary lime accumulation--Occur as filaments or soft masses or as coatings on underside of rock fragments.

Isolde Series

The Isolde series consists of very deep, excessively drained soils that formed in eolian sand from mixed rock sources. Isolde soils are on semi-stabilized dunes over lake plains, beach terraces, lake beds, playas, lake terraces, alluvial fans and uplands. Slopes are 2 to 15 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 52 degrees F.

Taxonomic class: Mixed, mesic Typic Torripsamments

Typical pedon: Isolde fine sand, in map unit 1215, rangeland. (Colors are for dry soil unless otherwise noted.)
A--0 to 7 inches; light gray (10YR 7/2) fine sand, dark grayish brown (10YR 4/2) moist; single grained; loose, nonsticky and nonplastic; many very fine roots; many very fine and fine interstitial pores; moderately alkaline (pH 8.4); clear wavy boundary.
C1--7 to 24 inches; light gray (10YR 7/2) fine sand, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; many very fine and common fine roots; many very fine and fine interstitial pores; moderately alkaline (pH 8.4); clear smooth boundary.
C2--24 to 42 inches; light gray (10YR 7/2) fine sand, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; many very fine, common fine and few medium roots; many very fine and fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.
C3--42 to 55 inches; light gray (10YR 7/2) fine sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots; many very fine and fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.
Ck--55 to 62 inches; light gray (10YR 7/2) fine sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots; many very fine and fine interstitial pores; few fine soft masses of lime; strongly effervescent; moderately alkaline (pH 8.4).

Type location: Washoe County, Nevada; 1,200 feet west and 1,600 feet south of the northeast corner of section 17, T. 41 N., R. 18 E.; (41 degrees, 28 minutes, 36 seconds north latitude and 119 degrees, 59 minutes, 24 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist for short periods in winter and spring, dry from summer to mid fall.
Soil temperature: 53 to 57 degrees F.
Reaction: Neutral to moderately alkaline.
Control section:
Texture--Commonly fine sand or in some pedons sand, with 50 to 80 percent passing number 40 sieve and 1 to 10 percent passing the number 200 sieve.

A horizon:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 4 or 5 moist.
Chroma--2 or 3.

C horizons:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 or 3.

Other features--Some pedons have a 2C horizon below 40 inches. In some pedons the lower C horizon is moderately to strongly alkaline and noneffervescent to strongly effervescent.

Jaybee Series

The Jaybee series consists of very shallow and shallow, well drained soils that formed in residuum and colluvium from basic volcanic rocks primarily from basalt. Jaybee soils are on hills, mountains and plateaus. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic Lithic Xeric Haplargids

Typical pedon: Jaybee very cobbly loam, in map unit 1125, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 2 percent stones, 20 percent pebbles, and 25 percent cobbles.

A1--0 to 4 inches; pale brown (10YR 6/3), very cobbly loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine vesicular pores; 2 percent stones, 20 percent cobbles, 15 percent pebbles; slightly alkaline (pH 7.4); clear smooth boundary.

Bt1--4 to 8 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; few very fine roots; few very fine tubular and common very fine interstitial pores; common thin clay films on faces of peds and in pores; 25 percent pebbles, neutral (pH 7.2); clear smooth boundary.

Bt2--8 to 14 inches; yellowish brown (10YR 5/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate medium prismatic structure parting to fine subangular blocky; hard; very friable, very sticky and very plastic; few very fine and common medium and coarse roots; common very fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 20 percent pebbles, 5 percent cobbles; neutral (pH 6.8); abrupt irregular boundary.

R--14 to 18 inches; fractured hard basalt.

Type location: Washoe County, Nevada; on the Barrel Springs road about 400 feet east of the Nevada-California state line; about 1,000 feet north and 400 feet east of the southwest corner of section 20, T. 46 N., R. 18 E.; (41 degrees, 53 minutes, 22 seconds north latitude and 119 degrees, 59 minutes, 47 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry during summer and fall, moist winter and spring.
Soil temperature: 54 to 57 degrees F.
Depth to lithic contact: 7 to 14 inches.
Control section:
Clay content--25 to 35 percent.
Rock fragments--Averages 15 to 35 percent after mixing

A horizon:
Hue--10YR or 7.5YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--2 through 4.
Reaction--Neutral or slightly alkaline.
Other features--The surface 7 inches has value lighter than 5.5 dry or 3.5 moist after mixing.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 or 4 moist
Chroma--2 through 4.
Texture--Clay or clay loam.
Clay content--35 to 45 percent.
Reaction--Neutral or slightly alkaline.

Karlo Series

The Karlo series consists of moderately deep, well drained soils that formed in residuum from volcanic rocks. Karlo soils are on plateaus. Slopes range from 0 to 8 percent. The mean annual precipitation is about 11 inches and the mean annual air temperature is about 44 degrees F.

Taxonomic class: Very-fine, montmorillonitic, frigid Leptic Haploxererts

Typical pedon: Karlo very cobbly clay, in map unit 1180, rangeland (Colors are for dry soil unless otherwise noted). The soil surface is partially covered with 30 percent cobbles and 20 percent pebbles.

A1--0 to 3 inches; dark reddish brown (5YR 3/3) very cobbly clay, dark brown (7.5YR 3/2) moist; strong very fine and fine granular structure; hard, very friable, very sticky and very plastic; common very fine and fine roots; many very fine interstitial pores; 30 percent cobbles and 20 percent pebbles; neutral (pH 7.0); abrupt smooth boundary.

A2--3 to 5 inches; dark reddish brown (5YR 3/3) silty clay, dark brown (7.5YR 3/2) moist; moderate fine angular blocky structure; hard, friable, very sticky and very plastic; common very fine and fine roots; many very fine and fine interstitial pores; vertical cracks 10 to 30 millimeters wide and 3 to 6 inches apart; slightly alkaline (pH 7.4); clear smooth boundary.

A3--5 to 10 inches; dark reddish brown (5YR 3/3) clay, dark brown (7.5YR 3/2) moist; moderate coarse prismatic structure parting to strong fine and medium angular blocky; very hard, friable, very sticky and very plastic; common very fine and fine roots; common very fine interstitial pores; vertical cracks 10 to 20 millimeters wide and about 3 to 6 inches apart; pressure faces on 60 percent of faces of peds; slightly alkaline (pH 7.4); clear smooth boundary.

Bwss--10 to 25 inches; reddish brown (5YR 4/3) clay, dark reddish brown (5YR 3/3) moist; strong coarse prismatic

structure parting to strong fine and medium angular blocky; very hard, firm, very sticky and very plastic; few very fine roots; common very fine interstitial pores; vertical cracks 10 millimeters to 1 centimeter wide and about 3 to 6 inches apart; common wedge-shaped aggregates tilted 30 degrees from horizontal; many intersecting slickensides; moderately alkaline (pH 8.0); clear smooth boundary.

Bkss--25 to 30 inches; reddish brown (5YR 4/3) silty clay, dark brown (7.5YR 3/4) moist; strong fine and medium angular blocky structure; hard, friable, very sticky and very plastic; few very fine roots; few very fine tubular pores;few wedge-shaped aggregates tilted 30 degrees from horizontal; few slickensides; few fine lime masses; moderately alkaline (pH 8.2); abrupt smooth boundary.

R--30 to 34 inches; hard basalt; strong brown (7.5YR 5/6) decomposed rock materials in fractures; thin continuous white lime coats on fractured faces.

Type location: Washoe County, Nevada; about 2,000 feet west and 2,500 feet south of the northeast corner of sec. 33, T. 46 N., R. 19 E.; (41 degrees, 51 minutes, 54 seconds north latitude and 119 degrees, 51 minutes, 19 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 44 to 45 degrees.
Depth to bedrock: 24 to 40 inches
Other features: Cracks are open to the surface for about 150 to 180 days. (mid-June to November).
Control section:
Clay content--60 to 70 percent.

A horizons:
Hue--10YR, 7.5YR or 5YR
Value--3 or 4 dry or moist
Chroma--2 through 4
Reaction--Slightly acid to slightly alkaline
Other features--A surface cover of 20 to 60 percent basalt cobbles is present in most pedons.

Bwss and Bkss horizons:
Hue--10YR, 7.5YR or 5YR.
Value--3 or 4 dry or moist.
Chroma--2 through 4.
Structure--Prismatic, subangular blocky or angular blocky
Reaction--Mildly alkaline or moderately alkaline
Other features--Slickensides are on 20 to 70 percent of faces of peds

Langston Series

The Langston series consists of very deep, well drained soils that formed in alluvium over lake sediments derived from mixed sources. Langston soils are on lake terraces and alluvial 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 over sandy or sandy-skeletal, mixed, mesic Xeric Haplargids

Typical pedon: Langston gravelly sandy loam, in map unit 1040, rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 3 inches; pale brown (10YR 6/3) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; strong thin and medium platy structure; hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine and fine vesicular pores; 25 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

Bt--3 to 11 inches; pale brown (10YR 6/3) gravelly sandy clay loam, dark brown (10YR 3/3) moist; strong fine and medium subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and fine, common medium and few coarse roots; many very fine tubular pores; common thin clay films on faces of peds and in pores; 20 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

2Bk1--11 to 19 inches; very pale brown (10YR 7/4) very gravelly sand, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and few fine roots; many very fine interstitial pores; 50 percent pebbles; few (2 percent) very thin lime pendants on rock fragments; slightly effervescent; slightly alkaline (pH 7.4); abrupt wavy boundary.

3Bk2--19 to 29 inches; very pale brown (10YR 7/3) very gravelly coarse sand, brown (10YR 5/3) moist; massive; loose when dry and moist; few very fine and medium roots; many very fine interstitial pores; 50 percent pebbles; common (20 percent) very thin lime pendants on rock fragments; strongly effervescent; slightly alkaline (pH 7.6); clear wavy boundary.

4C--29 to 60 inches; varigated colored, extremely gravelly coarse sand and extremely gravelly sand; massive; loose when dry and moist; no roots observed; many very fine interstitial pores; 75 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0).

Type location: Washoe County, Nevada; about 4.5 miles east of Vya on Road 8A to power line; about 0.4 miles south along power line in an unsectioned area. (41 degrees, 34 minutes, 40 seconds north latitude and 119 degrees, 45 minutes, 18 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry from June through October.
Soil temperature: 47 to 52 degrees F.
Depth to discontinuity: 11 to 20 inches.
Control section:
Clay content--18 to 30 percent in the upper part and 0 to 5 percent in the lower part.
Rock fragments--Averages 10 to 35 percent in the upper part and 65 to 90 percent in the lower part.

A horizon:
Value--5 through 7 dry, 3 or 4 moist, when mixed.

Chroma--2 or 3.
Reaction--Slightly acid or neutral.

Bt horizon:
Hue--7.5YR or 10YR.
Value--5 or 6 dry, 4 or 5 moist.
Chroma--2 or 3.
Texture--Sandy clay loam, clay loam, loam.
Clay content--18 to 30 percent.
Rock fragments--Averages 10 to 35 percent.
Reaction--Slightly acid to slightly alkaline.
Structure--Subangular blocky or is massive.

Bk horizons:
Hue--2.5Y or 10YR.
Value--3 through 7 dry, 3 through 5 moist.
Chroma--1 through 3.
Texture--Stratified gravelly sand through extremely gravelly coarse sand.
Rock fragments--Averages 65 to 90 percent, most of which are pebbles.
Reaction--Slightly alkaline or moderately alkaline.
Other features--Depth to lime coatings on rock fragments, 11 to 40 inches. Some pedons have thin silica coats on undersides of rock fragments.
Effervescence--Noneffervescent to violently effervescent.

C horizons:
Other features--Horizons may be present in some pedons.

Layview Series

The Layview series consists of shallow, well drained soils that formed in residuum and colluvium from andesite, rhyolite, chert and tuff. Layview soils are on mountain crests, summits, shoulders and side slopes. Slopes are 4 to 30 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed Argic Lithic Cryoborolls

Typical pedon: Layview very gravely loam, in map unit 1345, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent cobbles and 40 percent pebbles.

A1--0 to 1 inch; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak very fine and fine subagular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine vesicular pores; 5 percent cobbles, 45 percent pebbles; slightly alkaline (pH 7.6); abrupt smooth boundary.

A2--1 to 4 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, sticky and plastic; few very fine roots; many very fine vesicular pores; 50 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.

Bt1--4 to 12 inches; brown (10YR 4/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine medium subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine tubular pores; common thin clay films on faces of peds and in pores; 45 percent pebbles; slightly alkaline (pH 7.8); clear wavy boundary.

Bt2--12 to 14 inches; yellowish brown (10YR 5/4) very gravelly loam, dark brown (10YR 3/3) moist; weak medium angular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and few fine roots; many very fine tubular pores; few thin clay films on faces of peds and in pores; 40 percent pebbles; slightly alkaline (pH 7.8); abrupt irregular boundary.

2R--14 to 18 inches; hard volcanic andesite with few fractures.

Type location: Washoe County, Nevada; about 600 feet west and 1,000 feet north of southeast corner of section 16, T. 46 N., R. 19 E.; (41 degrees, 54 minutes, 14 seconds north latitude and 119 degrees, 51 minutes, 01 second west longitude.)

Range in Characteristics:

Soil moisture: These soils are usually dry during summer and fall, moist mid-October through mid-July.
Soil temperature: 43 to 47 degrees F.
Average summer soil temperature: 50 to 59 degrees F.
Depth to bedrock: 10 to 14 inches.
Reaction: Neutral or slightly alkaline.
Mollic epipedon thickness: 7 to 12 inches.
Control section:
Clay content--18 to 30 percent.
Rock fragments--35 to 60 percent, mainly pebbles.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Value--4 or 5 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Very gravelly loam or very gravelly clay loam.
Clay content--22 to 35 percent.
Rock fragments--35 to 60 percent, mainly pebbles.
Structure--Weak or moderate subangular or angular blocky.
Consistence--Soft to hard, very friable or friable, slightly sticky or sticky and slightly plastic or plastic.

Lofftus Series

The Lofftus series consists of moderately deep to a duripan, somewhat poorly drained soils that formed in lacustrine sediments with an ash mantle. Lofftus soils are on low terraces in basins. Slopes are 0 to 1 percent. The mean annual precipitation is about 9 inches and the annual temperature is about 47 degrees F.

Taxonomic class: Ashy, mesic Aquicambidic Haplodurids

Typical pedon: Lofftus silt loam, in map unit 1115, rangeland. (Colors are for dry soil unless otherwise noted.)

Akn--0 to 2 inches; gray (10YR 6/1) silt loam, dark grayish brown (10YR 4/2) moist; moderate very thin platy structure; slightly hard, friable, very sticky and plastic; many very fine and fine roots; common fine vesicular pores; strongly effervescent, carbonates are disseminated; white salt and black organic staining occur in patches on the soil surface; strongly alkaline (pH 9.0); clear smooth boundary.

Bkn1--2 to 11 inches; light gray (10YR 7/1) silt loam, dark grayish brown (2.5Y 4/2) moist; weak very thin platy structure; slightly hard, friable, very sticky and plastic; many very fine and fine roots; common very fine tubular pores; strongly effervescent, carbonates are disseminated; strongly alkaline (pH 8.8); clear smooth boundary.

Bkn2--11 to 30 inches; light gray (10YR 7/1) silt loam, dark grayish brown (2.5Y 4/2) moist; weak very thin platy structure; soft, very friable, very sticky and plastic; many fine and medium roots to 24 inches, few below; violently effervescent, carbonates are disseminated; strongly alkaline (pH 8.8); abrupt smooth boundary.

2Bkqm--30 to 50 inches; light gray (10YR 7/1) duripan, dark grayish brown (2.5Y 4/2) moist; strongly cemented; strong very thick platy structure; very hard, very firm, brittle; few fine tubular pores; coatings of silica in some pores and on the surface of the pan; violently effervescent, carbonates are disseminated; strongly alkaline (pH 8.8); abrupt wavy boundary.

3C--50 to 60 inches; stratified lacustrine sediments.

Type location: Washoe County, Nevada; in Coleman Valley; about 2,400 feet west and 200 feet south of the northeast corner of section 13, T. 47N., R. 19 E.; (41 degrees, 59 minutes, 50 seconds north latitude and 119 degrees, 47 minutes, 55 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry mid-June through October. These soils have a perched water table at a depth of 1 to 3 feet from March through June.
Soil temperature: 47 to 51 degrees F.
Depth to duripan: 20 to 40 inches
Mineralogy: 30 to 60 percent glass in the silt and sand fraction
Control section:
Clay content--8 to 18 percent
Bulk density--0.8 to 1.0 g/cc
Electrical conductivity--8 to 16 mmhos/cm
SAR: 25 to 50

A horizon:
Value--6 or 7 dry, 3 or 4 moist
Chroma--1 or 2

Bkn horizons:
Hue--10YR, 2.5Y or neutral
Value--6 or 7 dry, 4 or 5 moist
Chroma--0 through 2
Other--Layers of white ash a few inches thick are in some pedons

Longdis Series

The Longdis series consists of very deep, well drained soils that formed in mixed lacustrine sediments influenced by volcanic ash. The Longdis soils are on lake terraces and basin rims. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Xeric Natrargids.

Typical pedon: Longdis silty clay loam, in map unit 1310, rangeland (Colors are for dry soil unless otherwise noted.)

A1--0 to 5 inches; light brownish gray (10YR 6/2) silty clay loam, dark brown (10YR 3/3) moist; moderate very thin and thin platy structure; slightly hard, very friable, sticky and plastic; many very fine roots; many very fine vesicular pores; moderately alkaline (pH 8.0); abrupt wavy boundary.

Btn1--5 to 11 inches; light brownish gray (10YR 6/2) silty clay, dark brown (10YR 3/3) moist exped, dark yellowish brown (10YR 4/4) moist crushed; strong fine and medium prismatic structure parting to strong fine and medium subangular blocky; very hard, firm, very sticky and very plastic; many very fine and fine roots; common very fine tubular pores; many thin clay films on faces of peds and lining pores; moderately alkaline (pH 8.0); abrupt wavy boundary.

Btn2--11 to 26 inches; pale brown (10YR 6/3) clay, dark grayish brown (10YR 4/2) moist; strong fine and medium prismatic structure parting to strong fine and medium angular blocky; very hard, firm, very sticky and very plastic; many very fine and fine roots; common very fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; slightly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Btnk--26 to 45 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 4/3) moist; strong very fine angular blocky structure; hard, firm, very sticky and very plastic; common very fine roots; few very fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; common fine soft masses of lime; strongly effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary.

2C--45 to 61 inches; light brownish gray (2.5Y 6/2) stratified silty clay and silty clay loam, grayish brown (2.5Y 5/2) moist; massive; hard and very hard, friable and firm, very sticky and very plastic; few very fine tubular pores; strongly alkaline (pH 9.0).

Type location: Washoe County, Nevada. At the north end of Long Valley; about 2,300 feet south, 450 feet west of the northeast corner of section 2, T. 44 N., R.19 E.; (41 degrees, 45 minutes, 52 seconds north latitude and 119 degrees, 48 minutes, 37 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 51 degrees F.
Depth to carbonates: 11 to 24 inches.
Control section:
Clay content--40 to 50 percent.

A horizon:
Value--6 or 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Slightly alkaline or moderately alkaline.

Btn horizons:
Value--5 through 7 dry; 3 through 5 moist.
Chroma--2 through 4.
Clay content--40 to 50 percent.
Texture--Silty clay or clay.
SAR--13 to 45.
Reaction--Moderately alkaline or strongly alkaline.

Btnk horizon:
Hue--10YR or 2.5Y.
Value--5 through 7 dry; 3 through 5 moist.
Chroma--2 through 4.
Clay content--35 to 50 percent.
Texture--Silty clay, clay or silty clay loam.
SAR--13 to 45.
Effervescence--Slightly effervescent or strongly effervescent; few to many fine to large soft masses of lime in the lower part.
Other features--Few or common fine or medium soft masses of gypsum in the lower part are in some pedons.

C horizon:
Hue--10YR or 2.5Y.
Value--6 through 8 dry, 4 through 6 moist.
Chroma--2 through 4.
Texture--Usually stratified; dominantly silty clay loam, silty clay or clay, but includes strata of loam, clay loam, fine sandy loam or very fine sandy loam.
Clay content--35 to 45 percent.
Structure--Platy or is massive.
Consistence--Hard or very hard dry, very friable through firm moist.
Effervescence--Noneffervescent to violently effervescent; few or common fine to medium soft masses of lime are in some pedons.
Other features--Few or common fine or medium relict mottles with chroma of 4 or 5 or soft masses of gypsum are in some pedons.

Macyflet Series

The Macyflet series consists of very deep, moderately well drained soils that formed in lacustrine deposits mainly from volcanic rocks. The Macyflet soils are on interplateau basins. Slopes are 0 to 2 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Very fine, montmorillonitic, frigid Vertic Paleargids

Typical pedon: Macyflet silty clay loam, in map unit 1010, rangeland. (Colors are for dry soil unless otherwise noted.)
A1--0 to 2 inches; light gray (10YR 7/2) silty clay loam, dark grayish brown (10YR 4/2) moist; weak thick platy structure; slightly hard, very friable, sticky and plastic; common fine roots; common medium, many fine and very fine vesicular pores; neutral (pH 7.0); abrupt smooth boundary.
A2--2 to 9 inches; light brownish gray (10YR 6/2) silty clay loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, sticky and plastic; common very fine, fine and medium roots; few fine tubular, and many very fine interstitial pores; neutral (pH 7.0); abrupt smooth boundary.
Bt1--9 to 15 inches; light brownish gray (10YR 6/2) crushed, clay, brown (10YR 4/3) moist; strong medium prismatic structure parting to moderate medium angular blocky; hard, very friable, very sticky and very plastic; few fine medium roots; common very fine interstitial pores, few fine and very fine tubular pores; many pressure faces; neutral (pH 7.0); abrupt smooth boundary.
Bt2--15 to 32 inches; pale brown (10YR 6/3) clay, brown (10YR 4/3) moist; strong medium prismatic structure; very hard, very firm, very sticky and very plastic; few fine and medium roots; very few fine tubular pores; many pressure faces; neutral (pH 7.0); gradual smooth boundary.
Bt3--32 to 47 inches; light yellowish brown (10YR 6/4) clay, olive brown (2.5Y 4/4) moist, with few fine distinct light olive brown (2.5Y 5/6) mottled manganese stains; strong fine angular blocky structure; very hard, very firm, very sticky and very plastic; very few roots; very few fine tubular pores; many pressure faces; slightly alkaline (pH 7.6); abrupt smooth boundary.
2C1--47 to 49 inches; white (10YR 8/1) loamy sand, light gray (10YR 7/1) moist; massive; hard, very friable, nonsticky and nonplastic; slightly alkaline (pH 7.6); abrupt smooth boundary.
2C2--49 to 60 inches; light gray (2.5Y 7/2) loamy fine sand, light brownish gray (2.5Y 6/2) moist, common fine prominent brownish yellow (10YR 6/8) mottles; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine interstitial pores; moderately alkaline pH 8.2).

Type location: Washoe County, Nevada; approximately 150 feet south of the Oregon state line and 150 feet east of road line in Macy Flat, about 2,500 feet west and 150 feet south of the northeast corner of section 17 and the Oregon state line, T. 47 N., R. 21 E.; (41 degrees, 59 minutes, 44 seconds north latitude and 119 degrees, 38 minutes, 41 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall. Saturated below 5 feet in most years, in the early spring. Aridic moisture regime bordering on Xeric.

Soil temperature: 43 to 47 degrees F.
Depth to base of Bt horizon: 30 to 60 inches.
Control section:
Clay content--60 to 70 percent.
Other features--Linear extensibility is 6 centimeters or more.

A horizons:
Value--6 or 7 dry; 3 through 5 moist.
Reaction--Slightly acid to slightly alkaline.

Bt1 and Bt2 horizons:
Value--5 or 6 dry, 3 through 5 moist.
Chroma--3 or 4, may be 2 in Bt1 horizon.
Clay content--60 to 70 percent.
Structure--Prismatic or columnar sometimes parting to angular blocky
Consistence--Very hard or extremely hard dry, may be hard in Bt1 horizon.
Reaction--Slightly acid to slightly alkaline.
Other features--Common to many pressure faces.

Bt3 horizon:
Hue--10YR or 2.5Y moist.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--3 or 4.
Clay content--60 to 70 percent.
Structure--Angular blocky; some pedons have prismatic parting to angular blocky.
Consistence--Very hard or extremely hard dry.
Reaction--Slightly acid to slightly alkaline.
Other features--Common to many pressure faces.

2C horizons:
Hue--10YR or 2.5Y.
Texture--Loamy sand or loamy fine sand.
Clay content--0 to 10 percent.
Reaction--Mildly alkaline to strongly alkaline.
Other features--This layer when present is dominated by volcanic ash.

Madeline Series

The Madeline series consists of shallow, well drained soils that formed in residuum and colluvium from basalt, tuff and andesite. Madeline soils are on summits, crests, shoulders, and side slopes of plateaus, hills, and mountains. Slopes are 4 to 30 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Madeline very cobbly loam, in map unit 1375, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 20 percent cobbles and 30 percent pebbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) very cobbly loam, very dark brown (10YR 2/2) moist; moderate thin and medium platy structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine interstitial pores; 20 percent cobbles and 30 percent pebbles; neutral (pH 7.0); clear wavy boundary.

A2--2 to 6 inches; dark grayish brown (10YR 4/2) clay loam, very dark brown (10YR 2/2) moist; weak very fine and fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine tubular pores; 10 percent pebbles; neutral (pH 7.2); clear wavy boundary.

Bt1--6 to 14 inches; dark brown (10YR 4/3) gravelly clay, dark brown (10YR 3/3) moist; strong fine and medium subangular blocky structure; hard, very friable, sticky and very plastic; common very fine and few fine roots; many very fine tubular pores; many moderately thick clay films on faces of peds and in pores; 25 percent pebbles; neutral (pH 7.2); clear wavy boundary.

Bt2--14 to 19 inches; yellowish brown (10YR 5/4) gravelly clay, brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; hard, friable, very sticky and very plastic; common very fine and fine roots; many very fine tubular pores; 25 percent pebbles; many moderately thick clay films on faces of peds and in pores; neutral (pH 7.2); abrupt smooth boundary.

R--19 to 23 inches; hard basalt.

Type location: Washoe County, Nevada; about 400 feet east and 2,350 feet south of the northwest corner of section 18, T. 43 N., R. 19 E.; (41 degrees, 38 minutes, 56 seconds north latitude and 119 degrees, 54 minutes, 16 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 43 to 47 degrees F.
Mollic epipedon thickness: 7 to 15 inches and includes part or all of argillic horizon.
Depth to bedrock: 10 to 20 inches.
Other features: 4 to 8 inch thick BA horizon is present in some pedons.
Control section:
Clay content--35 to 60 percent.
Rock fragments--5 to 35 percent.

A horizons:
Hue--5YR through 10YR moist and dry.
Value--4 or 5 dry, 2 or 3 moist. A thin subhorizon may be 6 dry and 4 moist.
Chroma--1 through 3 dry and moist.
Reaction--Slightly acid to slightly alkaline.

Bt1 horizons:
Hue--5YR through 10YR moist and dry.
Value--3 through 5 dry.
Chroma--2 or 3 moist and dry.
Texture--Sandy clay loam, sandy clay or clay loam with 25 to 40 percent clay.
Structure--Weak to strong, prismatic, subangular or angular blocky.
Consistence--Slightly hard to hard dry.
Reaction--Slightly acid to slightly alkaline.

Bt2 horizons:
Hue--5YR through 10YR moist and dry.
Value--3 through 6 dry, 3 or 4 moist.
Chroma--2 through 4 dry and moist.
Texture--Clay, sandy clay or clay loam with 35 to 60 percent clay.
Rock fragments--5 to 35 percent, cobbles, stones and pebbles.
Structure--Weak to strong, prismatic, subangular or angular blocky.
Consistence--Hard to extremely hard dry, friable to very firm moist.
Reaction--Slightly acid to slightly alkaline.

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 side slopes of rock pediment remnants, plateau summits, hills and rock core areas of fan piedmont remnant side slopes. Slopes are 0 to 8 percent. The mean annual temperature is about 47 degrees F. and the mean annual precipitation is about 11 inches.

Taxonomic class: Fine, montmorillonitic, mesic Vertic Paleargids

Typical pedon: Mahala very cobbly silt loam, in map unit 1095, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 30 percent cobbles and 20 percent pebbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) very cobbly silt loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure; slightly hard, very friable, sticky and plastic; many very fine roots; many very fine vesicular pores; 30 percent cobbles and 20 percent pebbles; neutral (pH 7.3); clear wavy boundary.

A2--3 to 7 inches thick; brown (10YR 5/3) cobbly silt loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and common fine roots; many very fine tubular pores; 10 percent cobbles, 15 percent pebbles; neutral (pH 7.3); abrupt wavy boundary.

2Bt1--7 to 10 inches; brown (10YR 5/3) gravelly clay, dark brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; very hard, very friable, very sticky and very plastic; common very fine and fine and few medium roots; many very fine tubular pores; common thin and few moderately thick dark grayish brown (10YR 4/2) clay films, very dark brown (10YR 2/2) moist on faces of peds and in pores; 20 percent pebbles; many pressure faces; slightly alkaline (pH 7.6); abrupt wavy boundary.

2Bt2--10 to 19 inches; brown (10YR 5/3) clay, dark yellowish brown (10YR 4/4) moist; strong medium prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; common very fine and few fine roots; few very fine tubular pores; many thin and moderately thick clay films on faces of peds and in pores; many pressure faces; slightly alkaline (pH 7.6); clear wavy boundary.

2Btk--19 to 23 inches; light yellowish brown (10YR 6/4) gravelly clay, yellowish brown (10YR 5/4) moist; moderate fine and medium angular blocky structure; very hard, firm, very sticky and very plastic; common very fine roots; few very fine tubular pores; 15 percent pebbles; many moderately thick clay films coating sand grains and on faces of peds; lime is disseminated; slightly effervescent; slightly alkaline (pH 7.8); abrupt wavy boundary.

2Cr--23 to 27 inches; very pale brown (10YR 8/3) weathered tuff, light yellowish brown (10YR 6/4) moist; thick platy in upper 2 inches; strongly effervescent lime coats on some plates; many very fine roots in horizontal mat at upper boundary; common thin and moderately thick clay films on plates in upper 2 inches.

Type location: Washoe County, Nevada; about 700 feet south and 1,200 feet east of the northwest corner of section 35, T. 43 N., R. 18 E.; (41 degrees, 36 minutes, 36 seconds north latitude and 119 degrees, 56 minutes, 25 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
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.
Other features: Abrupt clay increase of 15 percent or more within a vertical distance of 1 inch or less between the A and Bt horizon. Linear extensibility is 6 centimeters or more.
Control section:
Clay content--40 to 60 percent average.
Rock fragments--0 to 20 percent mainly pebbles.
Reaction: Neutral through moderately alkaline, normally increasing with depth.

A horizons:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--1 through 3.
Other features--Some pedons have thin AB horizons.
Other features--Commonly has bleached sand grains and common fine distinct iron mottles.

Bt horizons:
Value--5 or 6 dry, 4 through 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. Stress surfaces are common to many in some part of most pedons.

Btk horizon:
Value--6 or 7 dry, 5 or 6 moist.

Chroma--2 through 4.
Texture--Clay or clay loam with gravelly clay loam, or silty clay loam common in some pedons.
Reaction--Slightly alkaline or moderately alkaline.
Secondary lime accumulation--Disseminated but may include filaments or threads in some pedons.

Cr horizon:
Other features--Few or common, fine or medium, lime coats or soft masses or threads on fracture planes.
Effervescence--Noneffervescent to slightly effervescent, may be strongly effervescent in areas of visible carbonate accumulation.

Mazuma Series

The Mazuma series consists of very deep, well drained soils that formed in alluvium and lacustrine materials from mixed rock sources. Mazuma soils are on lake plain terraces, lagoons, beach plains, alluvial flats, fan skirts, lagoons, and stream terraces. Slopes are 0 to 4 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Mazuma fine sandy loam, in map unit 1210, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; very pale brown (10YR 7/3) fine sandy loam, brown (10YR 4/3) moist; strong medium and thick platy structure; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; many very fine and fine vesicular pores; 10 percent 2 to 5 millimeter pebbles; slightly effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary.

A2--2 to 6 inches; light gray (2.5Y 7/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure; slightly hard, very friable, nonsticky and nonplastic; few fine roots; many very fine and common fine vesicular pores; slightly effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary.

Bk--6 to 15 inches; light gray (10YR 7/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak coarse subangular blocky structure; slightly hard, very friable; nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine tubular pores; strongly effervescent; few fine soft masses of lime; strongly alkaline (pH 9.0); clear smooth boundary.

C1--15 to 28 inches; light gray (2.5Y 7/2) fine sandy loam and sandy loam, olive brown (2.5Y 4/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; few fine roots; common very fine tubular pores; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

C2--28 to 36 inches; light gray (2.5Y 7/2) stratified fine sandy loam and sandy loam, olive brown (2.5Y 4/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; few fine roots; few very fine tubular pores; 10 percent 2 to 5 millimeter pebbles; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

C3--36 to 51 inches; light gray (2.5Y 7/2) stratified very fine sandy loam and sandy loam, olive brown (2.5Y 4/4) moist; massive ; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many fine and very fine interstitial pores; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

C4--51 to 62 inches; light gray (2.5Y 7/2) gravelly sandy loam, olive brown (2.5Y 4/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; few fine tubular pores; 15 percent 2 to 5 millimeter pebbles and 5 percent 5 millimeter to 1 centimeter pebbles; violently effervescent; very strongly alkaline (pH 9.6).

Type location: Washoe County, Nevada; about 0.7 miles east of the Nevada-California state line on the east side of Surprise Valley; about 75 feet east of main road on north side of trail; about 350 feet east and 650 feet north of the southwest corner of section 16, T. 41 N., R. 18 E.; (41 degrees, 28 minutes, 07 seconds north latitude and 119 degrees, 59 minutes, 04 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist for short periods in the winter and spring, dry from summer to mid fall.
Soil temperature: 53 to 57 degrees F.
Control section:
Clay content--5 to 15 percent.
Rock fragments--A few strata have up to 25 percent pebbles.

A horizons:
Hue--10YR or 2.5Y.
Value--5 through 7 dry; 4 through 6 moist.
Chroma--2 through 4.
Reaction--Moderately alkaline to very strongly alkaline.
Electrical conductivity--0 to 4 millimhos
SAR--1 to 5

Bk horizon:
Hue--10YR or 2.5Y.
Value--5 through 7 dry; 4 through 6 moist.
Chroma--2 through 4.
Structure--Subangular blocky or it is massive.
Electrical conductivity--4 to 16 millimhos
SAR--13 to 45
Other features--Less than 3 percent calcium carbonate equivalent.
Consistence--Slightly hard or hard, dry.

C horizons:
Hue--10YR or 2.5Y
Value--5 through 7 dry; 4 through 6 moist.
Chroma--2 through 4.
Texture--Stratified sandy loam, fine sandy loam, very fine sandy loam and silt loam with some pedons containing thin strata of clay loam and strata up to 12 inches thick of coarse sand, very coarse sand, fine sand or loamy sand.

Reaction--Moderately alkaline to very strongly alkaline.
Electrical conductivity--4 to 16 millimhos
SAR--13 to 45
Segregated lime--Few fine or medium calcium carbonate concretions may be in any horizon.
Unconformable material--Lacustrine silts and clays occur below 40 inches in some pedons.
Other features--Salt crystals and relict mottles are in some pedons in the lower C horizon.
Structure--Subangular blocky, platy or is single grain or massive.
Consistence--Soft or slightly hard, dry or is loose.

McConnel Series

The McConnel series consists of very deep, somewhat excessively drained soils that formed in alluvium from mixed rock sources with a component of loess and volcanic ash over lacustrine beach sediments or gravelly alluvium. McConnel soils are on inset fans, fan aprons, beach plains, beach terraces, fan skirts, drainage channel, barrier bars, and offshore bars. Slopes are 2 to 8 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Xeric Haplocambids

Typical pedon: McConnel gravelly fine sandy loam, in map unit 1121, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inch; light browninsh gray (2.5Y 6/2) gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak thick platy structure; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine and fine vesicular pores; 20 percent pebbles; neutral (pH 7.0); abrupt smooth boundary.

A2--2 to 5 inches; light brownish gray (10YR 6/2) gravelly fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine interstitial pores; 20 percent pebbles; neutral (pH 7.0); clear smooth boundary.

Bw--5 to 15 inches; light brownish gray (10YR 6/2) fine sandy loam, dark brown (10YR 4/3) moist; weak very fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine interstitial pores; 5 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.

2Bk1--15 to 20 inches; grayish brown (10YR 5/2) very gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; massive; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine interstitial pores; common very thin lime coatings on the underside of pebbles; slightly effervescent; 50 percent pebbles; moderately alkaline (pH 8.0); clear wavy boundary.

3Bk2--20 to 30 inches; grayish brown (10YR 5/2) extremely gravelly coarse sand, dark gray (10YR 4/1) moist; single grain; loose, nonsticky and nonplastic; few fine roots; many very fine and fine, and few medium interstitial pores; continuous lime coatings on the undersides, and some lime on the top and sides of pebbles; 75 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

4C--30 to 60 inches; grayish brown (10YR 5/2) coarsely stratified coarse sand and gravel, dark grayish brown (10YR 4/2) moist; many very dark gray (10YR 3/1), white (10YR 8/1) and brown (10YR 4/3) pebbles and sand grains; single grain; loose, nonsticky and nonplastic; few fine roots; many very fine and fine, and few medium interstitial pores; slightly effervescent; strongly alkaline (pH 9.0).

Type location: Washoe County, Nevada; about 0.25 miles east of the Nevada-California state line on the east side of Surprise Valley; about 1,400 feet east and 2,600 feet south of the northwest corner of section 17, T. 42 N., R. 18 E.; (41 degrees, 33 minutes, 38 seconds north latitude and 119 degrees, 59 minutes, 34 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 50 to 54 degrees F.
Depth to 2Bk1 horizon: 10 to 20 inches.
Control section:
Clay content--Averages up to 5 percent.
Rock fragments--Averages 50 to 80 percent, mainly pebbles.

A horizons:
Hue--10YR or 2.5Y.
Value--5 or 6 dry, 3 or 4 moist (5 dry and 3 moist only in the upper 3 inches).
Chroma--1 through 3.
Reaction--Neutral to moderately alkaline.

Bw horizon:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 3 through 5 moist.
Chroma--2 through 4 (1 if dark sand grains are present).
Texture--Loam, sandy loam, fine sandy loam.
Structure--Very fine to medium granular or subangular blocky or it is massive.
Reaction--Neutral to moderately alkaline.

Bk and C horizons:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 3 through 6 moist.
Chroma--2 through 4 (1 if dark sand grains are present).
Texture--Stratified very gravelly sandy loam to extremely gravelly coarse sand.
Structure--Single grain or massive, subangular or blocky in subhorizons of some pedons.
Consistence--Loose to slightly hard, dry, loose to friable moist.
Reaction--Slightly alkaline to very strongly alkaline.

Calcium carbonate equivalent--Less than 5 percent.

McWatt Series

The Mcwatt series consists of deep, somewhat excessively drained soils that formed in mixed alluvium. The Mcwatt soils are on beach terraces. Slopes are 8 to 30 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Xeric Haplocambids.

Typical pedon: Mcwatt extremely stony fine sandy loam, in map unit 1135, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; pale brown (10YR 6/3) extremely stony fine sandy loam, dark brown (10YR 3/3) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine vesicular pores; 15 percent stones, 20 percent cobbles and 30 percent pebbles; neutral (pH 6.8); clear wavy boundary.

A2--4 to 10 inches; light brownish gray (10YR 6/2) extremely cobbly fine sandy loam, dark brown (10YR 3/3) moist; strong medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine and common fine roots; many very fine tubular pores; 15 percent stones, 20 percent cobbles and 30 percent pebbles; neutral (pH 7.2); clear wavy boundary.

Bw--10 to 20 inches; pale brown (10YR 6/3) extremely gravelly fine sandy loam, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, common fine and medium roots; many very fine interstitial pores; 3 percent stones, 20 percent cobbles and 50 percent pebbles; neutral (pH 7.2); clear irregular boundary.

2Cqk1--20 to 25 inches; light yellowish brown (10YR 6/4) extremely cobbly loamy sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium and few coarse roots; many very fine interstitial pores; 10 percent stones, 35 percent cobbles and 40 percent pebbles, 30 percent of underside of rock fragments have less than 0.5 millimeter thick silica and lime coats; slightly alkaline (pH 7.6); clear irregular boundary.

2Cqk2--25 to 44 inches; light yellowish brown (10YR 6/4) extremely gravelly sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and fine, few medium and coarse roots; many very fine interstitial pores; 5 percent stones, 15 percent cobbles and 50 percent pebbles; 60 percent of underside of rock fragments have less than 0.5 millimeter thick lime and silica coats; slightly alkaline (pH 7.6); abrupt irregular boundary.

R--44 to 53 inches; Hard massive vesicular basalt with silica and lime coats in some fractures.

Type location: Washoe County, Nevada. About 3.5 miles south of Road 8A along power line in Long Valley in an unsectioned area, T. 42 N., R.20 E.; (41 degrees, 31 minutes, 59 seconds north latitude and 119 degrees, 44 minutes, 32 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from mid-June through October.
Soil temperature: 47 to 53 degrees F.
Depth to sandy-skeletal layer: 15 to 26 inches.
Depth to bedrock: 40 to 60 inches.
Control section--Clay content--2 to 8 percent.
Rock fragments--60 to 75 percent stones, cobbles and pebbles, when mixed.
Depth to secondary lime accumulation--17 to 29 inches. Lime accumulation occur as coatings on rock fragments.

A horizons:
Hue--10YR or 2.5Y
Reaction--Neutral or slightly alkaline.
Organic matter--1 to 2 percent.

Bw horizon:
Value--6 or 7 dry, 3 through 5 moist
Chroma--3 or 4
Clay content--8 to 15 percent
Texture--Extremely gravelly fine sandy loam or very gravelly sandy loam.
Reaction--Neutral or slightly alkaline.

2Cqk horizons:
Value--5 through 7 dry, 3 through 5 moist
Chroma--3 or 4
Clay content--0 to 2 percent
Texture--Extremely cobbly or extremely gravelly sand or loamy sand.
Rock fragments--60 to 80 percent stones, cobbles and pebbles.
Reaction--Slightly alkaline or moderately alkaline.
Effervescence--Noneffervescent matrrix. Few to many less than 0.5 millimeter thick lime and silica coats on underside of rock fragments.
Calcium carbonate equivalent--1 to 3 percent.

Menbo Series

The Menbo series consists of moderately deep well drained soils that formed in residuum and colluvium derived from volcanic rocks. The Menbo soils are on plateau shoulder slopes and side slopes. Slopes are 4 to 30 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 Pachic Argixerolls.

Typical pedon: Menbo very gravelly loam, in map unit 1256, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; brown (10YR 5/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine roots; many very fine tubular pores; 50 percent pebbles; slightly acid (pH 6.5); abrupt wavy boundary.

A2--2 to 7 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine and fine and common medium roots; many very fine tubular pores; 30 percent pebbles; neutral (pH 6.6); clear wavy boundary.

2Bt1--7 to 14 inches; dark grayish brown (10YR 4/2) very gravelly clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine and common fine tubular pores; 40 percent pebbles; few thin clay films on faces of peds and in pores; neutral (pH 6.6); clear wavy boundary.

2Bt2--14 to 21 inches; brown (7.5YR 5/3) very gravelly clay, dark brown (7.5YR 3/3) moist; moderate fine and medium prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; common very fine and fine and few medium and coarse roots; common very fine tubular pores; many thin and moderately thick dark brown (7.5YR 4/2) clay films, dark brown (7.5YR 3/2) moist on faces of peds and in pores; 15 percent cobbles, 30 percent pebbles; neutral (pH 7.0)--gradual smooth boundary.

2Bt3--21 to 34 inches; brown (7.5YR 5/4) very gravelly clay, dark brown (7.5YR 4/4) moist; weak fine and medium prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; few very fine and fine roots; few very fine tubular pores; many thin and moderately thick clay films on faces of peds and in pores; 15 percent cobbles, 30 percent pebbles; neutral (pH 7.0); clear wavy boundary.

Cr--34 to 36 inches; hard tuff.

Type location: Washoe County, Nevada; about 1,600 feet east and 1,800 feet south of the northwest corner of section 23, T. 46 N., R. 19 E.; (41 degrees, 53 minutes, 45 seconds north latitude and 119 degrees, 49 minutes, 21 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 44 to 47 degrees F.
Mollic epipedon thickness: 20 to 35 inches.
Depth to bedrock: 20 to 40 inches.
Control section:
Clay content--35 to 50 percent when mixed.
Rock fragments--35 to 50 percent pebbles and cobbles.

A horizons:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3 .
Reaction--Slightly acid or neutral

2Bt horizons:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 3 or 4 moist.
Chroma--2 through 4.
Texture--Clay loam or clay.
Clay content--35 to 50 percent
Rock fragments--15 to 30 percent cobbles and 20 to 40 percent pebbles.

Mesman Series

The Mesman series consist of very deep well drained soils that formed in mixed lacustrine sediments. The Mesman soils are on lake terraces. Slopes are 0 to 5 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 Xeric Natrargids

Typical pedon: Mesman fine sandy loam in map unit 1115, rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; light brownish gray (10YR 6/2) fine sandy loam, dark brown (10YR 4/3) moist; strong thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine and fine tubular and vesicular pores; slightly effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

Btn--4 to 9 inches; pale brown (10YR 6/3) sandy clay loam, dark brown (10YR 4/3) moist; weak fine prismatic structure parting to strong fine and medium subangular blocky; hard, friable, sticky and plastic; few very fine and fine roots; common very fine tubular pores; many thin clay films on faces of peds and in pores; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Btnk--9 to 13 inches; pale brown (10YR 6/3) clay loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; hard, friable, very sticky and very plastic; few fine and medium roots; common very fine tubular pores; many moderately thick clay films on faces of peds and in pores; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bkn1--13 to 22 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; hard, friable, sticky and plastic; common fine roots; common very fine tubular pores; few thin clay films in pores and bridges; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bkn2--22 to 29 inches; very pale brown (10YR 7/3) very fine sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few

very fine roots; common very fine tubular pores; common medium soft masses of lime; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary.
Bkn3--29 to 36 inches; very pale brown (10YR 7/3) silt loam, dark brown (10YR 4/3) moist; massive; slightly hard, very friable, sticky and plastic; few very fine roots; common very fine tubular pores; common medium soft masses of lime; slightly effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.
C--36 to 60 inches; pale brown (10YR 6/3) very fine sandy loam and loam, dark brown (10YR 4/3) moist; massive; hard, very friable, slightly sticky and slightly plastic; common very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.2).

Type location: Washoe County, Nevada; in Coleman Valley near the Nevada-Oregon state line; about 600 feet west and 100 feet south of the northeast corner of section 13, T. 47 N., R. 19 E.; (41 degrees, 59 minutes, 50 seconds north latitude and 119 degrees, 47 minutes, 31 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from mid-June through October.
Soil temperature: 47 to 50 degrees F.
Control section:
Clay content--18 to 35 percent
Sand content--25 to 50 percent, mainly very fine and fine sand
Effervescence: Slightly effervescent to violently effervescent.

A horizon:
Value--5 thru 7 dry, 3 or 4 moist

Btn and Btnk horizons:
Value--5 or 6 dry, 3 or 4 moist
Texture--Loam, sandy clay loam or clay loam
SAR--25 to 70

Bkn and C horizons:
Value--5 through 7 dry, 3 or 4 moist
Chroma--2 or 3
Texture--Very fine sandy loam, loam or silt loam
SAR--13 to 70

Millerlux Series

The Millerlux series consists of shallow, well drained soil that formed in residuum and colluvium from basalt and tuff with a minor component of loess. Millerlux soils are on the tops of basaltic plateaus. Slopes are 2 to 15 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid Lithic Xeric Haplargids

Typical pedon: Millerlux very cobbly loam, in map unit 1240, rangeland. (Colors are for dry soils unless otherwise noted). The soil surface is covered with 25 percent cobbles and 20 percent pebbles.
A--0 to 4 inches; light brownish gray (10YR 6/2) very cobbly loam, dark brown (10YR 3/3) moist; strong thin and medium platy structure; hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine vesicular pores; 25 percent cobbles and 20 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.
Bt1--4 to 8 inches; pale brown (10YR 6/3) clay, dark brown (10YR 3/3) moist; strong very fine and fine angular blocky structure; hard, very friable, very sticky and very plastic; many very fine roots; many very fine tubular pores; many moderately thick clay films on faces of peds and in pores; slightly alkaline (pH 7.6); abrupt wavy boundary.
Bt2--8 to 12 inches; light yellowish brown (10YR 6/4) clay, dark yellowish brown (10YR 4/4) moist; strong fine and medium angular blocky structure; hard, very friable, very sticky and very plastic; common very fine and few fine roots; few very fine tubular pores; many moderately thick brown (10YR 4/3)clay films, very dark grayish brown (10YR 3/2) moist on faces of peds and in pores; slightly alkaline (pH 7.6); clear wavy boundary.
Btk--12 to 15 inches; light yellowish brown (10YR 6/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; strong medium angular blocky structure; hard, very friable, very sticky and very plastic; few very fine roots; few very fine tubular pores; common thin and moderately thick clay films on faces of peds and in pores; 20 percent pebbles; lime is disseminated; slightly effervescent; moderately alkaline (pH 8.0); clear irregular boundary.
2R--15 to 19 inches; hard tuff with few thin white (10YR 8/1) lime coatings on its surface.

Type location: Washoe County Nevada; about 900 feet west and 1,700 feet south of the northeast corner of section 10, T. 43 N., R. 18 E.; (41 degrees, 39 minutes, 53 seconds north latitude and 119 degrees, 56 minutes, 52 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 43 to 47 degrees F.
Depth to bedrock: 12 to 20 inches.

A horizon:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Usually neutral or slightly alkaline, but is moderately alkaline in some pedons.

Bt horizons:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 through 5 moist.
Chroma--3 through 6, but may be 2 dry in upper part.
Clay content--40 to 60 percent.
Structure--Fine to coarse prismatic or angular blocky.

Consistence--Hard or extremely hard, dry; firm to extremely firm, moist; sticky or very sticky and plastic or very plastic, wet.
Rock fragments--0 to 15 percent, mainly pebbles.
Reaction--Neutral to moderately alkaline.

Btk horizon:
Hue--10YR Or 7.5YR.
Value--5 or 6 dry, 4 or 5 moist.
Chroma--3 or 4.
Texture--Clay or clay loam.
Clay content--35 to 50 percent.
Rock fragments--10 to 30 percent, mainly pebbles.
Structure--Prismatic or angular blocky.
Reaction--Moderately alkaline to strongly alkaline.

Nellspring Series

Nellspring series consists of moderately deep to duripan, well drained soils formed in alluvium from volcanic rocks. The Nellspring soils are fan piedmont remnant summits. Slopes are 2 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Vertic Argidurids.

Typical pedon: Nellspring very gravelly fine sandy loam, in map unit 1412, rangeland (Colors are for dry soil unless otherwise noted.) The soil surface is covered with about 5 percent cobbles and 45 percent pebbles.

A--0 to 3 inches; light brownish gray (10YR 6/2) very gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; strong thick platy structure; hard, friable, nonsticky and nonplastic; few very fine roots; many very fine and fine vesicular pores; 5 percent cobbles and 45 percent pebbles; neutral (pH 7.2); abrupt wavy boundary.

Btss1--3 to 12 inches; light brown (7.5YR 6/4) clay, dark reddish brown (5YR 3/4) moist; strong fine prismatic structure parting to strong fine angular blocky; very hard, friable, very sticky and very plastic; common very fine and few medium exped roots; common very fine tubular pores; many moderately thick clay films on faces of peds and lining pores; vertical cracks 8 millimeters to 1 centimeter wide and 3 to 4 inches apart extend from a depth of 3 to 12 inches; common slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; neutral (pH 7.3); clear wavy boundary.

Btss2--12 to 18 inches; reddish brown (5YR 5/4) clay, yellowish red (5YR 4/6) moist; strong fine prismatic structure parting to strong fine angular blocky; very hard, friable, very sticky and very plastic; few very fine roots; common very fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; vertical cracks 8 millimeters to 1 centimeter wide and 4 to 6 inches apart are present; few slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; slightly alkaline (pH 7.5); clear wavy boundary.

Btk--18 to 35 inches; light brown(7.5YR 6/4) clay loam, brown (7.5YR 4/4) moist; strong fine and medium angular blocky structure; very hard, friable, sticky and plastic; few very fine roots; common very fine tubular pores; many moderately thick and thick clay films on faces of ped and lining pores; common fine soft filaments of lime; moderately alkaline (pH 8.0); abrupt wavy boundary.

Bqkm1--35 to 41 inches; strongly silica/lime cemented duripan; strong thin and medium platy structure; extremely hard, extremely firm; alternate medium horizontal plates with discontinuous laminar cap; horizontal root mat at upper boundary with many very fine, fine and few medium roots; 5 percent cobbles, 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.3); gradual smooth boundary.

Bqkm2--41 to 60 inches; strongly silica and lime cemented duripan; alternating layers of strongly and weakly cemented material; extremely hard and hard, extremely firm and firm; 5 percent cobbles, 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.3).

Type location: Washoe County, Nevada. About 5 miles northeast of Nellie Spring Mountain and about 1 mile east of Grassy Camp; about 2,100 feet south and 1,300 feet west of the northeast corner of section 19, T. 41 N., R.22 E.; (41 degrees, 27 minutes, 05 seconds north latitude and 119 degrees 32 minutes, 28 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July through October.
Soil temperature: 47 to 51 degrees F.
Depth to duripan: 20 to 40 inches
Control section:
Clay content--40 to 60 percent
Rock fragments--0 to 15 percent.

A horizon:
Value--6 or 7 dry, 3 or 4 moist.
Chroma--2 or 3

Btss and Btk horizons:
Hue--10YR, 7.5YR or 5YR.
Value--4 through 6 dry, 3 or 4 moist
Chroma--4 through 6
Clay content--50 to 60 percent in the upper part; 35 to 50 percent in the lower part; when mixed, 40 to 60 percent.
Texture--Clay or clay loam
Rock fragments--0 to 15 percent.
Consistence--Hard through extremely hard dry, friable through very firm moist.
Reaction--Neutral or slightly acid in the upper part, slightly or moderately alkaline in the lower part.
Effervescence--Noneffervescent in Bt horizons; strongly or violently effervescent in the Btk horizon, with few or common fine or medium soft filaments or masses of lime in the lower part.
Other features: Vertical cracks 5 to 25 millimeters wide, few to common slickensides and wedge-shaped aggregates. A clay increase of 35 to 50 percent

occurs within a vertical distance of 1 inch between the A and Bt horizons.

Newlands Series

The Newlands series consists of deep, well drained soils that formed in residuum and local colluvium from basic rocks. Newlands soils are on mountain, plateau or foothill toe and side slopes. Slopes are 4 to 50 percent. The mean annual precipitation is about 14 inches and mean annual air temperature is about 44 degrees F.

Taxonomic class: Fine-loamy, mixed Argic Cryoborolls

Typical pedon: Newlands stony loam, in map unit 1257, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 1 percent stones, 5 percent cobbles, and 15 percent pebbles.

A1--0 to 2 inches; brown (10YR 5/3) stony loam, very dark brown (10YR 2/2) moist; moderate very fine and fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores; 1 percent stones, 5 percent cobbles and 15 percent pebbles; slightly acid (pH 6.2); clear wavy boundary.

A2--2 to 6 inches; grayish brown (10YR 5/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and and common fine roots; many very fine tubular pores; 5 percent cobbles and 15 percent pebbles; slightly acid (pH 6.4); clear smooth boundary.

Bt1--6 to 12 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine and common fine roots; many very fine tubular pores; few thin clay films on faces of peds and in pores; 10 percent pebbles; slightly acid (pH 6.4); clear wavy boundary.

Bt2--12 to 27 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark brown (10YR 3/3) moist; strong fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, common fine and few medium and coarse roots; many very fine tubular pores; many thin clay films on faces of peds and in pores; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.

Bt3--27 to 36 inches; light brown (7.5YR 6/4) gravelly clay loam, dark brown (7.5YR 4/4) moist; moderate coarse and medium subangular blocky structure; hard, very friable, sticky and plastic; common very fine and few fine roots; many very fine tubular pores; common moderately thick clay films on faces of peds and in pores; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.

BCt--36 to 41 inches; light brown (7.5YR 6/4) gravelly clay loam, dark brown (7.5YR 4/4) moist; moderate coarse subangular blocky structure; hard, very friable, sticky and plastic; few very fine and fine roots; many very fine tubular pores; common thin and moderately thick clay films on faces of peds and in pores; 20 percent pebbles and 5 percent cobbles; neutral (pH 7.0); abrupt irregular boundary.

R--41 to 45 inches; hard andesite with common moderately thick clay films in some fractures in upper 2 inches.

Type location: Washoe County, Nevada; about 200 feet west and 900 feet south of the northeast corner of section 17, T. 46 N., R.19 E.; (41 degrees, 54 minutes, 48 seconds north latitude and 119 degrees, 52 minutes, 04 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually moist, moist in winter and spring, dry in late summer and fall.
Soil temperature: MAST--41 to 45 degrees F.
Average summer soil temperature: 56 to 59 degrees F.
Thickness of mollic: 12 to 16 inches and includes part of the argillic
Depth to bedrock: 40 to 60 inches
Control section:
Clay content--27 to 35 percent
Reaction--Slightly acid or neutral

A horizons:
Hue--10YR or .5YR
Value--4 or 5 dry, 3 or 4 moist
Chroma--1 through 3, chroma of 1 occurs only in the A1 horizon

Bt horizons:
Hue--10YR, 7.5YR or 5YR
Value--5 or 6 dry, 3 through 5 moist
Chroma--3 or 4
Texture--Clay loam or sandy clay loam modified by 5 to 35 percent pebbles and a few cobbles
Structure--Moderate or strong, fine to coarse subangular blocky or angular blocky or weak or moderate fine or medium prismatic

Ninemile Series

The Ninemile series consists of shallow, well drained soils that formed in residuum and colluvium from andesite, rhyolite, basalt and welded tuffs with admixtures of volcanic ash. The Ninemile soils are on hill plateau and mountain side slopes, shoulders, and summits. Slopes are 2 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Ninemile very cobbly loam, in map unit 1180, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 20 percent cobbles and 30 percent pebbles.

A1--0 to 2 inches; dark brown (10YR 4/3) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate thin platy structure; slightly hard, friable,

slightly sticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores; 25 percent cobbles, 30 percent pebbles; slightly acid (pH 6.4); abrupt smooth boundary.
A2--2 to 7 inches; dark brown (10YR 4/3) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores; 35 percent pebbles and 20 percent cobbles; slightly acid (pH 6.4); abrupt smooth boundary.
Bt1--7 to 11 inches; brown (10YR 5/3) gravelly clay, dark brown (10YR 3/3) moist; moderate very fine subangular blocky structure; hard, friable, very sticky and very plastic; many very fine and fine, and few medium roots; many very fine interstitial pores; continuous thin clay films on faces of peds; 30 percent pebbles and 5 percent cobbles; neutral (pH 6.8); abrupt wavy boundary.
Bt2--11 to 19 inches; light yellowish brown (10YR 6/4) clay, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; extremely hard, extremely firm, very sticky and very plastic; few very fine and fine roots; very few tubular pores; many thick clay films on faces of peds and in pores; neutral (pH 6.6); abrupt irregular boundary.
R--19 to 23 inches; basalt.

Type location: Washoe County, Nevada; about 1,500 feet east and 1,000 feet south of the northwest corner of section 28, T. 46 N., R. 19 E.; (41 degrees, 53 minutes, 01 second north latitude and 119 degrees, 51 minutes, 42 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
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 to 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--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 to moderately alkaline.
Consistence--Hard to extremely hard dry.
Other features--Some pedons are slightly hard dry, friable to firm moist; sticky and plastic wet in the Bt1 horizon.

R horizon:
Other features--In some pedons, where bedrock is less than 15 inches deep, the upper 1 to 3 inches of bedrock is weathered.

Nitpac Series

Nitpac series consists of moderately deep to duripan well drained soils that formed in colluvium and alluvium from basalt and andesite. The Nitpac soils are on interplateau side slopes. Slopes are 2 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Vertic Durixerolls

Typical pedon: Nitpac very cobbly loam, in map unit 1173, rangeland. (Colors are for dry soil unless otherwise noted). The soil surface is partially covered with 1 percent stones, 15 percent cobbles, and 20 percent pebbles.
A1--0 to 3 inches; brown (10YR 5/3) very cobbly loam, very dark grayish brown (10YR 3/2) moist; strong thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; 1 percent stones, 15 percent cobbles and 20 percent pebbles; neutral (pH 6.8); abrupt wavy boundary.
A2--3 to 8 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium and thick platy structure; slightly hard, very friable, sticky and plastic; common very fine and few fine roots; many very fine vesicular and interstitial pores; 10 percent cobbles, 30 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.
Bt1--8 to 14 inches; brown (7.5YR 5/3) clay, dark brown (7.5YR 3/3) moist; moderate medium prismatic structure parting to strong medium angular blocky; very hard, friable, very sticky and very plastic; common very fine and few fine, medium and coarse roots; common very fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; vertical cracks 5 millimeters to 1 centimeter wide and 1 to 2 inches apart extend from a depth of 8 to 14 inches; few slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; 1 percent cobbles and 10 percent pebbles; neutral (pH 7.2); abrupt wavy boundary.
Bt2--14 to 21 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; strong fine and medium prismatic structure parting to strong medium and coarse angular

blocky; very hard, firm, very sticky and very plastic; common very fine and few fine roots; common very fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; vertical cracks 5 millimeters to 15 millimeters wide and 2 to 3 inches apart extend from a depth of 14 to 21 inches; few slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; 10 percent pebbles; neutral (pH 7.2); clear wavy boundary.

Bt3--21 to 26 inches; light yellowish brown (10YR 6/4) gravelly clay loam, brown (7.5YR 5/4) moist; strong fine and medium angular blocky structure; very hard, friable, very sticky and very plastic; few very fine roots; common very fine and few fine tubular pores; many thin and moderately thick clay films on faces of ped and lining pores; 20 percent pebbles; slightly alkaline (pH 7.6); abrupt wavy boundary.

Bqm--26 to 34 inches; reddish yellow (7.5YR 7/6) strongly silica cemented duripan reddish yellow (7.5YR 6/8) moist; strong medium and thick platy structure; extremely hard, extremely firm; horizontal root mat at upper boundary with many very fine, fine and few medium roots; common very pale brown (10YR 7/4) silica laminae on tops of plates, yellowish brown (10YR 5/4) moist; clear smooth boundary.

Cr--34 to 40 inches; fractured basalt with silica in some fractures

Type location: Washoe County, Nevada. About 2 miles west of Long Valley and 1.5 miles northwest of Button Brush Flat in an unsectioned area, T. 41 N., R. 19 E.; (41 degrees, 28 minutes, 58 seconds north latitude and 119 degrees 51 minutes, 23 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from mid-June through October.
Soil temperature: 47 to 51 degrees F.
Thickness of mollic: 10 to 20 inches and includes the upper part of the argillic.
Depth to duripan: 20 to 40 inches
Depth to bedrock: 24 to 40 inches
Control section:
Clay content--40 to 60 percent
Rock fragments--10 to 15 percent, mainly pebbles when mixed.

A horizons:
Value--5 or 6 dry, 2 or 3 moist. Value of 6 only in upper 2 inches.
Chroma--2 or 3.
Reaction--Neutral or slightly alkaline.

Bt horizons:
Hue--10YR or 7.5YR
Value--4 through 6 dry, 3 through 5 moist.
Chroma--2 through 6
Clay content--40 to 60 percent when mixed. 45 to 60 percent in the upper part, 35 to 45 percent in the Bt3 when present.
Consistence--Hard to extremely hard dry, very friable to very firm moist.
Reaction--Neutral or slightly alkaline.
Other features--Vertical cracks 5 to 30 millimeters wide, few to common slickensides and wedge-shaped aggregates. A clay increase of 25 to 35 percent occurs within a vertical distance of 1 inch between the A and Bt horizons.

Nutzan Series

The Nutzan series consists of moderately deep, well drained soils formed in residuum and colluvium from rhyolitic tuff and pyroclastic rocks. The Nutzan soils are on plateau shoulder and side slopes. Slopes are 4 to 30 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Ashy-skeletal, frigid Vitritorrandic Haploxerolls.

Typical pedon: Nutzan gravelly sandy loam, in map unit 1279, rangeland (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 10 percent pyroclastic, 10 percent obsidian, and 10 percent rhyolitic and tuff pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) gravelly sandy loam, dark brown (10YR 3/3) moist; weak very thin and thin platy structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial pores; 10 percent obsidian and 20 percent hard pyroclastic, tuff and rhyolitic pebbles; neutral (pH 6.6); clear wavy boundary.

A2--2 to 10 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, very friable, nonsticky and nonplastic; many very fine, common fine and few medium roots; many very fine tubular pores; 10 percent obsidian and 15 percent hard pyroclastic, tuff and rhyolitic pebbles; neutral (pH 6.8); clear wavy boundary.

Bw--10 to 17 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; many very fine tubular pores; 20 percent hard glassy vitric pyroclastic pebbles; 5 percent rhyolitic and tuff pebbles; few thin glass coats bridging mineral grains; neutral (pH 7.0); clear wavy boundary.

BC--17 to 28 inches; very pale brown (10YR 7/3) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine tubular pores; 40 percent hard glassy vitric pyroclastic pebbles; 5 percent rhyolitic and tuff pebbles; few thin glass coats bridging mineral grains; neutral (pH 7.0); clear wavy boundary.

C--28 to 36 inches; very pale brown (10YR 7/3) extremely gravelly coarse sandy loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and few fine roots; many very fine interstitial pores; 50 percent hard glassy vitric pyroclastic pebbles; 15 percent rhyolitic and tuff

pebbles; 10 percent cobbles; neutral (pH 7.0); clear irregular boundary.
Cr--36 to 46 inches; highly fractured weathered glassy vitric pyroclastic rock with admixtures of rhyolitic and tuff rocks; many moderately thick glass coats; few very fine roots in some fractures.

Type location: Washoe County, Nevada. On the south flank of Nut Mountain in an unsectioned area. T. 42 N., R. 22 E.; (41 degrees, 34 minutes, 05 seconds north latitude and 119 degrees, 27 minutes, 05 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from July through October.
Soil temperature: 44 to 47 degrees F.
Depth to weathered bedrock: 20 to 40 inches.
Mollic epipedon: 10 to 20 inches.
Mineralogy: 60 to 80 percent glass in the very fine and fine sand size throughout.
Reaction: Slightly acid or neutral.
Control section:
Clay content--10 to 18 percent.
Rock fragments--40 to 60 percent pebbles that are dominantly hard vitric pyroclastic rocks when mixed.

A horizons:
Value--5 or 6 dry, 2 or 3 moist. Dry value of 6 is only in the surface 2 inches.
Chroma--2 or 3.

Bw horizon:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 3 or 4 moist.
Chroma--3 or 4.

BC horizon:
Value--6 or 7 dry, 3 or 4 moist.
Chroma--3 or 4.

C horizon:
Value--6 or 7 dry, 4 or 5 moist.
Chroma--3 or 4.
Texture--Extremely gravelly or very gravelly sandy loam or coarse sandy loam.

Old Camp Series

The Old Camp series consists of shallow, well drained soils that formed in residuum and colluvium weathered from tuffs, basalt, rhyolite and andesite with a minor component of volcanic ash. Old Camp soils are on hills, mountains, and plateaus. Slopes are 4 to 30 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 Xeric Haplargids

Typical pedon: Old Camp very stony loam, in map unit 1063. Rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent stones, 10 percent cobbles, and 20 percent pebbles.
A--0 to 2 inches; light brownish gray (10YR 6/2) very stony loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine vesicular pores; 5 percent stones, 10 percent cobbles and 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bt1--2 to 7 inches; pale brown (10YR 6/3) very cobbly clay loam, dark brown (10YR 3/3) moist; moderate very fine and fine subangular blocky structure; soft, very friable; sticky and plastic; many very fine and fine, and few medium roots; many very fine interstitial pores; common thin and moderately thick clay films on faces of peds and in pores; 30 percent pebbles and 20 percent cobbles; neutral (pH 6.8); abrupt wavy boundary.
Bt2--7 to 15 inches; brown (10YR 5/3) very cobbly clay loam, dark brown (10YR 3/3 moist; moderate medium and fine subangular blocky structure; hard, friable, sticky and plastic; many very fine and fine roots; many very fine interstitial pores; common thin and moderately thick clay films on faces of peds and in pores; 3 percent stones, 30 percent cobbles and 20 percent pebbles; slightly alkaline (pH 7.6); abrupt irregular boundary.
R--15 to 19 inches; inches; dark gray (10YR 4/1) basalt with few thin lime coats on rock surface.

Type location: Washoe County, Nevada; about 2.5 miles south of Road 8A and 3 miles southwest of Painted Point in an unsectioned area. (41 degrees, 32 minutes, 48 seconds north latitude and 119 degrees, 43 minutes, 11 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
*Soil temperature:*47 to 52 degrees F.
Depth to bedrock: 10 to 20 inches.
Control section:
Clay content--27 to 35 percent.
Rock fragments--50 to 75 percent, dominantly cobbles and stones. The upper part has 35 to 50 percent rock fragments in some pedons.

A horizon:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--2 or 3.
Reaction--Neutral or slightly alkaline.

Bt horizons:
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.
Consistence--Soft to hard dry, very friable to friable, slightly sticky to sticky and slightly plastic to plastic.
Structure--Weak to strong, coarse to fine angular or subangular blocky or massive.
Reaction--Neutral or slightly alkaline in the upper part, neutral to strongly alkaline in the lower part.
Effervescence--Slightly effervescent to strongly effervescent.
Other features--Few to continuous lime coats on rock fragment or bedrock.

Oreneva Series

The Oreneva series consists of moderately deep, well drained soils that formed in residuum and colluvium from basalt. Oreneva soils are on plateaus. Slopes are 2 to 15 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Xeric Haplocambids.

Typical pedon: Oreneva very gravelly loam, 2 to 15 percent slopes, in map unit 1070, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 40 percent pebbles.

A--0 to 2 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate thick platy structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine interstitial pores; 40 percent pebbles; neutral (pH 6.8); clear smooth boundary.

Bw1--2 to 10 inches; pale brown (10YR 6/3) loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; common fine and very fine roots; common very fine interstitial pores; 10 percent pebbles; neutral (pH 7.2); clear smooth boundary.

Bw2--10 to 30 inches; light yellowish brown (10YR 6/4) very gravelly loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine interstitial pores; 40 percent pebbles, 5 percent cobbles; slightly alkaline (pH 7.4); abrupt wavy boundary.

2R--30 to 34 inches; basalt.

Type location: Washoe County, Nevada; near the Nevada-Oregon state line, about 600 feet east and 200 feet south of the northwest corner of section 16, T. 47 N., R.21 E.; (41 degrees, 59 minutes, 44 seconds north latitude and 119 degrees, 37 minutes, 59 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring; dry from late June through October.
Soil temperature: 44 to 47 degrees F.
Average summer soil temperature: 59 to 61 degrees F.
Depth to bedrock: 20 to 40 inches, but typically is 20 to 30 inches.
Control section:
Clay content--18 to 27 percent when mixed.
Rock fragments--35 to 50 percent, dominantly pebbles.

A horizon:
Value--5 or 6 dry, 3 or 4 moist.
Chroma--2 or 3 dry.
Reaction--Neutral or slightly alkaline.

Bw1 horizon:
Value 5 or 6 dry, 3 or 4 moist.
Texture--Loam or clay loam.
Clay content--18 to 30 percent.
Rock fragments--0 to 15 percent pebbles, 0 to 5 percent cobbles.
Reaction--Neutral or slightly alkaline.

Bw2 horizon:
Value--5 through 7 dry, 3 through 5 moist.
Chroma--3 or 4 moist
Texture--Loam or clay loam.
Clay content--18 to 30 percent.
Rock fragments--35 to 50 percent pebbles, 0 to 15 percent cobbles.
Reaction--Slightly alkaline or moderately alkaline.
Other--Some pedons have a C horizon which is similar to the Bw2 horizon, but is massive.

Orr Series

The Orr series consists of very deep, well drained soils that formed in mixed alluvium. These soils are on alluvial fans terraces, fan piedmont remnants, terraces, inset fans and hill slopes. Slopes are 2 to 8 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Aridic Argixerolls

Typical pedon: Orr sandy loam, in map unit 1395, pasture. (Colors are for dry soil unless otherwise noted).

A1--0 to 3 inches; grayish brown (10YR 5/2) sandy loam, very dark brown (10YR 2/2) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine roots; 10 percent pebbles; slightly acid (pH 6.5); clear wavy boundary.

A2--3 to 9 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, friable,

slightly sticky and slightly plastic; many very fine and fine roots; common very fine tubular pores; 5 percent pebbles; slightly acid (pH 6.5); clear wavy boundary.
Bt1--9 to 14 inches; brown (10YR 4/3) gravelly sandy clay loam, vey dark grayish brown (10YR 3/2) moist; strong fine and medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; many very fine tubular pores; common thin and few moderately thick clay films on faces of peds and in pores; 20 percent pebbles; neutral (pH 7.0); gradual wavy boundary.
Bt2--14 to 27 inches; brown (10YR 5/3) gravelly sandy clay loam, dark brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; very hard, firm, sticky and plastic; few fine and medium roots; many very fine tubular pores; common thin and few moderately thick clay films on faces of peds and in pores; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.
Bt3--27 to 44 inches; light yellowish brown (10YR 6/4) gravelly sandy clay loam, dark brown (10YR 4/3) moist; weak medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few fine and medium roots; common very fine tubular pores; common thin clay films on faces of peds and in pores; 20 percent pebbles; neutral (pH 7.2); clear boundary.
C--44 to 60 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few fine and medium roots; many very fine interstitial pores; 20 percent pebbles; neutral (pH 7.2).

Type location: Washoe County, Nevada; about 1,600 feet east and 800 feet north of the southwest corner of section 20, T. 44 N., R. 19 E.; (41 degrees, 42 seconds, 53 minutes north latitude and 119 degrees, 52 minutes, 50 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in the late winter and spring, dry summer and fall.
Soil temperature: 49 to 53 degrees F.
Mollic epipedon: 10 to 20 inches thick and may include the upper part of the Bt horizon.
Thickness of argillic horizon: 35 to 45 inches.
Control section:
Clay content- 18 to 25 percent.
Rock fragments--Less than 35 percent.

A horizons:
Hue of 10YR or 7.5YR.
Value--4 or 5 dry.
Chroma--2 or 3.

Bt horizons:
Hue--10YR or 7.5YR
Value--5 or 6 dry.
Chroma--3 or 4.
Texture--Sandy loam, sandy clay loam or loam
Structure--Angular blocky, subangular blocky or prismatic, or it is massive.
Rock fragment--0 to 35 percent in any one horizon, averages 10 to 25 percent.

C horizon:
Hue--10YR or 7.5YR
Value--6 or 7 dry, 4 through 6 moist
Chroma--3 or 4.
Texture--Sand, loamy fine sand, sandy loam, fine sandy loam, sandy clay loam, clay loam and is gravelly or very gravelly in some pedons.
Rock fragments--Cobbles range from 0 to 5 percent, pebbles range from 10 to 25 percent.
Durinodes--Are in some pedons but average less than 20 percent.

Paypoint Series

The Paypoint series consists of very deep, well drained soils that formed in alluvium from mixed rock sources and influenced by volcanic ash. The Paypoint soils are on lagoons. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Ashy over sandy or sandy-skeletal, mixed, mesic Durinodic Xeric Haplargids

Typical pedon: Paypoint gravelly fine sandy loam, in map unit 1045, rangeland. (Colors are for dry soil unless otherwise noted.)
A1--0 to 2 inches; pale brown (10YR 6/3) gravelly fine sandy loam, dark brown (10YR 3/3) moist; thick and very thick platy structure; hard, very friable, nonsticky and nonplastic; few very fine roots; many very fine and fine vesicular pores; 15 percent pebbles; slightly alkaline (pH 7.6); abrupt smooth boundary.
A2--2 to 5 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 3/3) moist; strong very thick platy structure; hard, very friable, nonsticky and nonplastic; few very fine roots; many very fine and fine vesicular pores; 15 percent pebbles; slightly alkaline (pH 7.6); abrupt smooth boundary.
Bt--5 to 11 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, very friable, sticky and plastic; common very fine, few fine roots; common very fine tubular pores; common thin clay films on peds and lining pores; 5 percent pebbles; slightly alkaline (pH 7.8); clear wavy boundary.
Bqk--11 to 17 inches; very pale brown (10YR 7/4) loam, dark yellowish brown (10YR 4/4) moist; moderate medium platy structure; hard, friable and firm, slightly sticky and slightly plastic; few very fine and fine roots; many very fine interstitial and few very fine tubular pores; 80 percent weak discontinuous silica and lime cementation; common moderately thick silica coats bridging mineral grains; common fine horizontal soft masses of lime; violently effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary.
2Ckq1--17 to 25 inches; light yellowish brown (2.5Y 6/4) very gravelly loamy sand, olive brown (2.5Y 4/4) moist; massive; loose, nonsticky, nonplastic; few very fine

roots; many very fine interstitial pores; 40 percent pebbles; 20 percent of underside of rock fragments have less than 1 milimeter thick silica-lime coats; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

3Ckq2--25 to 36 inches; light yellowish brown (2.5Y 6/4) very gravelly sand, olive brown (2.5Y 4/4) moist; massive; loose, nonsticky, nonplastic; few very fine roots; very fine interstitial pores; common thin and moderately thick silica coats bridging mineral grains; 50 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

4C--36 to 60 inches; pale brown (10YR 6/3) gravelly fine sand, dark brown (10YR 4/3) moist; massive; loose, nonsticky, nonplastic; few very fine roots; very fine interstitial pores; 30 percent pebbles; violently effervescent; moderately alkaline (pH 8.4)

Type location: Washoe County, Nevada. About 5 miles east of Vya, Nevada on Road 8A; about 2 miles southwest of Painted Point; 150 feet south of Road 8A at trail to Lone Spring; (41 degrees, 34 minutes, 53 seconds north latitude and 119 degrees, 44 minutes, 01 second west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from mid-June through October.
Soil temperature: 47 to 51 degrees F.
Depth to carbonates: 11 to 24 inches.
Depth to contrasting layers: 16 to 30 inches.
Other features: 35 to 55 percent glass in the very fine and fine sand size in the A, Bt, and Bqk horizons. 5 to 20 percent glass in the C horizons.
Control section:
Clay content--18 to 25 percent
Sand content--35 to 50 percent.

A horizons:
Value--5 or 6 dry, 4 or 5 moist
Chroma--2 or 3
Reaction--Slightly alkaline or moderately alkaline.

Bt horizon:
Value--5 or 6 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Loam or sandy clay loam.
Clay content--18 to 25 percent.
Rock fragments--0 to 10 percent, mainly pebbles.
Reaction--Slightly alkaline or moderately alkaline.

2Ckq1 and 3Ckq2 horizons:
Hue--10YR or 2.5Y.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--3 or 4.
Structure--thin through thick platy.
Clay content--0 to 2 percent.
Rock fragments--35 to 50 percent pebbles.
Reaction--Moderately alkaline or strongly alkaline.
Effervescence--Slightly effervescent to violently effervescent; few to many 0.5 millimeter to 1.0 millimeter lime coats on under side of rock fragments.

4C horizon:
Hue--10 YR or 2.5Y.
Value--6 or 7 dry.
Chroma--3 or 4.
Texture--Sand, fine sand or loamy sand in the fine earth fraction.
Clay content--0 to 2 percent.
Rock fragments--30 to 50 percent pebbles.
Reaction--Moderately alkaline or strongly alkaline.

Powlow Series

The Powlow series consists of shallow to duripan, well drained soils that formed in alluvium derived from volcanic rocks. The Powlow soils are on fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic, shallow Argidic Durixerolls.

Typical pedon: Powlow very gravelly loam, in map unit 1431, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 2 percent cobbles, 40 percent pebbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine and fine vesicular pores; 2 percent cobbles, 40 percent pebbles; neutral (pH 6.8); abrupt wavy boundary.

A2--2 to 6 inches; grayish brown (10YR 5/2) gravelly loam, dark brown (10YR 3/3) moist; strong very thin and thin platy structure; slightly hard, friable, sticky and plastic; many very fine and common fine roots; many very fine vesicular pores; 30 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

Bt1--6 to 10 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.

Bt2--10 to 15 inches; strong brown (7.5YR 5/6) gravelly clay, strong brown (7.5YR 4/6) moist; moderate fine prismatic structure parting to strong fine and medium subangular blocky; very hard, very friable, very sticky and very plastic; common very fine and few fine roots; common fine tubular pores; many thin and moderately thick clay films on faces of peds and lining pores; 20 percent pebbles; slightly alkaline (pH 7.4); abrupt wavy boundary.

Bqm--15 to 25 inches; pink (7.5YR 7/4) strongly silica cemented duripan, yellowish brown (10YR 5/6) moist;

strong thick platy structure; extremely hard, extremely firm; common very fine roots matted on plate surfaces; alternate horizontal light brown (7.5YR 6/4) 1 to 2 millimeter thick silica laminae on tops of plates, dark brown (7.5YR 4/4) moist; slightly alkaline (pH 7.8); clear smooth boundary.

Bqkm1--25 to 36 inches; reddish yellow (7.5YR 7/6) continuous strongly silica and lime cemented duripan, strong brown (7.5YR 5/6) moist; massive; extremely hard, extremely firm; common medium and large horizontal masses of lime; many less than 0.5 millimeter lime and silica coats on underside of pebbles; violently effervescent; moderately alkaline (pH 8.0); clear wavy boundary.

Bqkm2--36 to 60 inches; pink (7.5YR 8/4) strongly and weakly silica and lime cemented duripan, strong brown (7.5YR 5/6) moist; massive; very hard, extremely firm and very firm; common alternate horizontal discontinuous 0.5 to 2 millimeter silica laminae; few fine and medium horizontal lime masses; strongly effervescent; moderately alkaline (pH 8.0).

Type location: Washoe County, Nevada; near the Sheldon Antelope Refuge in an unsectioned area, T. 43 N., R. 22 E.; (41 degrees, 37 minutes, 59 seconds north latitude and 119 degrees, 28 minutes, 45 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring, dry mid-June through October.
Soil temperature: 47 to 51 degrees F.
Depth to duripan: 14 to 20 inches.
Control section:
Clay content--35 to 50 percent.
Thickness of mollic: 9 to 15 inches and includes the upper part of the Bt horizon.
Reaction: Neutral to moderately alkaline.

A horizons:
Value--2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Hue--7.5YR or 10YR.
Value--4 through 6 dry, 3 or 4 moist.
Chroma--3 through 6.
Texture--Clay, gravelly clay, clay loam or gravelly clay loam.
Rock fragments--10 to 25 percent, dominantly pebble-sized.
Structure--Subangular blocky, angular blocky or prismatic parting to subangular or angular blocky.

Bqkm horizons:
Hue--7.5YR or 10YR.
Value--6 to 8 dry, 4 or 5 moist.
Chroma--4 through 6.

Raglan Series

The Raglan series consists of very deep, well drained soils that formed in loamy mixed alluvium and lacustrine materials derived from mixed rock sources with a component of loess and volcanic ash. The Raglan soils are on fan skirts, alluvial flat remnants, basin floor remnants and lake plain terraces. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Durinodic Haplocambids

Typical pedon: Raglan very fine sandy loam, in map unit 1230, rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 3 inches; pale brown (10YR 6/3) very fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; few very fine and fine roots; many very fine vesicular pores; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

Bw--3 to 14 inches; pale brown (10YR 6/3) silt loam, dark grayish brown (10YR 4/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine tubular pores; many very fine and fine and few medium roots; strongly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Bqk--14 to 26 inches; very pale brown (10YR 7/3) silt loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, sticky and plastic; common very fine, and few fine roots; few very fine tubular pores; 40 percent hard 5 to 15 millimeter durinodes; violently effervescence; strongly alkaline (pH 9.0); clear smooth boundary.

2C1--26 to 33 inches; pale brown (10YR 6/3) sandy loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, sticky and plastic; many very fine and fine roots; common very fine tubular pores; strongly effervescent; strongly alkaline (pH 8.8).

3C2--33 to 41 inches; light gray (2.5Y 7/2) silty clay loam, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, sticky and plastic; common very fine and fine roots; many very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary.

4C3--41 to 61 inches; light gray (2.5Y 7/2) very fine sandy loam, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.6).

Type location: Washoe County, Nevada; about 2,100 feet west and 1,100 feet south of the northeast corner of section 8 T. 41 N., R. 18 E.; (41 degrees, 29 minutes,

34 seconds north latitude and 119 degrees, 59 minutes, 36 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist for short periods in the winter and spring, dry from summer to mid fall.
Soil temperature: 47 to 52 degrees F.
Depth to Bqk horizon: 10 to 20 inches.
Reaction: Mildly alkaline to very strongly alkaline, usually increasing with depth.
Salt and sodium: The soils are normally non-saline to slightly saline-sodic affected to a depth of 10 to 20 inches and slight to strongly affected below. Moderate or strongly saline-sodic affected phases are recognized.
Textures: Stratified, including loam, silt loam, very fine sandy loam, clay loam and silty clay loam; averages silt loam with more than 15 percent sand coarser than very fine sand.
Other features: Mineralogy is mixed, but has a strong influence from volcanic ash.
Control section:
Clay content--18 to 25 percent.
Profile color:Hue--10YR or 2.5Y.
Value--6 or 7 dry, 4 or 5 moist.
Chroma--2 through 4.

A horizon:
Effervescence--Noneffervescent to strongly effervescent.

Bw horizon:
Structure--Fine to thick platy, prismatic or subangular blocky or is massive.
Effervescence--Noneffervescent to strongly effervescent.
SAR--13 to 30.

Bqk horizon:
Durinodes--20 to 80 percent, up to 40 percent discontinuous weak silica cementation is common in any subhorizon where durinodes are present. Durinodes are hard or very hard dry, firm or very firm, moist and are brittle.
Consistence--Matrix is soft to hard, dry, and very friable or friable moist.
SAR--13 to 45.

2C and 3C horizons:
Hue--2.5Y or 5Y.
Structure--Platy or horizon is massive.
Effervescence--Slightly effervescent to violently effervescent.
Other features--Lacustrine material with hue of 2.5Y or 5Y and relict mottles with reddish-hue (7.5YR or 5YR) and high chroma (4 through 6) iron stains commonly occur below depths of 24 inches. Gypsum segregations and shells from various aquatic animals are in the lacustrine material in most pedons.
SAR--13 to 45.

Reywat Series

The Reywat series consists of shallow, well or somewhat excessively drained soils that formed in material weathered from basalt or similar rocks. Reywat soils are on uplands and mountains and have slopes of 4 to 75 percent. The mean annual precipitation is about 12 inches and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Argixerolls

Typical pedon: Reywat very stony loam, in map unit 1326, rangeland. (Colors are for dry soil unless otherwise noted). The soil surface is partially covered with 10 percent stones, 10 percent cobbles, and 20 percent pebbles.
A1--0 to 2 inches; light brownish gray (10YR 6/2) very stony loam, very dark grayish brown (10YR 3/2) moist; moderate very thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 10 percent stones, 10 percent cobbles, 20 percent pebbles; neutral (pH 6.6); abrupt wavy boundary.
A2--2 to 6 inches; brown (10YR 5/3) very stony loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine tubular pores; 30 percent pebbles, 10 percent cobbles and 15 percent stones; neutral (pH 6.6); clear wavy boundary.
Bt1--6 to 11 inches; brown (10YR 5/3) very gravelly loam dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine roots; common very fine tubular pores; common thin clay films on faces of peds and in pores; 50 percent pebbles and 5 percent cobbles; neutral (pH 6.6); clear wavy boundary.
Bt2--11 to 18 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; common very fine roots; common very fine tubular pores; common thin and moderately thick clay films on faces of peds and in pores; 40 percent pebbles and 10 percent cobbles; neutral (pH 6.6); abrupt irregular boundary.
R--18 to 22 inches; basalt. Slightly decomposed. Slightly effervescent at upper surface and in some cracks.

Type location: Washoe County, Nevada; about 100 feet east and 200 feet north of the southwest corner of section 29, T. 47 N. R. 19 E.; (41 degrees, 57 minutes, 35 seconds north latitude and 119 degrees, 53 minutes, 08 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 54 degrees F.
Average summer soil temperature: 65 to 71 degrees F.
Depth to bedrock: 10 to 20 inches.

Base saturation: Greater than 75 percent throughout the entire pedon.

A horizons:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 2 or 3 moist
Chroma--2 or 3 dry and moist
Reaction--Slightly acid to moderately alkaline

Bt horizons:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 2 through 4 moist
Chroma--2 or 3 dry and moist
Textures--Very gravelly or very cobbly clay loam, sandy clay loam or loam
Percent clay--24 to 35 percent
Rock fragments--35 to 70 percent
Reaction--Neutral to moderately alkaline
Effervescence--Slightly effervescent or strongly effervescent just above bedrock or in cracks in the bedrock

Saraph Series

The Saraph series consists of shallow, well drained soils that formed in residuum from soft tuffs with a minor admixture of basalt, loess and colluvium from basalt. The Saraph soils are on pediments and plateaus. Slopes are 4 to 30 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Ashy, mesic, shallow Vitrixerandic Haplargids

Typical pedon: Saraph very gravelly sandy loam, in map unit 1245, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 50 percent pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly sandy loam, dark brown (10YR 3/3) moist; weak thin platy structure; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine and fine vesicular pores; 50 percent pebbles; neutral (pH 7.0); abrupt smooth boundary.

A2--2 to 4 inches; light brownish gray (10YR 6/2) gravelly sandy loam, dark grayish brown (10YR 4/2) moist; moderate very thin and thin platy structure; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine tubular pores; 30 percent pebbles; neutral (pH 7.0); abrupt smooth boundary.

Bt1--4 to 9 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine tubular pores; few thin clay films on faces of peds and in pores; 10 percent pebbles; neutral (pH 7.0); clear wavy boundary.

Bt2--9 to 16 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; many very fine tubular pores; many thin clay films on faces of peds and in pores; 10 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

Cr--16 to 30 inches; soft weathered pyroclastic tuff; few thin lime coats on some fractures.

Type location: Washoe County, Nevada; about 1.4 miles southwest of Coyote Camp; about 0.2 miles south of Road 8A in an unsectioned area. (41 degrees, 35 minutes, 48 seconds north latitude and 119 degrees, 32 minutes, 18 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.
Reaction: Neutral or slightly alkaline.
Depth to paralithic contact: 14 to 20 inches.
Mineralogy: 50 to 70 percent glass in the very fine and fine sand size throughout.
Control section:
Clay content--18 to 30 percent.
Rock fragments--0 to 15 percent.

A horizons:
Value--3 or 4 moist.
Chroma--2 or 3.

Bt1 horizons:
Value--5 or 6 dry, 3 or 4 moist.
Texture--Sandy loam or sandy clay loam.
Clay content--15 to 25 percent.
Rock fragments--0 to 15 percent.

Bt2 horizons:
Value--5 or 6 dry, 3 or 4 moist.
Texture--Sandy clay loam or clay loam.
Clay content--20 to 35 percent.
Rock fragments--0 to 15 percent.
Structure--Moderate or strong, fine or medium, angular blocky or subangular blocky.
Other features--May be slightly calcareous and have few or common lime segregations.

Schamp Series

The Schamp series consists of very deep, well drained soils that formed in mixed alluvium and colluvium from tuff, andesite and basalt with admixtures of volcanic ash. The Schamp soils are on foothills, mountain side slopes and ridges. Slopes are 4 to 50 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Xeric Haplargids

Typical pedon: Schamp very stony loam, in map unit 1220, rangeland. (Colors for dry conditions unless

otherwise noted). The soil surface is covered with 10 percent stones, 5 percent cobbles, and 15 percent pebbles.

A--0 to 5 inches; light brownish gray (10YR 6/2) very stony loam, very dark grayish-brown (10YR 3/2) moist; moderate very thin and thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine interstitial pores; 10 percent stones, 5 percent cobbles and 15 percent pebbles; neutral (pH 7.0); clear smooth boundary.

Bt1--5 to 8 inches; light brownish gray (10YR 6/2) clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine and few fine and medium roots; many very fine tubular pores; few thin clay films on faces of peds and in pores; neutral (pH 7.2); abrupt wavy boundary.

Bt2--8 to 15 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, friable, very sticky and very plastic; many very fine and fine and few medium roots; many very fine tubular pores; many thin and moderately thick clay films on faces of peds and in pores; neutral (pH 7.2); clear wavy boundary.

Bt3--15 to 20 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; weak fine prismatic structure parting to moderate medium subangular blocky; hard, friable, very sticky, very plastic; common very fine and fine and few medium roots; many very fine tubular pores; common thin and moderately thick clay films on faces of peds and in pores; slightly alkaline (pH 7.7); clear wavy boundary.

Btk--20 to 32 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; hard, very friable, very sticky and very plastic; common very fine and few fine roots; common very fine tubular pores; common thin clay films on faces of peds and in pores; 10 percent pebbles; few thin lime coats on underside of pebbles; noneffervescent matrix; moderately alkaline (pH 8.2); clear wavy boundary.

Ck--32 to 43 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 4/3) moist; massive; hard, very friable, sticky, plastic; common very fine and fine roots; common very fine tubular pores; 5 percent pebbles and 5 percent cobbles; few thin lime coats on underside of rock fragments; few small soft masses of lime; noneffervescent matrix; strongly alkaline (pH 8.5); clear wavy boundary.

2C2--43 to 60 inches; pale brown (10YR 6/3) very cobbly loam, brown (10YR 4/3) moist; massive; slightly hard, friable, slightly sticky, slightly plastic; few fine roots; common very fine tubular pores; 25 percent cobbles and 20 percent pebbles; slightly effervescent; strongly alkaline (pH 8.9).

Type location: Washoe County, Nevada; about 1.8 miles east of the Nevada-California state line on the east side of Surprise Valley; about 1,100 feet east and 400 feet south of the northwest corner of section 15, T. 42 N., R. 18 E.; (41 degrees, 34 minutes, 00 seconds north latitude and 119 degrees, 57 minutes, 45 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 50 degrees F.
Control section:
Clay content--35 to 50 percent.

A horizon:
Value--5 or 6 dry, 3 or 4 moist
Chroma--2 or 3
Reaction--Neutral or slightly alkaline

Bt horizons:
Hue--10YR or 7.5YR
Value--5 or 6 dry, 3 or 4 moist
Chroma--2 through 4
Structure--Weak or moderate, fine to coarse prismatic, subangular blocky or angular blocky
Reaction--Neutral to moderately alkaline
Texture--Clay or clay loam
Clay content--35 to 50 percent
Rock fragments--0 to 15 percent
Thickness--24 to 32 inches

Btk horizons:
Secondary lime accumulations--Few to many fine to coarse soft masses
Effervescense--Noneffervescent or slightly effervescent matrix

C and 2C:
Value--5 through 7 dry, 4 or 5 moist
Chroma--2 or 3
Texture--Sandy loam, sandy clay loam, gravelly sandy clay loam or very cobbly loam
Clay content--10 to 25 percent
Rock fragments--15 to 80 percent increasing with depth, mainly pebbles and cobbles
Reaction--Strongly alkaline or very alkaline
Effervescence--Noneffervescent to strongly effervescent in the upper part. Slightly effervescent to violently effervescent in the lower part
Secondary lime accumulations--None to many fine to coarse soft masses
SAR--13 to 30 in the Bt2 and Bt3 horizons
Electrical conductivity--4 to 8 millimhos per centimeter

Skullwak Series

The Skullwak series consists of deep, poorly drained soils that formed in fine textured lacustrine sediments from mixed rock sources. These soils are on lake plains. 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: Fine, montmorillonitic (calcareous), mesic Aeric Halaquepts

Typical pedon: Skullwak silt loam, in map unit 1050, rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 5 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate very thick platy structure; soft, friable, sticky and plastic; few very fine roots; many very fine vesicular pores; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

C--5 to 11 inches; light gray (2.5Y 7/2) silty clay loam, olive brown (2.5Y 4/3) moist; moderate thin and medium platy structure; hard, friable, very sticky and very plastic; common very fine and fine roots; common very fine interstitial pores; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

2Bqk--11 to 18 inches; light gray (5Y 7/2) silty clay loam, olive (5Y 4/3) moist; strong thin and medium platy structure; hard, friable, very sticky and very plastic; common very fine and fine roots; common very fine interstitial pores; 30 percent 15 to 25 millimeter durinodes; lime is disseminated; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary.

3Bqkg--18 to 36 inches; light gray (5Y 7/2) silty clay, olive (5Y 4/3) moist; strong medium and thick platy structure; hard, friable, very sticky and very plastic; common very fine and fine roots; few very fine tubular pores; 60 percent 15 to 25 millimeter durinodes; 20 percent grayish green (5G 5/2) moist iron depletions; lime is disseminated; slightly effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

4Cg1--36 to 40 inches; light gray (5Y 7/2) silty clay, olive (5Y 5/3) moist; massive; hard, very friable, sticky and very plastic; few very fine roots; few very fine tubular pores; 10 percent grayish green (5G 5/2) moist iron depletions; slightly effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

4Cg2--40 to 60 inches; light gray (5Y 7/2) stratified silty clay loam and silty clay, olive (5Y 4/3) moist; massive; hard, friable, very sticky and very plastic; no roots observed; few very fine interstitial pores; 10 percent grayish green (5G 5/2) moist iron depletions; slightly effervescent; moderately alkaline (pH 8.2)

Type location: Washoe County, Nevada; about 1.6 miles northeast of Vya; about 950 feet north and 100 feet west of the southeast corner of section 28, T. 43 N., R. 19 E.; (41 degrees, 36 minutes, 54 seconds north latitude and 119 degrees, 50 minutes, 57 seconds west longitude.)

Range in Characteristics:

Soil moisture: The soil is saturated year round between a depth of 18 to 36 inches.

Soil temperature: 47 to 52 degrees F.

Depth to Bqk horizon: 8 to 14 inches.

SAR: 31 to 45 above Bqk horizon, 13 to 30 below.

Control section:

Clay content--35 to 45 percent, when mixed.

Reaction--Moderately alkaline to very strongly alkaline usually decreasing with depth.

Salt--Strongly affected above the Bqk horizon and moderately affected within and below the Bqk horizon.

A horizon:

Value--7 or 8 dry, 4 through 6 moist.

Chroma--2 or 3.

C and Bqk horizons:

Hue--10YR in the upper part and 5Y or 2.5Y in the lower part.

Chroma--2 through 4 in the upper part and 1 or 2 in the lower part.

Texture--Stratified silty clay loam or silty clay.

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, mountain ridges, crests, summits, shoulders and side slopes. Slopes are 4 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 Lithic Xeric Haplargids

Typical pedon: Soughe very cobbly loam, in map unit 1131, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 30 percent cobbles 20 percent pebbles.

A--0 to 4 inches; pale brown (10YR 6/3) very cobbly loam, dark brown (10YR 3/3) moist; moderate fine and medium platy structure; slightly hard, very friable, sticky and plastic; many very fine roots; common very fine vesicular; 30 percent cobbles, 20 percent pebbles; slightly alkaline (pH 7.4); clear wavy boundary.

Bt1--4 to 8 inches; pale brown (10YR 6/3) very gravelly clay loam, dark brown (10YR 3/3) moist; fine and medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and few fine and medium roots; common very fine tubular pores; common thin clay films on faces of peds and lining pores; 30 percent pebbles, 10 percent cobbles; slightly alkaline (pH 7.8); clear wavy boundary.

Bt2--8 to 17 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightlyl hard, very friable, sticky and plastic; few very fine, fine, and medium roots; common very fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 30 percent pebbles, 10 percent cobbles; slightly alkaline (pH 7.8); abrupt wavy boundary.

R--17 to 21 inches; hard massive tuff.

Type location: Washoe County, Nevada; about 2,000 feet east and 900 feet north of the southwest corner of section 10, T. 41 N., R. 18 E.; (41 degrees, 29 minutes, 01 second north latitude, 119 degrees, 57 minutes, 33 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 50 degrees.
Depth to bedrock: 10 to 20 inches.
Reaction: Neutral to 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 horizon:
Value--5 or 6 dry, 3 or 4 moist.

Bt horizons:
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.

Surprise Series

The Surprise series consists of deep, well drained soils that formed in alluvium mainly from basic volcanic rocks. The Surprise soils are on alluvial fans and have slopes of 2 to 15 percent. The mean annual precipitation is about 13 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Aridic Haploxerolls

Typical pedon: Surprise gravelly loamy sand, in map unit 1075, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; grayish brown (10YR 5/2) gravelly loamy sand, very dark grayish brown (10YR 3/2) moist; weak very thin platy structure; soft, very friable, nonsticky and nonplastic; many fine roots; many very fine interstitial pores; 20 percent pebbles; neutral (pH 6.8); clear smooth boundary.

A2--2 to 9 inches; brown (10YR 4/3) sandy loam, very dark grayish brown (10YB 3/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine roots; many very fine interstitial pores; neutral (pH 6.8); clear wavy boundary.

Bw1--9 to 17 inches; brown (10YR 5/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; many fine roots; many fine tubular pores; 30 percent pebbles; neutral (pH 6.8); clear wavy boundary.

Bw2--17 to 36 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark brown (10YR 4/3) moist; weak medium and coarse subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; many fine roots; many fine tubular pores; 30 percent pebbles; neutral (pH 6.8); clear smooth boundary.

C1--36 to 54 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark grayish brown (10YR 4/2) moist; massive; hard, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine interstitial pores; 30 percent pebbles; neutral (pH 6.8); clear wavy boundary.

C2--54 to 65 inches; very pale brown (10YR 7/3) stratified gravelly sandy loam and gravelly loamy sand, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; 40 percent pebbles; neutral (pH 6.8).

Type location: Washoe County, Nevada; about 0.3 miles northwest of Vya in an unsectioned area. (41 degrees, 35 minutes, 35 seconds north latitude and 119 degrees, 51 minutes, 52 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 48 to 54 degrees F.
Thickness of mollic: 8 to 20 inches.
Control section:
Clay content--10 to 18 percent
Rock fragments--15 to 35 percent pebbles

A horizons:
Value--4 or 5 dry
Chroma--2 or 3

Bw and C horizons:
Value--5 through 7 dry, 3 through 5 moist

Tinpan Series

Tinpan series are moderately deep, well drained soils that formed in colluvium and alluvium from basalt, andesite and tuff. The Tinpan soils are on plateaus. Slopes are 0 to 8 percent. The mean annual precipitation is about 14 inches and the mean annual air temperature is about 43 degrees F.

Taxonomic class: Very-fine, montmorillonitic, frigid Vertic Palexerolls

Typical pedon: Tinpan extremely cobbly loam, in map unit 1181, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 40 percent cobbles and 20 percent pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) extremely cobbly loam, dark brown (10YR 3/3) moist; moderate thin and medium platy structure; slightly hard, friable, sticky and plastic; many very fine roots; many very fine, common fine vesicular pores; 40 percent

cobbles; 20 percent pebbles; neutral (pH 6.8); clear wavy boundary.
A2--2 to 5 inches; brown (10YR 5/3) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, common fine roots; many very fine interstitial pores; 10 percent pebbles; neutral (pH 6.8); abrupt wavy boundary.
Btss1--5 to 12 inches; brown (10YR 5/3) clay, dark brown (10YR 3/3) moist; strong medium prismatic structure; extremely hard, extremely firm, very sticky and very plastic; common very fine, fine and medium vertical exped roots; common fine tubular pores; many moderately thick pressure faces on faces of peds; common thin light gray (10YR 7/2) uncoated sand grains, dark grayish brown (10YR 4/2) moist on tops of prisms; vertical cracks 5 millimeters to 15 millimeters wide and 2 to 4 inches apart extend from a depth of 5 to 18 inches; few slickensides; neutral (pH 7.0); clear wavy boundary.
Btss2--12 to 18 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure parting to strong medium and coarse angular blocky; extremely hard, extremely firm, very sticky and very plastic; common very fine, fine and medium vertical exped roots; common very fine tubular pores; many moderately thick and thick clay films on faces of peds and in pores; common slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; neutral (pH 7.2); clear smooth boundary.
Btss3--18 to 28 inches; light brown (7.5YR 6/4) clay, brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; few very fine, fine and medium vertical exped roots; common very fine tubular pores; many moderately thick clay films on faces of peds and in pores; many slickensides; many wedge-shaped aggregates up to 10 centimeters in size tilted 30 degrees from horizontal; slightly alkaline (pH 7.5); clear smooth boundary.
Btkss--28 to 36 inches; light yellowish brown (10YR 6/4) clay, brown (7.5YR 4/4) moist; strong medium and coarse angular blocky structure; very hard, friable, very sticky and very plastic; few very fine roots; common very fine tubular pores; many moderately thick and thick clay films on faces of peds and in pores; few slickensides; few wedge-shaped aggregates tilted 30 degrees from horizontal; 3 percent medium and large white (10YR 8/1) soft masses of lime; slightly effervescent matrix; moderately alkaline (pH 8.2); abrupt wavy boundary.
R--36 to 46 inches; hard vesicular basalt; few thin lime coats at upper boundary and in some fractures.

Type location: Washoe County, Nevada; 2.6 miles northeast of Barrel Springs road; about 1,500 feet west and 2,200 feet north of the southeast corner of section 9, T. 46 N., R.19 E.; (41 degrees, 55 minutes, 18 seconds north latitude and 119 degrees, 51 minutes, 11 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 44 to 47 degrees F.
Average summer soil temperature: 60 to 64 degrees F.
Thickness of mollic: 10 to 16 inches
Depth to bedrock: 20 to 40 inches
Depth to carbonates: 25 to 35 inches
Control section:
Clay content--60 to 70 percent

A horizons:
Value--5 or 6 dry, 2 or 3 moist. Value of 6 only in upper 2 inches. Uncoated sand grains with value of 6 or 7 dry.
Chroma--2 or 3

Btss horizons:
Hue--10YR or 7.5YR
Value--4 through 6 dry, 3 through 5 moist
Chroma--2 through 4
Reaction: Neutral or slightly alkaline
Other features: Vertical cracks 5 to 25 millimeters wide; few to many slickensides and wedge-shaped aggregates

Btkss horizons:
Hue--10YR or 7.5YR
Value--6 or 7 dry, 4 or 5 moist
Secondary lime accumulation: Few to many small to large soft masses or few or common lime coats on bedrock; slightly effervescent to strongly effervescent in matrix
Reaction: Slightly alkaline or moderately alkaline

Toney Series

The Toney soils are moderately deep over weathered bedrock, moderately well-drained soils that formed in material weathered from tuff. They are on tuffaceous tablelands. Slopes are 2 to 8 percent. The mean annual precipitation is about 13 inches and the mean annual air temperature is about 42 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Vertic Paleargids

Typical pedon: Toney extremely cobbly loam, in map unit 1240, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface has about 60 percent cover of cobbles.
A1--0 to 2 inches; grayish brown (10YR 5/2) extremely cobbly loam, very dark grayish brown (10YR 3/2) when moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; few fine, and many very fine roots; many very fine interstitial and tubular pores; 60 percent cobbles; neutral (pH 6.6); abrupt smooth boundary.
A2--2 to 4 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) when moist; light

gray (10YR 6/1) spots, moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few fine and many very fine roots; many very fine interstitial and tubular pores; many bleached sand grains; neutral (pH 6.6); abrupt smooth boundary.

Bt1--4 to 12 inches; brown (10YR 4/3) clay, brown (10YR 4/3) when moist; strong medium columnar structure, with a light-gray (10YR 7/1) bleached sand grain capping; extremely hard, firm, very sticky and very plastic; few fine and common very fine exped roots; common very fine tubular pores; many pressure cutans, and many thin clay films in pores; neutral (pH 6.6); gradual smooth boundary.

Bt2--12 to 18 inches; brown (10YR 5/3) clay, brown (10YR 5/3) moist; moderate medium prismatic structure; very hard, firm, very sticky and very plastic; few fine and common very fine roots; many very fine interstitial, and common very fine tubular pores; many pressure cutans and many thin clay films in pores; neutral (pH 7.2); abrupt smooth boundary.

Btk--18 to 23 inches; brown (10YR 5/3) yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; hard, firm, very sticky and very plastic; few very fine roots; many very fine interstitial and tubular pores; common moderately thick clay films in pores; few thin and moderately thick clay films on faces of peds; strongly effervescent; many fine white (10YR 8/2) lime veins and filaments; moderately alkaline (pH 8.2); abrupt irregular boundary.

Cr--23 to 30 inches; very pale brown (10YR 8/3) tuff, with many white (10YR 8/1) pumiceous flecks, brown (10YR 5/3) when moist; massive; very hard, very firm; few very fine roots along fracture planes; many thin brown (10YR 5/3) clay films along fractures; many faint black (10YR 2/1) coatings on fracture faces; matrix is noneffervescent with few fine lime veins and filaments along fracture planes; slightly alkaline (pH 7.8).

Type location: Washoe County, Nevada; about 1,200 feet west and 1,500 feet north of the southeast corner of section 22, T. 43 N., R.18 E.; (41 degrees, 37 minutes, 46 seconds north latitude and 119 degrees, 56 minutes, 54 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 43 to 46 degrees F.
Depth to paralithic: 20 to 40 inches
Control section:
Upper 20 inches clay content--40 to 60 percent

A horizons:
Value--4 through 7 dry, 2 through 4 moist
Chroma--1 or 2

Bt horizons:
Hue--10YR or 7.5YR
Value--4 through 6 dry, 4 or 5 moist
Chroma--2 through 4
Texture--Clay or silty clay
Structure--Columnar or prismatic in the upper part, prismatic, angular blocky or subangular blocky in the lower part
Other features--Lime accumulation are common or many fine or medium soft masses in the Btk horizons

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 15 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 very gravelly sandy loam, in map unit 1410, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 20 percent tuff pebbles, 10 percent pumice pebbles, and 5 percent rhyolitic pebbles.

A--0 to 1 inch; gray (10YR 6/1) very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak thin platy structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine interstitial pores; 35 percent tuff, pumice and rhyolitic pebbles; slightly alkaline (pH 7.6); abrupt smooth boundary.

C--1 to 8 inches; gray (10YR 6/1) gravelly sandy loam, dark grayish brown (10YR 4/2) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, common fine and few medium roots; many very fine interstitial pores; 25 percent glassy vitric pyroclastic pebbles and cinders; slightly alkaline (pH 7.6); clear wavy boundary.

Cr1--8 to 30 inches; highly weathered and fractured tuffaceous sandstone; massive; few fine roots in fractures; noneffervescent matrix; common less than 0.5 millimeter lime pendants on underside of fractured pieces.

Type location: Washoe County, Nevada, about 1 mile southeast of the Stevens Camp; about 1,700 feet east and 700 feet south of the northwest corner of section 11, T. 41 N., R. 22 E.; (41 degrees, 29 minutes, 13 seconds north latitude, 119 degrees, 28 minutes, 21 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry from late June through October. Torric moisture regime that borders on xeric.
Soil temperature: 47 to 52 degrees F.
Depth to paralithic contact: 4 to 14 inches.
Pyroclastic material: 60 to 75 percent of the 0.02 to 2 mm fraction and 30 to 60 percent of the fine earth fraction.

Control section:
Clay content--5 to 15 percent.
Rock fragments--5 to 25 percent, mainly pebbles.
Reaction--Neutral or slightly alkaline.

A horizon:
Value--5 through 7 dry, 3 or 4 moist.
Chroma--1 through 4 dry or moist.

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--Massive or is subangular blocky.

Cr horizon:
Secondary lime accumulation--Few or common less than 0.5 millimeter lime pendants along fracture planes.
Weathering--Highly weathered material in the upper part, to soft weathered material in the lower part.

Tunnison Series

The Tunnison series consists of moderately deep, well drained soils that formed in colluvium over residuum weathered from andesite or basalt. Tunnison soils are on plateaus. Slopes are 0 to 8 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Very-fine, montmorillonitic, mesic Aridic Haploxererts

Typical pedon: Tunnison cobbly clay, in map unit 1175, rangeland. (Colors are for dry soil unless otherwise stated.) The soil surface is covered with 15 percent cobbles and 10 percent pebbles.

A1--0 to 2 inches; dark brown (7.5YR 4/3) cobbly clay, dark brown (7.5YR 4/4) moist; strong very fine granular structure; hard, very friable, very sticky and plastic; common very fine roots; many very fine interstitial pores; 15 percent cobbles, 15 percent pebbles; slightly alkaline (pH 7.5); clear wavy boundary.

A2--2 to 5 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure; very hard, firm, very sticky and very plastic; common very fine, few fine and medium roots; many very fine interstitial pores; vertical cracks 10 to 30 millimeters wide and about 3 to 6 inches apart; slightly alkaline (pH 7.5); clear wavy boundary.

A3--5 to 13 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure parting to strong medium and coarse angular blocky; very hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; vertical cracks 10 to 20 millimeters wide and about 3 to 6 inches apart; pressure faces on 75 percent of faces of peds; slightly alkaline (pH 7.5); clear wavy boundary.

Ass--13 to 27 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 4/4) moist; moderate coarse prismatic structure parting to moderate medium angular blocky; very hard, firm, very sticky and very plastic; few very fine, few fine and common medium roots; common very fine tubular pores; vertical cracks 10 to 20 millimeters wide and about 3 to 6 inches apart; common 10 to 25 millimeter wide wedge-shaped aggregates tilted about 30 degrees from horizontal; common intersecting slickensides; slightly alkaline (pH 7.5); clear wavy boundary.

Cr--27 to 30 inches; reddish yellow (7.5YR 7/6) soft tuff, strong brown (7.5YR 5/8) moist; weathered into medium and coarse plates in upper 2 to 3 inches with discontinuous silica coatings on underside of some plates; clear wavy boundary.

R--30 to 34 inches; hard, consolidated tuff.

Type location: Washoe County, Nevada; about 1,100 feet south of Barrel Springs road along power line; about 3,100 feet south and 3,600 feet west of the northeast corner of section 13, T. 46 N., R 18 E.; (41 degrees, 54 minutes, 27 seconds north latitude and 119 degrees, 55 minutes, 09 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 4 to 50 degrees F.
Depth to weathered bedrock: 20 to 35 inches.
Depth to bedrock: 30 to 40 inches.
Other features: Vertical cracks--are open more than 180 days
Control section:
Clay content--60 to 70 percent

A horizons:
Hue--7.5YR or 5 YR
Value--4 or 5 dry, 3 through 5 moist
Chroma--2 through 4
Other features--Few to many wedge-shaped aggregates and slickensides at a depth of 10 inches to bedrock. Secondary carbonates are at depths of 23 to 30 inches in some pedons.

Tusune Series

The Tusune series consists of moderately deep, well drained soils that formed in residuum and colluvium from andesitic tuff and pyroclastic rocks. The Tusune soils are on north facing plateau side slopes. Slopes are 30 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Ashy-skeletal, Vitrandic Cryoborolls.

Typical pedon: Tusune stony loam, in map unit 1440, rangeland (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 1

percent stones, 2 percent cobbles, and 25 percent pebbles.
A1--0 to 2 inches; brown (10YR 5/3) stony loam, very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine interstitial pores; 1 percent stones, 2 percent cobbles and 25 percent hard tuff and rhyolitic pebbles; neutral (pH 6.6); clear wavy boundary.
A2--2 to 10 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; soft, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine tubular pores; 20 percent hard tuff and rhyolitic pebbles; neutral (pH 6.8); clear wavy boundary.
Bt1--10 to 26 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist; strong fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine tubular pores; 40 percent hard rhyolitic and tuff pebbles; few thin clay films on faces of peds and lining pores; neutral (pH 7.0); clear wavy boundary.
Bt2--26 to 38 inches; brown (7.5YR 5/4) very gravelly clay loam, dark brown (7.5YR 4/4) moist; weak medium and coarse subangular blocky structure; hard, very friable, sticky and plastic; common very fine and fine and few medium roots; many very fine tubular pores; 5 percent cobbles and 40 percent hard rhyolitic and tuff pebbles; common thin clay films of faces of peds and lining pores; neutral (pH 7.0); abrupt irregular boundary.
Cr--38 to 46 inches; highly fractured weathered andesitic pyroclastic tuff rock; few thin glass coats; few very fine roots in some fractures.

Type location: Washoe County, Nevada. On the northeast side of Massacre Mountain in an unsectioned area. T. 42 N., R. 21 E.; (41 degrees, 31 minutes, 22 seconds north latitude and 119 degrees, 34 minutes, 02 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually moist, moist in winter and spring, dry in late summer and fall.
Soil temperature: 44 to 47 degrees F.
Average summer soil temperature: 54 to 59 degrees F.
Depth to weathered bedrock: 20 to 40 inches.
Mollic epipedon: 20 to 30 inches and includes all or part of the argillic.
Mineralogy: 50 to 80 percent glass in the very fine and fine sand size throughout.
Reaction: Slightly acid or neutral.
Control section:
Clay content--25 to 30 percent.
Rock fragments--35 to 50 percent pebbles that are dominantly hard rhyolitic and tuff rocks when mixed.

A horizons:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.

Bt horizons:
Hue--10YR or 7.5YR.
Value--4 or 5 dry, 3 or 4 moist.
Chroma--3 through 4.
Texture--Loam or clay loam.
Rock fragments--35 to 50 percent, dominantly pebbles and a few cobbles of hard tuff and rhyolitic rocks.

Uhaldi Series

The Uhaldi series consists of moderately deep, well drained soils that formed in mixed colluvium from tuffaceous sandstone or mudstone. Uhaldi soils are on rock pediments. Slopes are 4 to 30 percent. Mean annual precipitation is about 11 inches, and mean annual temperature is 46 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Aridic Argixerolls

Typical pedon: Uhaldi stony loam, in map unit 1245, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with about 1 percent stones, 3 percent cobbles, and 30 percent pebbles.
A1--0 to 4 inches; brown (10YR 5/3) stony loam, dark brown (10YR 3/3) moist; strong thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; 1 percent stones, 3 percent cobbles, 30 percent pebbles; slightly acid (pH 6.2); abrupt wavy boundary.
Bt1--4 to 12 inches; brown (7.5YR 5/3) gravelly loam, dark brown (7.5YR 3/3) moist; moderate fine subangular blocky structure; hard, very friable, sticky and plastic; many very fine and common fine and medium roots; many very fine tubular pores; common thin clay films on faces of peds and in pores; 25 percent pebbles; slightly alkaline (pH 7.4); clear wavy boundary.
Bt2--12 to 22 inches; yellowish brown (10YR 5/4) gravelly clay loam, dark brown (7.4YR 4/4) moist; strong medium and coarse subangular blocky structure; hard, very friable, sticky and plastic; common very fine and fine and few medium roots; many very fine and common fine tubular pores; common thin and few moderately thick clay films on faces of peds and in pores; 20 percent pebbles; slightly alkaline (pH 7.6); clear irregular boundary.
Cr1--22 to 33 inches; brownish yellow (10YR 6/6) weathered tuffaceous sandstone, strong brown (7.5YR 4/6) moist; strong very thick platy rock structure; many very fine roots in some fractures; few large very thin lime coats on underside of some plates; clear irregular boundary.
Cr2--33 to 46 inches; white (N 8/) weathered tuffaceous sandstone, grayish brown (2.5Y 5/2) moist fractured into 4 to 6 inch thick plates; few large very thin lime coats on underside of some plates.

Type location: Washoe County, Nevada; about 2 miles west of the Sheldon Antelope Refuge boundary along Road 8A in an unsectioned area, T. 43 N., R. 22 E.; (41

degrees, 37 minutes, 00 seconds north latitude and 119 degrees, 31 minutes, 03 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry; moist in winter and spring, dry summer and fall.
Soil temperature: 47 to 50 degrees F.
Mollic epipedon: 12 to 16 inches thick, includes the upper part of the argillic horizon.
Depth to paralithic contact: 20 to 40 inches.
Control section:
Percent clay--27 to 35 percent.
Rock fragments--15 to 35 percent, mainly pebbles.

A horizon:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--1 through 3.
Rock fragments--0 to 35 percent cobbles and stones, 15 to 35 percent pebbles.
Reaction --Moderately acid through neutral.

Bt horizon:
Hue--10YR or 7.5YR.
Value--5 or 6 dry, 2 through 4 moist.
Chroma--2 through 4.
Reaction--Slightly acid to slightly alkaline.
Texture--Loam or clay loam in the Bt1, clay loam below.
Percent clay--When mixed, 27 to 35 percent.

Cr horizon:
Other features--Bedded weathered tuffaceous sandstone or mudstone that can be dug with tile spade. Roots penetrate weak fracture planes.
Secondary lime accumulation--None to few very thin or thin lime coats on underside of some fracture planes or plates.

Updike Series

The Updike series consist of very deep moderately well drained soils that formed in mixed alluvium. The Updike soils are on low terraces and have slopes of 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, montmorillonitic, mesic Typic Natrargids

Typical pedon: Updike silt loam in map unit 1310, rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; light gray (10YR 7/2) silt loam, dark brown (10YR 4/3) moist; strong thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine and fine tubular and vesicular pores; strongly effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

Btn1--4 to 9 inches; pale brown (10YR 6/3) silty clay, dark brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; many thin clay films on faces of peds and in pores; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Btn2--9 to 13 inches; pale brown (10YR 6/3) silty clay loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; hard, friable, very sticky and very plastic; few fine and medium roots; common very fine tubular pores; many moderately thick clay films on faces of peds and in pores; strongly effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

C--13 to 22 inches; pale brown (10YR 6/3) silty clay loam, dark brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; hard, friable, very sticky and very plastic; common few fine roots; common very fine tubular pores; few thin clay films in pores and bridges; strongly effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Ck1--22 to 29 inches; very pale brown (10YR 7/3) silty clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, very sticky and very plastic; few very fine roots; common very fine tubular pores; common medium soft masses of lime; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

Ck2--29 to 36 inches; very pale brown (10YR 7/3) silty clay loam, dark brown (10YR 4/3) moist; massive; slightly hard, very friable, very sticky and very plastic; few very fine roots; common very fine tubular pores; common medium soft masses of lime; violently effervescent; strongly alkaline (pH 9.0); abrupt wavy boundary.

2C--36 to 60 inches; light gray (2.5Y 7/2) stratified clay, clay loam and sandy clay loam, light brownish gray (2.5Y 6/2) moist; massive; hard, very friable, very sticky and sticky and very plastic and plastic; common very fine tubular pores; violently effervescent; very strongly alkaline (pH 9.1).

Type location: Washoe County, Nevada; about 12 miles north of Vya at the north end of Long Valley; about 1,200 feet east and 2,400 feet south of the northwest corner of section 2, T. 44 N., R. 19 E.; (41 degrees, 45 minutes, 47 seconds north latitude and 119 degrees, 49 minutes, 24 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist for short periods in the winter and spring, dry from summer to mid fall.
Soil temperature: 49 to 52 degrees F.
Reaction: Moderately alkaline to very strongly alkaline
Effervescence: Slightly effervescent to violently effervescent

A horizon:
Value--6 or 7 dry, 4 or 5 moist
Chroma--2 or 3

Btn horizons:
Hue--10YR or 7.5YR
Value--5 through 7 dry, 4 or 5 moist
Chroma--2 through 4

Texture--Clay or sandy clay, but includes silty clay or silty clay loam
SAR--13 to 45

C horizons:
Hue--10YR or 2.5Y
Value--5 through 7 dry, 3 through 6 moist
Chroma--2 through 4

Valmy Series

The Valmy series consists of very deep, well drained soils that formed in a thin loess cap high in volcanic ash superimposed over loamy alluvium. The Valmy soils are on inset fans and fan skirts. Slopes are 0 to 8 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 51 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Haploduridic Torriorthents

Typical pedon: Valmy fine sandy loam, in map unit 1141, rangeland. (Colors are for dry soil unless otherwise noted.)

A--0 to 2 inches; pale brown (10YR 6/3) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak very thin platy structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and few fine roots; many very fine interstitial pores; moderately alkaline (pH 8.0); abrupt wavy boundary.

C--2 to 10 inches; light gray (10YR 7/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate medium platy structure; hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine vesicular pores; strongly alkaline (pH 8.5); abrupt wavy boundary.

Cqk1--10 to 15 inches; light yellowish brown (10YR 6/4) fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; 50 percent 0.5 to 2 inch hard, firm durinodes; many thin silica coats bridging sand grains; few thin silica films in pores; few fine soft lime masses; slightly effervescent; strongly alkaline (pH 8.5); clear smooth boundary.

Cqk2--15 to 22 inches; light yellowish brown (10YR 6/4) fine sandy loam, dark brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine and common fine roots; many very fine tubular pores; 30 percent 0.5 to 1 inch hard, firm durinodes that are olive brown (2.5Y 4/3) moist; lime is disseminated; strongly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Cqk3--22 to 36 inches; light yellowish brown (10YR 6/4) sandy loam, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots; many very fine tubular pores; 5 percent 0.5 to 2 inch hard, firm durinodes; common thin silica films bridging mineral grains; violently effervescent; few fine white (10YR 8/2) soft masses of lime; strongly alkaline (pH 8.6); clear wavy boundary.

Ck--36 to 53 inches; light yellowish brown (10YR 6/4) stratified sandy loam and gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; common very fine tubular pores; 15 percent pebbles; common fine and medium white (10YR 8/2) soft masses of lime; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

2C--53 to 60 inches; light brownish gray (2.5Y 6/2) gravelly sand, olive brown (2.5Y 4/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; 20 percent pebbles; violently effervescent; strongly alkaline (pH 9.0).

Type location: Washoe County, Nevada; at the south end of Coleman Valley; about 2.5 miles south of the Nevada-Oregon state line and 0.9 miles west of State Route 34; about 200 feet north and 400 feet east of the southwest corner of section 29 T. 47 N., R. 20 E.; (41 degrees, 57 minutes, 35 seconds north latitude and 119 degrees, 46 minutes, 08 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist for short periods in winter and spring, dry from May through November.
Soil temperature: 47 to 53 degrees F.
Depth to Cq horizon: 6 to 20 inches. Durinodes range from 5 to 85 percent by volume in any one horizon but one or more horizons more than 6 inches thick contains more than 25 percent.
Depth to unconformity: 30 to 50 inches, with some pedons deeper than 50 inches to sandy material. Some pedons have a stratified substratum.
Control section:
Clay content--5 to 15 percent.
Rock fragments--0 to 30 percent, mainly pebbles.

A horizon:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 3 through 5 moist.
Reaction--Moderately alkaline or strongly alkaline.

C horizons:
Hue--10YR or 2.5Y.
Value--5 through 7 dry, 4 or 5 moist.
Chroma--2 through 4.
Texture--Mainly fine sandy loam or sandy loam, but includes strata of very fine sandy loam or coarse sandy loam in some pedons.
Durinodes--Hard to extremely hard, very friable to very firm and brittle, nonsticky or slightly sticky and nonplastic or slightly plastic wet.
Reaction--Strongly alkaline or very strongly alkaline.
Effervescence--Slightly effervescent to violently effervescent.

2C horizons:
Texture--Gravelly sand or very gravelly sand; substratum phases have textures of silty clay loam below 40 inches, or are stratified very fine sandy loam to gravelly silt loam.
Clay content--1 to 18 percent.

Structure--Single grained, massive or platy.
Consistence--Loose or slightly hard or hard dry, nonsticky or sticky wet.
Rock fragments--5 to 55 percent.
Reaction--Strongly alkaline or very strongly alkaline.

Verdico Series

The Verdico series consists of moderately deep, well drained soils that formed in fluvial sediments and pedisediments, residuum and colluvium from water laid tuff on plateaus and side slopes of hills, strath terraces and pediments. Slopes are 4 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Vertic Paleargids

Typical pedon: Verdico very stony sandy loam, in map unit 1090, rangeland. (Colors are for dry soil unless otherwise noted). The soil surface is covered with 10 percent stones, 10 percent cobbles, and 20 percent pebbles.

A--0 to 3 inches; pale brown (10YR 6/3) very stony sandy loam, brown (10YR 4/3) moist; moderate thin and medium platy structure; slightly hard, very friable, sticky and plastic; few fine tubular pores, common medium vesicular pores; 10 percent stones, 10 percent cobbles, 20 percent pebbles; slightly acid (pH 6.4); abrupt wavy boundary.

Bt1--3 to 13 inches; light yellowish brown (10YR 6/4) clay, yellowish brown (10YR 5/4) moist; weak medium prismatic structure parting to strong fine and medium angular blocky; hard, very friable, very sticky and very plastic; common fine and very fine and few medium roots; few very fine tubular pores; common thin grayish brown (10YR 5/1) clay films, very dark grayish brown (10YR 3/2) moist on faces of peds and in pores; 5 percent pebbles; 5 percent cobbles; neutral (pH 7.0); clear wavy boundary.

Bt2--13 to 17 inches; light yellowish brown (10YR 6/4) clay; yellowish brown (10YR 5/4) moist; moderate medium prismatic structure parting to strong fine and medium angular blocky; hard, firm, very sticky and very plastic; few fine and common medium roots; few very fine tubular pores; many thin and moderately thick clay films on faces of peds and in pores; many pressure faces; 10 percent pebbles; neutral (pH 7.0); clear wavy boundary.

2Ck--17 to 22 inches; light yellowish brown (10YR 6/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate very fine, fine and medium subangular blocky structure; hard, very friable, very sticky and very plastic; few fine and medium roots; few very fine tubular pores; few fine soft masses of lime; 25 percent pebbles; slightly effervescent; slightly alkaline (pH 7.5); gradual wavy boundary.

Cr--22 to 26 inches; white (10YR 8/2) weathered tuff, very pale brown (10YR 7/4) moist; very thick platy rock structure; many thin silica and lime coats between plates.

Type location: Washoe County, Nevada; about 2,100 feet north and 1,600 feet west of the southeast corner of section 17, T. 43 N., R. 18 E.; (41 degrees, 38 minutes, 46 seconds north latitude and 119 degrees, 59 minutes, 04 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 52 degrees F.
Solum thickness: 17 to 30 inches.
Reaction: Slightly acid or neutral.
*Depth to paralithic contact:*20 to 40 inches.
Control section:
Clay percent--45 to 60.
Rock fragments--0 to 10 percent pebbles.
Other features: Abrupt clay increase of 20 percent or more within a vertical distance of 1 inch or less between the A and Bt horizon. Linear extensibility is 6 centimeters or more.

A horizon:
Value--5 or 6 dry; 3 or 4 moist.
Chroma--2 or 3.
Other features--An increase of 15 percent clay in a vertical depth of 1 inch between the A and Bt horizon.

Bt horizons:
Value--6 or 7 dry, 4 or 5 moist.
Chroma--3 or 4.
Structure--Weak through strong prismatic or prismatic parting to angular blocky.
Other features--Common to many pressure faces.

C horizon:
Value--6 or 7 dry, 4 or 5 moist.
Texture--Clay loam and clay.
Clay content--35 to 50 percent clay.
Rock fragments--15 to 30 percent.
Reaction--Neutral or slightly alkaline.
Carbonates--None to few fine filaments and soft masses.

Weezweed Series

The Weezweed series consists of very deep, moderately well drained soils that formed in alluvium from volcanic rocks and pyroclastic materials. Weezweed soils are on stream terraces. Slopes are 0 to 2 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Ashy, mesic Vitritorrandic Haploxerolls

Typical pedon: Weezweed loam, in map unit 1460, rangeland (Colors are for dry soil unless otherwise noted).

A1--0 to 5 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate thick

platy structure; slightly hard, very friable, sticky and slightly plastic; common very fine and fine roots; common very fine tubular and interstitial pores; neutral (pH 6.8); clear wavy boundary.

A2--5 to 12 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak coarse prismatic parting to moderate coarse subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; neutral (pH 6.8); clear wavy boundary.

A3--12 to 16 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak coarse prismatic parting to strong fine and medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; common very fine, fine and medium roots; common very fine tubular pores; common thin dark gray (10YR 4/1) strata, black (10YR 2/1) moist; neutral (pH 6.8); clear wavy boundary.

C1--16 to 26 inches; light brownish gray (10YR 6/2) finely stratified sandy loam, dark grayish brown (10YR 4/2) moist; moderate coarse prismatic parting to strong thick platy structure; very hard, friable, slightly sticky and slightly plastic; few very fine through medium roots; few very fine tubular pores; common medium distinct dark yellowish brown (10YR 3/4) relict iron masses, black (10YR 2/1) moist; neutral (pH 6.7); clear wavy boundary.

C2--26 to 42 inches; light brownish gray (10YR 6/2) stratified loam and sandy clay loam, dark grayish brown (10YR 4/2) moist; moderate coarse prismatic parting to strong thick platy structure; very hard, firm, sticky and slightly plastic; few very fine through medium roots; few very fine tubular pores; few fine distinct dark yellowish brown (10YR 3/4) moist relict iron masses, few fine black (10YR 2/1) moist relict manganese masses; slightly acid (pH 6.4); clear wavy boundary.

C3--42 to 60 inches; light yellowish brown (2.5Y 6/3) stratified loam and sandy clay loam, olive brown (2.5Y 4/3) moist; massive; very hard, firm, stichy and slightly plastic; few very fine roots; common very fine tubular pores; common fine distinct black (10YR 2/1) moist relict manganese and grayish brown (2.5Y 5/3) moist relict iron masses; neutral (pH 6.6).

Type location: Washoe County, Nevada; about 1,500 feet southwest of Wall Canyon Ranch; about 100 feet south and 1,300 feet west of the northeast corner of section 4, T. 42 N., R. 23 E.; (41 degrees, 35 minutes, 33 seconds north latitude and 119 degrees, 23 minutes, 09 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring; dry from mid-June through October; saturated below 5 feet during late winter and early spring.

Soil temperature: 47 to 50 degrees F.

Thickness of mollic epipedon: 10 to 20 inches, organic matter decreases irregularly with depth.

Mineralogy: 35 to 60 percent glass in the very fine and fine sand size throughout.

Control section:
Clay content--18 to 27 percent.
Rock fragments--Less than 10 percent.
Other features: Some pedons have C horizons below depths of 36 inches with stratified textures of sandy loam to silty clay loam. Thin discontinuous strata having up to 35 percent pebbles are present in some pedons.

A horizons:
Hue--10YR or 2.5Y.
Value--4 or 5 dry, 2 or 3 moist.
Chroma--0 through 2.
Reaction--Neutral or slightly alkaline.

C horizons:
Hue--10YR, 2.5Y or 5Y.
Value--6 through 8 dry, 4 or 5 moist.
Chroma--1 through 3.
Structure--Weak or moderate fine to medium prismatic parting to platy or blocky, or is massive.
Texture--Usually stratified gravelly loamy sand to silty clay loam. Dominantly loam or sandy clay loam when mixed.
Redox features--Relic redox concentrations are present in most pedons.

Weimer Series

The Weimer series consists of very deep, poorly drained soils that formed in mixed lacustrine sediments from volcanic sources. Weimer soils are on lakeplains. Slopes are 0 to 2 percent. Mean annual precipitation is about 13 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Very-fine, montmorillonitic, frigid Xeric Epiaquerts.

Typical pedon: Weimer clay, in map unit 1380, rangeland. (Colors for dry soils unless otherwise noted). Vertical cracks 1 to 4 inches wide extend from the soil surface to a depth of 26 inches.

A1--0 to 4 inches; dark gray (10YR 4/1) clay, very dark gray (10YR 3/1) moist; strong very fine granular structure; hard, friable, very sticky and very plastic; many very fine and fine roots; many fine interstitial pores; neutral (pH 7.2); clear smooth boundary.

A2--4 to 8 inches; dark gray (10YR 4/1) clay, very dark gray (10YR 3/1) moist; moderate medium and coarse prismatic structure parting to strong fine and medium subangular blocky; very hard, very firm, very sticky and very plastic; many very fine and fine roots; many very fine interstitial and few fine tubular pores; common pressure faces; neutral (pH 7.3); clear smooth boundary.

Bss1--8 to 26 inches; dark gray (10YR 4/1) clay, very dark gray (10YR 3/1) moist; moderate medium and coarse prismatic structure parting to strong medium and coarse angular blocky; very hard, very firm, very sticky and very plastic; many very fine and fine roots; many very fine interstitial and few fine tubular pores; many slickensides; many wedge-shaped aggregates tilted 30 degrees from horizontal; few fine distinct yellowish

brown (10YR 5/4) iron masses on faces of peds; slightly alkaline (pH 7.4); gradual wavy boundary.
Bss2--26 to 48 inches; dark gray (10YR 4/1) clay, very dark gray (10YR 3/1) moist; weak medium and coarse prismatic structure parting to strong medium and coarse angular blocky; very hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine interstitial and few fine tubular pores; many slickensides; many wedge-shaped aggregates tilted 30 degrees from horizontal; few fine distinct yellowish brown (10YR 5/4) iron masses on faces of peds; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.
Bk--48 to 60 inches; dark gray (10YR 4/1) clay, very dark grayish brown (10YR 3/2) moist; massive; very hard, very firm, very sticky and very plastic; few very fine roots; few very fine and fine tubular pores; common fine and medium white (10YR 8/1) soft masses of lime; slightly effervescent; moderately alkaline (pH 8.4).

Type location: Washoe County, Nevada; in Crooks Meadow; about 1,600 feet east and 2,900 feet south of the northwest corner of section 22, T. 45 N., R. 18 E.; (41 degrees, 48 minutes, 21 seconds north latitude and 119 degrees, 57 minutes, 26 seconds west longitude.)

Range in Characteristics:

Soil moisture: Moist in winter and spring, ponded for very long duration during spring and early summer, dry late summer and fall.
Aquic condition: Saturated from the soil surface to within a depth of 20 inches during spring and early summer.
Soil temperature: 43 to 47 degrees F.
Average summer soil temperature: 61 to 63 degrees F.
Depth to secondary lime accumulation: 20 to 40 inches
Control section:
Clay content--60 to 75 percent
Other features: When dry, vertical cracks 0.5 inches to 4 inches wide extend from the soil surface to a depth of 20 to 30 inches or more. The cracks are closed in winter and spring. Gilgai micro relief is evident in most areas.

A horizons:
Hue--Neutral, 10YR or 2.5Y
Value--4 or 5 dry, 2 through 3.5 moist
Chroma--0 or 1
Electrical conductivity--Less than 1.

Bss horizons:
Hue--Neutral, 10YR or 2.5Y
Value--4 or 5 dry, 2 or 3 moist
Chroma--0 or 1
Structure--Prismatic or angular blocky
Reaction --Slightly alkaline or moderately alkaline.
Effervescence--Noneffervescent or slightly effervescent
Other features--Common or many slickensides and wedge-shaped aggregates. Few or common distinct redox concentrations

Bk horizon:
Hue--Neutral, 10YR or 2.5Y
Value--4 or 5 dry, 2 or 3 moist
Chroma--0 through 2
Texture--Clay or silty clay
Reaction--Moderately alkaline or strongly alkaline
Effervescence--Slightly effervescent or strongly effervescent. None to many fine to large soft masses of lime

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 Endoaquolls

Typical pedon: Welch clay loam, in map unit 1360, meadow. (Colors for dry soils unless otherwise noted.)
A1--0 to 5 inches; very dark gray (10YR 3/1) clay loam, black (10YR 2/1) moist; moderate thin platy structure; slightly hard, friable, sticky and plastic; many very fine roots; many very fine tubular pores; neutral (pH 6.6); abrupt smooth boundary.
A2--5 to 16 inches; very dark gray (10YR 3/1) silty clay loam, black (10YR 2/1) moist; moderate very fine and fine granular structure; hard, friable, sticky and plastic; few fine, and many very fine roots; many very fine tubular and interstitial pores; neutral (pH 6.8); gradual smooth boundary.
A3--16 to 28 inches; dark gray (N 4/0) sandy clay loam, black (10YR 2/1) moist; weak medium prismatic structure; hard, friable, sticky and plastic; few fine and very fine roots; few fine tubular and many very fine interstitial and tubular pores; few fine distinct dark yellowish brown (10YR 4/4) iron concentrations in pores, dark yellowish brown (10YR 3/4) moist; neutral (pH 6.8); gradual smooth boundary.
A4--28 to 43 inches; dark gray (N 4/0) sandy clay loam, black (N 2/0) moist; massive; hard, firm, sticky and plastic; few very fine and fine roots; few fine tubular, and many very fine interstitial and tubular pores; neutral (pH 6.8); gradual smooth boundary.
Cg--43 to 60 inches; gray (5Y 5/1) sandy clay loam, very dark gray (5Y 3/1) moist; massive; hard, friable, sticky and plastic; few very fine and fine roots; few fine tubular and many very fine interstitial and tubular pores; neutral (pH 6.8).

Type location: Washoe County, Nevada; about 150 feet west and 2,000 feet south of the northeast corner of section 1, T. 42 N., R. 18 E.; (41 degrees, 35 minutes, 29 seconds north latitude and 119 degrees, 54 minutes, 25 seconds west longitude.)

Range in Characteristics:

Soil moisture: Welch soils are saturated and have aquic conditions at or near the surface for a least one month during most years, mainly during the late winter and early spring months, water table drops to a depth of 18 to 36 inches from early spring through September.
Soil temperature: 41 to 46 degrees F.
Mollic epipedon thickness: 26 to over 60 inches, organic matter decreases irregularly with depth.
Control section: Clay content--27 to 35 percent, when mixed.
Mineralogy--Mixed, but the parent material has a large component of vitric pyroclastic materials.
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.

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--Few to many fine or medium redoximorphic concentrations either as pore linings or masses.

C horizons:
Hue--10YR, 2.5Y, 5Y or neutral.
Value--5 through 8 dry, 3 through 5 moist.
Chroma--0 through 2.
Structure--Massive or prismatic.
Texture--Stratified dominantly sandy clay loam or clay loam.
Consistence--Slightly hard or hard dry, very friable or friable moist. Slightly sticky or sticky and slightly plastic or plastic.
Reaction--Slightly acid to slightly alkaline.
Other features--None to many fine to coarse redox concentrations or depletions either as masses or pore linings.

Wendane Series

The Wendane series consists of very deep, somewhat poorly drained soils that formed in silty alluvium from mixed rocks, loess, and volcanic ash. The Wendane soils are on alluvial flats, stream terraces and smooth flood plains. Slopes are 0 to 4 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Aeric Halaquepts

Typical pedon: Wendane silt loam, in map unit 1145, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; light gray (10YR 7/1) silt loam, grayish brown (10YR 5/2) moist; moderate very thin platy structure; slightly hard, very friable, slightly sticky and plastic; few very fine roots; many very fine vesicular and tubular pores; strongly effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.
A2--3 to 10 inches; light gray (10YR 7/2) silt loam, brown (10YR 4/3) moist; moderate very thin and thin platy structure; hard, very friable, sticky and plastic; few very fine and fine roots; many very fine tubular pores; strongly effervescent; very strongly alkaline (pH 9.6); clear wavy boundary.
C--10 to 15 inches; light gray (10YR 7/2) silt loam, brown (10YR 4/3) moist; massive; hard, very friable, sticky and plastic; common very fine and few fine and medium roots; many very fine and few fine tubular pores; strongly effervescent; very strongly alkaline (pH 9.6); clear wavy boundary.
Cqk1--15 to 21 inches; white (10YR 8/2) silt loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, sticky and plastic; common very fine and few fine and medium roots; many very fine and few fine tubular pores; 20 percent weak, 10 to 30 millimeter durinodes; lime is disseminated; strongly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.
Cqk2--21 to 27 inches; white (10YR 8/1) very fine sandy loam (volcanic ash), light gray (10YR 7/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and fine tubular pores; 10 percent weak, 5 to 20 millimeter durinodes; 20 percent weak discontinuous silica cementation; lime is disseminated; strongly effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.
Ck--27 to 40 inches; light brownish gray (10YR 6/2) silty clay loam, dark grayish brown (10YR 4/2) moist; massive; hard, friable, sticky and plastic; few very fine roots; many very fine and common fine tubular pores; continuous thin clay films lining pores; common fine distinct strong brown (7.5YR 5/6) redox concentrations, brown (7.5YR 4/4) moist; slightly effervescent; few fine filaments of secondary carbonates; strongly alkaline (pH 8.6); clear wavy boundary.
Ab--40 to 48 inches; light gray (10YR 6/1) silty clay loam, very dark grayish brown and dark grayish brown (10YR 3/2 and 4/2) moist; massive; hard, friable, sticky and very plastic; few very fine roots; many very fine and few fine and medium tubular pores; continuous thin clay films lining pores; few snail shells evident; slightly effervescent; strongly alkaline (pH 8.6); clear irregular boundary.
C--48 to 65 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; massive; hard, friable, sticky and very plastic; few very fine roots; many very fine and few fine tubular pores; continuous thin clay films lining pores; 10 percent fine and medium pebbles; slightly effervescent; moderately alkaline (pH 8.4)

Type location: Washoe County, Nevada; near the Humboldt County line; west of High Rock Lake in an unsectioned area, T. 39 N., R. 23 E.; (41 degrees, 16 minutes, 54 seconds north latitude and 119 degrees, 18 minutes, 16 seconds west longitude.)

Range in Characteristics:

Soil moisture: Saturated within depths of 28 to 40 inches during the spring of most years. Dry mid-summer through mid-winter moist in mid-winter, spring, and early summer. Apparent seasonal water table is between 2.5 and 4 feet between February and July.
Soil temperature: 47 to 52 degrees F.
Mineralogy: Mixed, but has a strong influence from volcanic ash and other pyroclastic materials.
Depth to Cqk horizon: 11 to 20 inches.
Depth to redoximorphic concentrations: 8 to 27 inches.
Electrical conductivity: 16 to 32 millimhos per centimeter throughout.
SAR: 46 to 99 in half or more of the upper 20 inches and decreases with depth.
Profile reaction: Moderately alkaline to very strongly alkaline.
Other features: Unconformable stratified gravelly sand or very gravelly sand are common in some pedons below 40 inches. Some pedons have Cq horizons that are noneffervescent below 40 inches.
Control section:
Clay content--20 to 30 percent, when mixed.

A horizon:
Value--6 or 7 dry, 4 through 6 moist.
Chroma--1 through 4.
SAR--46 to 99

C and Cqk horizons:
Hue--10YR or 2.5Y.
Value--6 through 8 dry, 4 through 7 moist.
Chroma--1 through 4.
Texture--Stratified very fine sandy loam, silt loam, silty clay loam, and clay loam.
Structure--Thin platy or is massive. Prismatic parting to angular blocky in some subhorizons.
SAR--Less than 12.
Other features--Strata of volcanic ash that are 4 to 10 inches thick are common at some depth between 13 and 36 inches.
Cementation (Cqk horizons)--10 to 40 percent weakly or strongly cemented durinodes in a friable matrix and up to 30 percent discontinuous weak silica cementation in any one horizon.

Westbutte Series

The Westbutte series consists of moderately deep, well drained soils that formed in colluvium weathered from basalt, tuff and andesite. Westbutte soils are on hills and plateaus. Slopes are 4 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Pachic Haploxerolls

Typical pedon: Westbutte stony loam, in map unit 1346, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with about 2 percent stones, 10 percent cobbles, and 20 percent pebbles.
A--0 to 3 inches; dark grayish brown (10YR 4/2) stony loam, very dark brown (10YR 2/2) moist; weak very fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine interstitial and tubular pores; 1 percent stones, 10 percent cobbles and 20 percent pebbles; neutral (pH 7.2); abrupt wavy boundary.
AB--3 to 7 inches; grayish brown (10YR 5/2) very cobbly loam, very dark brown (10YR 2/2) moist; moderate very fine and fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine interstitial and tubular pores; 1 percent stones, 20 percent cobbles and 25 percent pebbles; neutral (pH 7.2); clear wavy boundary.
Bw1--7 to 14 inches; brown (10YR 5/3) very cobbly loam, dark brown (10YR 3/3) moist; strong fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine and common fine tubular pores; 20 percent cobbles and 20 percent pebbles; slightly alkaline (pH 7.4); clear wavy boundary.
Bw2--14 to 22 inches; grayish brown (10YR 5/3) very cobbly loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine and common fine tubular pores; 20 percent cobbles and 30 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.
Bw3--22 to 28 inches; yellowish brown (10YR 5/4) extremely cobbly loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; hard, very friable, sticky and plastic; common very fine and few fine roots; many very fine tubular pores; 5 percent stones, 25 percent cobbles and 40 percent pebbles; slightly alkaline (pH7.6); abrupt irregular boundary.
R--28 to 32 inches; Hard fractured andesite.

Type location: Washoe County, Nevada; about 700 feet west and 2,100 feet north of the southeast corner of section 20, T. 47 N., R. 19 E.; (41 degrees, 58 minutes, 44 seconds north latitude and 119 degrees, 52 minutes, 08 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 40 to 47 degrees F.
Depth to bedrock: 20 to 40 inches
Thickness of mollic: 20 to 40 inches
Reaction: Neutral or slightly alkaline
Control section:
Clay content--18 to 30 percent
Rock fragments--35 to 50 percent

A horizons:
Value--3 through 5 dry, 2 or 3 moist
Chroma--1 or 2

AB horizons:
Value--4 or 5 dry, 2 or 3 moist

Bw horizons:
Hue--10YR or 7.5YR
Value--4 or 5 dry, 2 or 3 moist
Chroma--2 through 4 dry, 2 or 3 moist
Structure--Subangular blocky or granular
Rock fragments--0 to 20 percent stones, 20 to 50 percent cobbles and 5 to 30 percent pebbles

Wetvit Series

The Wetvit series consists of very deep, very poorly drained soils that formed in alluvium from volcanic rocks and pyroclastic materials. Wetvit soils are on relatively narrow flood plains adjacent to plateaus and mountains. Slopes are 0 to 2 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Ashy, mesic Aquandic Endoaquolls

Typical pedon: Wetvit fine sandy loam, meadow, in map unit 1450 (Colors are for dry soil unless otherwise noted). The surface is covered with about 10 percent pebbles.

A1--0 to 16 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; hard, very friable, slightly sticky and nonplastic; many very fine and fine roots; common very fine tubular pores; few fine distinct dark brown (7.5YR 4/4) moist iron masses; slightly acid (pH 6.2); clear smooth boundary.

A2--16 to 25 inches; gray (10YR 5/1) fine sandy loam, very dark gray (10YR 3/1) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, very friable, slightly sticky and slightly plastic; common fine and very fine roots; common very fine tubular pores; common fine distinct dark yellowish brown (10YR 3/4) moist iron masses; slightly acid (pH 6.4); clear smooth boundary.

A3--25 to 35 inches; dark gray (10YR 4/1) stratified loam, black (10YR 2/1) moist; weak medium prismatic structure parting to moderate medium subangular blocky; very hard, firm, sticky and plastic; few fine and very fine roots; common very fine and fine tubular pores; common fine distinct dark brown (7.5YR 3/4) moist iron concentrations in masses and in pores; slightly acid (pH 6.4); clear smooth boundary.

A4--35 to 44 inches; gray (10YR 5/1) stratified loam, very dark gray (10YR 3/1) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, very friable, sticky and plastic; few very fine roots; common very fine tubular pores; common fine and medium distinct olive brown (2.5Y 4/3) and few fine distinct strong brown (7.5YR 4/6) iron concentrations in masses and in pores; neutral (pH 6.6); abrupt smooth boundary.

2C1--44 to 50 inches; gray (10YR 6/1) loamy sand, dark gray (10YR 4/1) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; common fine olive (5Y 4/4) iron concentrations in masses and in pores; neutral (pH 6.6); abrupt smooth boundary.

3C2--50 to 60 inches; light brownish gray (2.5Y 6/2) stratified sandy clay loam and loam, light olive brown (2.5Y 5/3) moist; massive; hard, very friable, sticky and plastic; few very fine roots; common very fine tubular pores; many coarse distinct gray (N 5/), common fine and medium distinct olive (5Y 4/4) and few coarse greenish gray (5G 5/1) iron concentrations and clay depletions in masses and in pores; neutral (pH 6.6).

Type location: Washoe County, Nevada; In Hanging Rock Canyon; about 2,500 feet east and 2,200 feet south of the northwest corner of section 31, T. 42 N., R. 23 E.; (41 degrees, 30 minutes, 45 seconds north latitude and 119 degrees, 25 minutes, 48 seconds west longitude.)

Range in Characteristics:

Soil moisture: Wetvit soils are saturated due to a seasonal water table at a depth of 0 to 18 inches mainly during the late winter and early spring months.
Soil temperature: 47 to 50 degrees F.
Mollic epipedon thickness: 26 to 48 inches, organic matter decreases irregularly with depth.
Control section:
Clay content--18 to 27 percent, when mixed.
Texture--Dominantly stratified loam or sandy clay loam, with strata of fine sandy loam or clay loam present in some pedons.
Rock fragments--Less than 15 percent.
Mineralogy: 35 to 60 percent glass in the very fine and fine sand size throughout.
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. Due to aeolian dust, some pedons are calcareous in the surfface layer.

A horizons:
Hue--10YR, 2.5Y, 5Y or neutral.
Value--3 through 5 dry, 2 or 3 moist.
Chroma--0 through 2.
Reaction--Slightly acid to slightly alkaline.
Other features--Few to many redoximorphic concentrations either as pore linings or masses are present within 17 inches.

C horizons:
Hue--10YR, 2.5Y, 5Y or neutral.
Value--5 through 8 dry, 3 through 5 moist.
Chroma--0 through 3.
Reaction--Neutral or slightly alkaline.
Structure--Massive or prismatic.
Texture--Stratified loam with strata of gravelly loamy sand to clay loam.
Other features--None to many fine to coarse redoximorphic concentrations or depletions either as masses or pore linings.

Wylo Series

The Wylo series consists of shallow, well drained soils that formed in residuum and lesser amounts of colluvium from basalt and andesite. The Wylo soils are on summits and side slopes of plateaus and hills. Slopes are 8 to 30 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Clayey, montmorillonitic, mesic Lithic Argixerolls

Typical pedon: Wylo very stony loam, in map unit 1160, rangeland. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 10 percent stones, 5 percent cobbles, and 25 percent pebbles.

A--0 to 4 inches; brown (7.5YR 5/2) very stony loam, dark brown (7.5YR 3/2) moist; moderate medium platy structure parting to weak fine subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; few very fine vesicular pores and common very fine tubular pores; 5 percent stones, 5 percent cobbles, 25 percent pebbles,; neutral (pH 7.0); clear smooth boundary.

Bt1--4 to 7 inches; brown (7.5YR 5/2) gravelly clay loam, dark brown (7.5YR 3/2) moist; moderate fine and medium angular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; many thin and few moderately thick clay films on faces of peds and in pores; 10 percent cobbles, 20 percent pebbles; neutral (pH 7.0); clear smooth boundary.

Bt2--7 to 11 inches; brown (7.5YR 5/2) gravelly clay, dark brown (7.5YR 4/2) moist; moderate fine and medium prismatic structure parting to strong fine and medium angular blocky; very hard, friable, very sticky and very plastic; few very fine and fine roots; common very fine tubular pores; many moderately thick and thick clay films on faces of peds and in pores; 10 percent cobbles, 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.

Bt3--11 to 15 inches; brown (7.5YR 5/4) gravelly clay, dark brown (7.5YR 4/4) moist; strong fine angular blocky structure; very hard, friable, very sticky and very plastic; few very fine and fine roots; few very fine tubular pores; many moderately thick and thick thick clay films on faces of peds; 10 percent cobbles, 20 percent pebbles; neutral (pH 7.0); abrupt irregular boundary.

R--15 to 19 inches; hard fractured basalt.

Type location: Washoe County, Nevada; about 2.75 miles north of High Rock Canyon; about 2.0 miles west of the Humboldt County line; about 2,200 feet north and 300 feet east of southwest corner of section 14 T. 40 N., R. 23 E.; (41 degrees, 22 minutes, 19 seconds north latitude and 119 degrees, 20 minutes, 26 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist winter, spring and early summer; dry July through October.
Soil temperature: 54 to 59 degrees F.
Depth to bedrock: 14 to 20 inches.
Mollic epipedon thickness: 7 to 11 inches, includes upper part of argillic horizon.
Profile reaction: Neutral or slightly alkaline.
Control section:
Clay content--35 to 50 percent.
Rock fragments--15 to 35 percent.

A horizon:
Hue--7.5YR or 10YR.
Chroma--2 or 3 dry or moist.

Bt horizons:
Hue--7.5YR or 10YR.
Value--3 or 4 moist, 4 or 5 dry.
Chroma--Dominantly 2 or 3 in upper part, 3 or 4 in lower part, moist or dry.
Texture--Dominantly clay or clay loam in the upper part.
Clay content--Individual subhorizons range from 35 to 55 percent, average is 35 to 50 percent.
Rock fragments--Average 15 to 35 percent, individual subhorizons may range up to 45 percent.

Yellowhills Series

The Yellowhills series consists of very deep, well drained soils that formed in alluvium high in volcanic ash. The Yellowhills soils are on inset fans. Slopes are 0 to 2 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Ashy, mesic Vitritorrandic Haploxerolls

Typical pedon: Yellowhills sandy loam, in map unit 1151, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; grayish brown (10YR 5/2) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine tubular and vesicular pores; neutral (pH 6.8); clear smooth boundary.

A2--2 to 16 inches; brown (10YR 5/3) sandy loam, very dark grayish brown (10YR 3/2) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine tubular pores; neutral (pH 6.8); clear smooth boundary.

Bw--16 to 34 inches; pale brown (10YR 6/3) fine sandy loam, dark brown (10YR 4/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine tubular pores; neutral (pH 6.8); clear smooth boundary.

Bq--34 to 60 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine

and fine roots; many very fine tubular pores; 10 percent weakly cemented durinodes; neutral (pH 7.0).

Type location: Washoe County, Nevada, near the Humboldt county line, about 100 feet north and 1,800 feet east of the southwest corner of section 36 T. 39 N., R. 23 E.; (41 degrees, 14 minutes, 07 seconds north latitude; 119 degrees, 19 minutes, 08 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring; dry from late June through October.
Soil temperature: 43 to 46 degrees F.
Mollic epipedon thickness: 10 to 20 inches.
Depth to Bq horizons: 25 to 40 inches.
Reaction: Neutral or slightly alkaline.
Control section:
Clay content--8 to 15 percent.
Rock fragments--0 to 15 percent.
Volcanic glass content: 60 to 80 percent of the 0.02 to 2 mm fraction.

A horizons:
Chroma--2 or 3

Bw horizon:
Value--3 or 4 moist.
Chroma--3 or 4.
Texture--Sandy loam or fine sandy loam.
Clay content--8 to 15 percent.
Rock fragments--0 to 15 percent.

Bq horizon:
Value--3 or 4 moist.
Chroma--3 or 4.
Texture--Sandy loam or fine sandy loam.
Clay content--8 to 15 percent.
Rock fragments--0 to 15 percent
Consistence--Soft or slightly hard, very friable or friable.
Other features--Has 5 to 15 percent weakly cemented durinodes or has few thin strata of discontinuous weak cementation. Some pedons have segregated lime.

Zorravista Series

The Zorravista series consists of very deep, excessively drained soils that formed in mixed aeolian material. The Zorravista soils are on semi-stabilized sand dunes and sand sheets superimposed on beach terraces. Slopes are 4 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Mixed, mesic Xeric Torripsamments

Typical pedon: Zorravista fine sand, in map unit 1030, rangeland. (Colors are for dry soil unless otherwise noted.)
A--0 to 4 inches; light brownish gray (2.5Y 6/2) fine sand, very dark grayish brown (2.5Y 3/2) moist; single grain; loose when dry and moist; few micro roots; many very fine and fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.
C1--4 to 29 inches; light brownish gray (2.5Y 6/2) fine sand, dark grayish-brown (2.5Y 4/2) moist; single grain; loose when dry and moist; very fine and few fine roots; many very fine and fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0); diffuse smooth boundary.
C2--29 to 60 inches; light brownish gray (2.5Y 6/2) fine sand, dark grayish brown (2.5Y 4/2) moist; single grained; loose when dry and moist; many micro and few very fine and fine roots; many very fine and fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0).

Type location: Washoe County, Nevada; about 3.5 miles southeast of Painted Point; about 2.5 miles south of Road 8A near Sand Spring in an unsectioned area. (41 degrees, 32 minutes, 52 seconds north latitude and 119 degrees, 40 minutes, 09 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, dry mid spring through fall, moist winter and early spring.
Soil temperature: 47 to 52 degrees F.
Control section:
Clay content--Less than 5 percent.
Other features--Effervescent to at least 20 inches.

A horizon:
Hue--10YR, 2.5Y.
Value--6 or 7 dry, 3 through 6 moist.
Chroma--1 through 4.
Reaction--Moderately alkaline or strongly alkaline.
Effervescence--Slightly effervescent or strongly effervescent.

C horizons:
Hue--10YR or 2.5Y.
Consistence--Soft to slightly hard or loose dry, very friable or loose moist.
Value--5 through 8 dry, 3 through 6 moist.
Chroma--1 through 4.
Texture--Fine sand, sand or loamy fine sand.
Clay content--Less than 5 percent in the upper part.
Reaction--Mildly alkaline through strongly alkaline.
Structure--Single grained or massive.
Effervescence--Noneffervescent to strongly effervescent.

Zymans Series

The Zymans series consists of deep and very deep, well drained soils that formed in residuum and colluvium from

volcanic rocks with additions of loess and ash. The Zymans soils are on mountains, hills, plateaus and rock pediments. Slopes are 4 to 15 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Aridic Argixerolls

Typical pedon: Zymans cobbly loam, in map unit 1285, rangeland. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; dark brown (10YR 5/3) cobbly loam, brown (10YR 3/3) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine interstitial pores; 10 percent pebbles and 15 percent cobbles; slightly alkaline (pH 7.6); clear wavy boundary.

A2--3 to 8 inches; brown (10YR 5/3) loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, common fine and few medium roots; many very fine tubular pores; 5 percent pebbles, 5 percent cobbles; slightly alkaline (pH 7.6); clear wavy boundary.

Bt1--8 to 14 inches; grayish brown (10YR 5/2) clay, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, very friable, very sticky and very plastic; many very fine and common fine and medium roots; many very fine tubular pores; common thin clay films on faces of peds and in pores; 10 percent pebbles; slightly alkaline (pH 7.6); clear wavy boundary.

Bt2--14 to 27 inches; yellowish brown (10YR 5/4) clay, dark brown (10YR 4/3) moist; strong fine and medium prismatic structure parting to strong fine and medium angular blocky; very hard, firm, very sticky and very plastic; common very fine and fine and few medium roots; common very fine tubular pores; many thin and common moderately thick dark yellowish brown (10YR 4/4) clay films, dark brown (10YR 3/3) moist on faces of peds and in pores; 10 percent pebbles; moderately alkaline (pH 7.8); clear wavy boundary.

Bt3--27 to 37 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; strong fine prismatic structure parting to strong fine and medium angular blocky; very hard, friable, very sticky and very plastic; common very fine and few fine and medium roots; few very fine tubular pores; many thin and common moderately thick dark yellowish brown (10YR 4/4) clay films, dark brown (10YR 3/3) moist clay films on faces of peds and in pores; 5 percent pebbles; moderately alkaline (pH 8.0); clear wavy boundary.

Btk--37 to 48 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 4/4) moist; moderate very fine and fine subangular blocky structure; very hard, very friable, very sticky and plastic; few very fine and fine roots; few very fine tubular pores; common thin dark yellowish brown (10Y 4/4) clay films, dark brown (10YR 3/3) moist on faces of peds and in pores; common fine soft masses of lime; slightly effervescent; 10 percent pebbles; moderately alkaline (pH 8.4); abrupt wavy boundary.

Cr--48 to 52 inches; white (10YR 8/1) weathered volcanic tuff, light gray (2.5Y 7/2) moist; strong medium and thick platy rock structure; common fine soft masses of lime on faces of plates.

Type location: Washoe County, Nevada; about 2,500 feet east and 4,000 feet north of the southwest corner of section 27, T. 43 N., R. 18 E.; (41 degrees, 37 minutes, 22 seconds north latitude and 119 degrees, 57 minutes, 16 seconds west longitude.)

Range in Characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.
Soil temperature: 47 to 52 degrees F.
Mollic epipedon: 10 to 19 inches thick, includes the upper Bt horizon.
Depth to base of Bt horizon: 40 to 60 inches.
Depth to weathered bedrock: 40 to 60 inches.
Control section:
Clay content--45 to 60 percent, subhorizons in some pedons range from 35 to 60 percent.
Rock fragments--5 to 20 percent.
Other features--Clay increase is gradual, with less than 20 percent within 3 inches of the boundary of the A and Bt horizon.

A horizon:
Value--4 or 5 dry, 2 or 3 moist.
Chroma--2 or 3.
Reaction--Neutral or slightly alkaline.

Bt horizon:
Hue--10YR or 7.5YR.
Value--4 through 6 dry, 2 through 4 moist.
Chroma--2 through 6. (Low value and chroma are in the upper part of the horizon)
Structure--Prismatic or blocky.
Consistence--Hard to very hard, dry.
Texture--The textures of the upper part of the Bt horizon are clay and silty clay, the lower part of the Bt horizon textures are silty clay loam, clay loam and clay with 0 to 15 percent rock fragments and averages 5 to 20 percent rock fragments;
Reaction--Neutral to moderately alkaline, increasing with depth.
Lime accumulation--Segregated lime occurs below 35 inches in most pedons.

Formation of the Soils

This section relates various soils in the survey area to the major factors of soil formation.

Soil is a natural body on the surface of the earth, in which plants grow. It is a mixture of rock and mineral matter, organic matter, water, and air, which occur in varying proportions. The rocks and minerals are fragmented and partly or wholly weathered. Soils have distinctive layers, or horizons, that are the product of environmental forces acting upon materials deposited or accumulated by geological agencies. The layers are more distinct in some soils than others.

The characteristics of the soils at any given point are determined by the interaction of (1) the parent material; (2) the climate in which the parent material has accumulated and has existed since accumulation; (3) the relief or topography, which influences the local, or internal environment of the soil, its drainage, moisture content, aeration, susceptibility to erosion, and exposure to sun and wind; (4) the biological forces that act upon the soil material; and (5) the length of time that climate, relief, and biological factors have acted on the parent material.

Climate

The climate of Washoe County, Nevada, North Part generally is characterized by warm, dry summers and cool, moist winters. The average annual precipitation ranges from about 6 inches on the eastern edge of Surprise Valley to about 18 inches in some of the higher elevation areas. The average annual air temperature ranges from about 50 degrees in the basins to 40 degrees in some of the higher mountains. Major climatic variations are the result of the effect of topography and relief. As a consequence, the soils within the area reflect a general zonation with increasing elevation.

At the lowest elevations on the eastern edge of Surprise Valley the precipitation is about 6 to 8 inches. Weathering of parent materials is slow, leaching is incomplete, and eluviation and illuviation proceed at a minimal rate. The plant cover consists mostly of a sparse stand of drought and salt tolerant shrubs. Typical soils are low in organic matter and have a light colored, thin A horizon. Bighat, Isolde, and Raglan soils are examples of soils formed in the driest, warmer parts of the survey area.

As the elevation increases there is an accompanying increase in precipitation. This is reflected by deeper leaching of salts and carbonates, decreasing reaction, changes in kind and density of vegetation, and thickening and darkening in the color of the A horizon.

At high elevations where the precipitation is about 16 inches, leaching of salts and carbonates is more intensive, the soils are slightly acid to neutral, and the A horizon is thick and high in content of organic matter. Easte, Hackwood, and Newlands soils are examples of soils formed where the climate is cool and moist.

Freezing and thawing generally occur throughout the area. The effects of frost action are discernible by the heaving of plants and puddling of surface soil resulting from saturation during daytime thaw.

Living Organisms

Plants, animals, insects, and microorganisms are important biological forces that affect soil formation in the area. Plants appear to have the dominant effect.

On wet soils, the dense growth of sedges, grass, and other plants supply the organic matter that gives Welch and Wetvit soils a dark color.

Plants, because of climatic controls, reflect considerable variations in kind and amount as elevation increases. On basins, flood plains, alluvial fans, and terraces at low elevations, the plants are principally desert shrubs. Because of the scarcity of available moisture, plants cover only a small part of the surface. They add little organic matter to the soil, give little protection from wind and provide meager shade. Salt tolerant shrubs, which occur in this kind of plant community, also tend to recycle salts from deeper subsurface layers to the soil surface. Mazuma and Raglan soils are examples of soils formed under sparse vegetation.

Alluvial fans, terraces, and foothills of higher elevations have a plant cover of shrubs and grass, which is transitional from the desert shrub to the upland shrub and tree plant communities. The density of plants in these areas is somewhat greater, and the soils have accumulated more organic matter and have a darker colored A horizon. Langston and Saraph soils formed under transitional vegetation consisting mainly of sagebrush and grasses.

The plateaus and mountainous areas have denser stands of plants, which are dominated by shrubs, grasses, and trees. Because of the more abundant vegetation, the A horizon of the soils in these areas is dark colored, has subangular blocky soil structure and has increased considerably in thickness. Fiddler, Hapgood, and Newlands soils formed under the vegetation common to mountains and high plateus.

Relief

Relief, through its controls on drainage, runoff, and erosion, has had an important effect on soil formation in the area. Physiographic features of the area, which control relief to a considerable extent, include: (1) north-south oriented mountain ranges; (2) volcanic plateaus; and (3) enclosed valleys.

The mountain ranges are mainly characterized by excessive relief. Runoff is rapid to very rapid, and erosion occurs at a rapid rate. The removal of material by erosion interferes with soil profile development. Because of erosion, soil development is reflected primarily by dark A horizons. Bt horizons and Bw horizons occur in the more stable soils on these landscapes. Hartig, Hapgood, and Newlands soils are examples.

The volcanic plateaus have normal to subnormal relief. Runoff is slow to medium, and the removal of material by erosion is minimal. Because erosion is so slow, soil development has been able to proceed over a considerable period of time. The soils developed on these landscapes have a relatively thin A horizon and a clayey Bt horizon and are underlain by bedrock or duripan. Devada, Ferver, Halvert, Jaybee, Madeline, Ninemile, Nitpac, and Tinpan are examples of soils that have developed on plateaus.

The valleys are essentially basins that receive drainage from surrounding uplands. A typical valley is characterized by having a nearly flat playa or intermittent lake in its lowest part, which is bordered by lacustrine terraces, numerous longshore bars, embankments, and other shoreline features. Large fan piedmonts flank upland mountains and encroach on lower lying terraces, lake shorelines, and playas.

The terraces, fan piedmonts, and shoreline features have mostly normal relief. Erosion is essentially in equilibrium with the rate of soil development. Examples of soils that have formed on these landscapes include Orr and Surprise soils.

The low flat terraces and narrow flood plains have flat or concave relief. Runoff is very slow and the poor drainage in these soils has caused the formation of development of redoximorphic features. The soils in these areas support dense stands of meadow vegetation that has resulted in a dark colored A horizon because of the large additions of organic matter to the soil. Welch and Wetvit soils are examples of soils that have formed on these landscapes. Some soils that are subject to a high water table contain excessive soluble salts in their upper horizons. These soils are light colored and some have salt crusts on their surface. Examples of some of the soils developed on salt affected, flat, or concave surfaces are Dugway, Skullwak, and Updike series.

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 content of weatherable minerals, greatly influence soil formation. The main sources of parent material in Washoe County, Nevada, North Part are hard rock, weakly to strongly consolidated pyroclastic rocks, alluvium, and eolian sand. Hard rock sources of parent material principally include massive and jointed basalt, rhyolite, and andesite. These rocks contain considerable minerals that weather to form clays. Rhyolite contains considerable quartz and yields much quartz sand as a weathering product. The various kinds of hard rock in the area provide the parent material for a large part of the soils on mountains and plateaus. Generally, under comparable conditions, basalt, rhyolite, and andesite weather at a slower rate than other kinds of rock in the area.

Volcanic tuff, ash, breccia, obsidian, and agglomerate are interbeded with basalt, andesite, and rhyolite on the mountains and plateaus. Tuff also is interbeded with some of the older valley alluvium. Volcanic ash occurs in varying amounts in most of the parent materials within the survey area. The pyroclastic rocks have a mineralogical composition comparable to the various hard volcanic-flow rocks with which they are associated. They consequently weather to yield similar clays and other products of weathering. Because they are generally softer and more porous, the pyroclastic rocks are believed to weather more rapidly than the more massive hard rocks.

Alluvium, which is the parent material for the major area of soils in Long Valley and Mosquito Valley, consists of sandy, loamy, and clayey materials of mixed mineralogical composition that washed from surrounding uplands. These parent materials were deposited on alluvial fans, or narrow flood plains, and in lake basins. Alluvial deposits on fan piedmonts and flood plains are mostly loamy textured and contain varying amounts of gravel, cobble, and stones. Because of high porosity, particle-size characteristics, and a high content of weatherable minerals, these kinds of alluvial deposits have a potential for rapid weathering.

Alluvial deposits in lake basins consist mostly of silty and clayey material that contain varying amounts of salts. The Longdis and Updike soils are examples of soils formed in alluvium on the lake basins. Gravel and sand occur within the basins as longshore bars, lagoons, and other shoreline deposits. The Bighat, Langston, Fernpoint, Mazuma, Paypoint and Mcwatt soils are examples of soils formed in this kind of material. Weathering of the loamy materials can proceed rapidly under favorable conditions because of the high content of weatherable minerals and porosity. The clayey materials contain low amounts of weatherable minerals and have low permeability. Weathering is consequently slow and less obvious than in other parent materials in the area.

Eolian deposits and sandy beach deposits are in dune areas or beaches around the lake basin. These materials are sands of mixed mineralogical composition. They are porous and, under favorable conditions, have a potential for considerable alteration. The Davey, Mazuma, Isolde, and Zorravista soils are examples of soils on beaches or dunes.

Because of the general mineralogical similarity in parent materials of Washoe County, Nevada, North Part, soil formation under comparable climate, relief, and biological conditions tends toward the development of soils that have similar kinds and sequences of horizons. Notable exceptions are those soils that formed in clayey parent materials, and those soils that contain considerable amounts of volcanic ash and glass. High shrink-swell

action in clayey materials tends to restrict the development of subsurface horizons by causing mixing. Examples of these kinds of soils are the Boulder Lake, Karlo, Tunnison, and Weimer soils. Soils with considerable volcanic ash and glass are young enough that they usually show only some soil development. The Ashcamp, Ashdos, Ashone, Ashtre, Bitner, Boltz, Emagert, Frentera, Paypoint, Saraph, Tuffo, Tusune, Weezweed, Wetvit, and Yellowhills are examples of soils formed in material with considerable volcanic ash and glass. Other soils that contain ash and glass have weathered enough to produce silica. The weathering and the availability of silica in these materials tends to form horizons cemented by silica. The Buffaran, Chime, Esmod, Ferver, Grassycan, Halvert, Hangrock, Indian Creek, Lofftus, Nellspring, Nitpac and Powlow are examples of soils with horizons cemented by silica.

Time

The effect of time on soil formation in Washoe County, Nevada, North Part is readily apparent. The existence of flood plains, lacustrine terraces, sequences of alluvial fans and the stable volcanic plateaus indicate the relative age of soils formed on these landscapes.

The flood plains and presently aggrading alluvial fans are the most recent parent materials. Some recent parent materials that have been exposed to weathering by erosion are also in the steep mountains. Soils on these recent landforms have little or no profile development other than the formation of an A horizon with or without a Bw horizon. Wetvit soils on flood plains and Hapgood soils in upland areas are examples of soils that formed in recent parent material.

The intensity of soil development increases in sequence from recent to older landscapes. On lacustrine terraces that are believed to date back to the close of the Pleistocene epoch and on alluvial fans and stable mountain areas of comparable age, the soils have developed an A horizon and a Bw or weak Bt horizon. Hartig, McConnel, Raglan, and Surprise soils are examples of soils that formed on landscapes of this age.

On landscapes that are believed to date back to late interpluvial periods of the Wisconsin stage, the soils have developed distinct A and Bt horizons and in some areas Bk or Bq horizons. The Bt horizon is strongly expressed and ranges in texture from clay loam to light clay. Major soil development in these soils probably took place prior to the Recent epoch. Hart Camp, Schamp, Uhaldi, and Zymans are examples of soils believed to date back to late in the Wisconsin age.

Older alluvial fans, terraces, and plateaus are believed to date back to the earlier part of the early Wisconsin stage of the Pleistocene epoch. Soils on these landscapes have an A horizon and a fine or very fine Bt horizon. Some soils on these landscapes have also developed indurated, silica cemented duripans. Stones and cobbles are only on the surface of some of these soils, possibly indicating frost activity during glacial periods of the Pleistocene epoch or a residual effect of longtime weathering and deepening of the soil profile. Soils that are believed to represent total effects of soil development over a period of time dating to the early Wisconsin age include Cotant, Esmod, Ferver, Madeline, Ninemile, Tinpan, and Toney soils.

Comparisons of soil profiles and the relative age of landscapes indicate that soils having distinct argillic (Bt) horizons may have developed their primary characteristics during the Wisconsin stage of the Pleistocene epoch. This indicates that soil development in Washoe County, Nevada, North Part has not been a rapid process.

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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 floodplain landform of extensive, marshy, or swampy, depressed areas of flood plains 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 adjacent 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 total 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 (HCL) 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 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 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. 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,*

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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.

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Soil Survey of Washoe County, Nevada, North Part

Part II

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Soil Survey of Washoe County, Nevada, North Part

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 and uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, 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.--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 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), 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 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" (6), 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 irrigated capability classification of each farmland 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 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.

About 90 percent of the acreage in this survey area is rangeland. Livestock grazing is the principal agricultural use of the rangeland. Livestock operations are mostly cow-calf or cow-calf-sheep enterprises. Ranches range from a few hundred to several thousands 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. The Bureau of Indian Affairs has management responsibility for the rangeland within Indian reservations.

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

The early devastation of rangeland plant communities through uncontrolled livestock grazing ended long ago, but severely depleted areas still reflect the abuses of early settlement. In the most severly 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 other 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 developement of these ratings are available from the local Nevada office of the Natural Resources Conservation Service. 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 Washoe County, Nevada, North Part" later in this section. Additional information about rangeland management can be obtained from local offices of the Natural Resources Conservation Service or 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. Prescribed 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 Washoe County, Nevada, North Part." 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 Washoe County, Nevada, North Part

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 appendix in the section "Rangeland Plants and Woodland Understory" shows 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 flood plains 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.

Washoe County, Nevada, North Part 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, Sandberg bluegrass, and desert needlegrass.

The salt-desert shrub plant communities in the survey area include stands dominated by a single shrub species and 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 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 habitat 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. Sand dunes formed through the deposition of windblown sediment are commonly on the leeward side of the playas in this survey area. Although of limited extent, partially stabilized sand dunes provide important habitat for both predator and prey vertebrate wildlife. Kangaroo rats, kit foxes, and bobcats inhabit the sand dunes.

Sagebrush-grass plant communities are at the lower elevations (4500 to 5500 feet) in the survey area. The average annual precipitation at these elevations is between 8 and 10 inches.

Wyoming big sagebrush, Lahontan sagebrush (a newly recognized subspecies of low 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 to 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 (5500 to 6800 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 stratigically 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.

Western juniper plant communities are at mid-elevations in the survey area. Local expansion of western juniper from woodland sites to the adjacent rangeland is common. The invasion of western juniper into sagebrush-grass communities has been attributed to overgrazing, a scarcity of naturally recurring fires, and climatic conditions. Young trees are readily killed by fire. The loss of fine fuel to carry fire and, to a lesser extent, fire control have limited the frequency and extent of natural fires in the sagebrush-grass zone. This reduction in the frequency of fires has allowed seedlings to become established in increasing numbers on sites that at one time supported virtually no trees.

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 (5800 to 7000 feet) 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 the table "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, 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 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 floodwater overtops the lagoon. A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor.

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 ground-water pollution. The ratings in the table "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 the table "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

Tables 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 the table "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 the table "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. The table "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 floodplain landform of extensive, marshy, or swampy, depressed areas of flood plains 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 adjacent 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 community that has a unique kind and/or proportion of species or total 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 (HCL) 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 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 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. 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.

TABLES

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1934-72 at Sheldon, 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---	34.1	17.1	25.6	53	-13	2	1.43	0.70	2.06	4
February--	36.2	18.8	27.5	53	-5	3	1.14	0.54	1.66	4
March-----	40.7	20.5	30.6	61	-2	16	1.09	0.58	1.54	4
April-----	50.6	25.7	38.1	71	8	77	0.93	0.44	1.35	3
May-------	59.8	31.9	45.8	78	13	217	1.26	0.59	1.84	4
June------	67.3	37.2	52.3	86	21	358	1.35	0.43	2.11	4
July------	78.9	43.7	61.3	91	28	641	0.31	0.11	0.66	0
August----	78.1	43.0	60.6	91	27	617	0.47	0.09	0.93	1
September-	70.3	37.5	53.9	86	16	426	0.47	0.09	0.78	1
October---	57.6	31.2	44.4	78	9	199	0.99	0.32	1.58	2
November--	44.3	24.1	34.2	63	1	39	1.17	0.55	1.83	3
December--	37.2	19.8	28.5	56	-7	6	1.30	0.57	1.92	4
Yearly :										
Average	54.6	29.2	41.9	----	----	----	---	---	---	---
Extreme	100	-29	---	93	-15	----	---	---	---	---
Total	---	---	---	----	----	2,602	11.90	9.38	14.09	34

*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 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1960-80 at Vya, 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---	39.2	14.3	26.7	57	-15	6	1.55	0.87	2.32	4
February--	42.0	18.7	30.4	58	-6	7	1.08	0.42	1.78	3
March-----	44.8	21.4	33.1	66	-0	31	1.38	0.70	1.97	4
April-----	51.9	26.3	39.1	73	10	80	1.09	0.61	1.51	3
May-------	63.5	33.8	48.6	84	16	266	1.33	0.44	2.05	3
June------	73.1	41.9	57.5	91	26	485	1.19	0.36	2.00	3
July------	83.8	47.5	65.6	96	33	768	0.36	0.14	0.69	1
August----	82.4	45.2	63.8	95	30	694	0.68	0.18	1.48	1
September-	74.2	37.0	55.6	89	21	433	0.44	0.15	0.80	1
October---	61.6	28.3	45.0	82	10	200	1.22	0.33	1.94	3
November--	47.7	23.0	35.3	70	0	30	1.78	0.92	2.73	4
December--	39.7	17.0	28.4	57	-13	6	1.56	0.70	2.29	5
Yearly										
Average	58.7	29.5	44.1	----	----	----	---	---	---	---
Extreme	101	-33	---	98	-19	----	---	---	---	---
Total	---	---	---	----	----	3,006	13.65	10.37	15.93	35

*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 1934-72 at Sheldon, 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--	June 19	July 9	July 22
2 years in 10 later than--	June 12	July 3	July 16
5 years in 10 later than--	May 31	June 20	July 5
First freezing temperature in fall:			
1 year in 10 earlier than--	September 1	August 22	August 8
2 years in 10 earlier than--	September 8	August 29	August 14
5 years in 10 earlier than--	September 21	September 12	August 25

TABLE 2.--FREEZE DATES IN SPRING AND FALL

(Recorded in the period 1960-80 at Vya, 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 31	June 9	July 2
2 years in 10 later than--	May 25	June 4	June 26
5 years in 10 later than--	May 13	May 26	June 13
First freezing temperature in fall:			
1 year in 10 earlier than--	September 18	August 30	August 17
2 years in 10 earlier than--	September 23	September 6	August 23
5 years in 10 earlier than--	October 2	September 18	September 3

TABLE 3.--GROWING SEASON

(Recorded in the period 1934-72 at Sheldon, Nevada.)

Probability	Daily Minimum Temperature during growing season		
	Higher than 24 degrees F.	Higher than 28 degrees F.	Higher than 32 degees F.
	Days	Days	Days
9 years in 10	78	47	25
8 years in 10	86	57	33
5 years in 10	103	75	49
2 years in 10	120	93	65
1 year in 10	128	102	73

TABLE 3.--GROWING SEASON

(Recorded in the period 1960-80 at Vya, Nevada.)

Probability	Daily Minimum Temperature during growing season		
	Higher than 24 degrees F.	Higher than 28 degrees F.	Higher than 32 degees F.
	Days	Days	Days
9 years in 10	95	78	54
8 years in 10	104	87	62
5 years in 10	121	102	76
2 years in 10	137	118	91
1 year in 10	146	127	98

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
1010	Macyflet-Boulder Lake association	4,930	0.7
1011	Macyflet silt loam, 0 to 2 percent slopes	440	*
1012	Macyflet-Indian Creek association	390	*
1015	Powlow very gravelly loam, 2 to 15 percent slopes	3,550	0.5
1020	Bearbutte-Welch association	240	*
1025	Mesman fine sandy loam, 0 to 4 percent slopes	60	*
1030	Zorravista fine sand, 4 to 15 percent slopes	100	*
1035	Ninemile-Madeline-Crocan association	9,180	1.3
1036	Tinpan-Ninemile association	8,580	1.2
1040	Langston gravelly sandy loam, 2 to 8 percent slopes	7,090	1.0
1041	Langston-Old Camp-Paypoint association	1,240	0.2
1045	Paypoint-Langston association	25,000	3.6
1050	Skullwak silt loam, 0 to 2 percent slopes	3,440	0.5
1055	Devada-Hapgood-Hart Camp association	3,910	0.6
1060	Bombadil-Chime association	1,960	0.3
1061	Old Camp gravelly loam, 8 to 30 percent slopes	1,185	0.2
1062	Old Camp-Corral association	1,300	0.2
1063	Old Camp very stony loam, 8 to 30 percent slopes	3,490	0.5
1065	Old Camp-Reywat-Rubble Land association	8,910	1.3
1070	Oreneva very gravelly loam, 2 to 15 percent slopes	50	*
1075	Surprise gravelly loamy sand, 2 to 15 percent slopes	3,650	0.5
1080	Bucklake-Rock Outcrop-Corral association	1,950	0.3
1081	Bucklake-Fiddler association	3,300	0.5
1083	Bucklake-Rubble Land association	5,500	0.8
1090	Jaybee-Verdico association	1,610	0.2
1095	Corral-Mahala association	1,200	0.2
1105	Freznik very stony loam, 2 to 15 percent slopes	370	*
1110	Indian Creek-Buffaran association	3,810	0.5
1115	Lofftus-Mesman complex, 0 to 2 percent slopes	40	*
1120	McConnel very stony sandy loam, 2 to 8 percent slopes	100	*
1121	McConnel gravelly fine sandy loam, 2 to 8 percent slopes	560	*
1125	Halvert-Jaybee-Tunnison association	4,490	0.6
1130	Soughe-Rock Outcrop complex, 4 to 30 percent slopes	2,130	0.3
1131	Soughe-Rock Outcrop complex, 30 to 50 percent slopes	1,320	0.2
1135	Mcwatt-Old Camp association	1,380	0.2
1140	Valmy very fine sandy loam, 0 to 2 percent slopes	350	*
1141	Valmy-Langston-Paypoint association	1,490	0.2
1145	Wendane silt loam, 0 to 2 percent slopes, rarely flooded	80	*
1150	Saraph-Hangrock-Tuffo association	30,450	4.3
1151	Saraph-Tuffo-Yellowhills association	70	*
1155	Madeline-Ninemile complex, 4 to 15 percent slopes	240	*
1160	Wylo-Bucklake-Rock Outcrop association	6,080	0.9
1162	Devada-Nitpac association	2,420	0.3
1163	Devada-Deseed complex, 2 to 15 percent slopes	270	*
1164	Devada-Ashcamp association	5,660	0.8
1165	Devada-Nitpac-Bidrim association	36,930	5.2
1166	Devada-Bieber association	30,550	4.3
1167	Devada-Reywat association	18,090	2.6
1168	Devada extremely cobbly loam, 4 to 15 percent slopes	10,816	1.5
1170	Devada-Bucklake association	2,710	0.4
1171	Devada-Indian Creek association	2,620	0.4
1172	Devada-Madeline-Ninemile association	350	*
1173	Devada-Nitpac-Uhaldi association	2,740	0.4
1174	Devada-Uhaldi association	1,620	0.2
1175	Ferver-Tunnison association	11,720	1.7
1180	Ninemile-Karlo association	2,590	0.4
1181	Ninemile-Madeline-Tinpan association	15,380	2.2
1182	Ninemile-Westbutte complex, 2 to 15 percent slopes	3,780	0.5
1183	Ninemile-Westbutte association, 30 to 50 percent slopes	660	*
1184	Ninemile-Tinpan association	7,630	1.1
1185	Ninemile-Hart Camp association	17,480	2.5

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
1186	Ninemile-Tinpan-Crocan association	20,560	2.9
1187	Ninemile-Tinpan-Hart Camp association	6,190	0.9
1188	Ninemile-Newlands-Hart Camp association	1,430	0.2
1189	Ninemile-Badgercamp-Crocan association	1,240	0.2
1190	Ferver-Nitpac association	3,780	0.5
1195	Bitner-Ashcamp association	5,820	0.8
1205	Davey loamy fine sand, 2 to 15 percent slopes	4,600	0.7
1206	Davey-Corral association	14,010	2.0
1210	Maruma-Bighat association	3,760	0.5
1215	Raglan-Isolde association	330	*
1220	Schamp very stony loam, 4 to 15 percent slopes	2,300	0.3
1221	Schamp very stony loam, 30 to 50 percent slopes	330	*
1223	Schamp loam, 4 to 15 percent slopes	1,870	0.3
1230	Raglan-Maruma association	1,080	0.2
1235	Chime gravelly loam, 4 to 15 percent slopes	2,170	0.3
1240	Toney-Millerlux-Hart Camp association	570	*
1245	Saraph-Uhaldi-Frentera association	8,190	1.2
1250	Ashone-Ashdos-Bearbutte association	4,180	0.6
1251	Ashone-Ashdos-Ashtre association	4,440	0.6
1253	Ashdos-Ashtre-Hackwood association	9,950	1.4
1255	Newlands-Ninemile complex, 4 to 15 percent slopes	220	*
1256	Newlands-Menbo association	3,880	0.6
1257	Newlands-Hapgood association	1,810	0.3
1258	Newlands-Badgercamp-Hackwood association	960	0.1
1265	Fitzwater-Westbutte association	740	0.1
1270	Hartig gravelly loam, 8 to 30 percent slopes	4,850	0.7
1271	Hartig-Newlands association	2,860	0.4
1272	Hartig-Rock Outcrop association	690	*
1273	Hartig-Hapgood association	1,870	0.3
1275	Hart Camp stony loam, 8 to 30 percent slopes	4,030	0.6
1276	Hart Camp-Reywat-Westbutte association	310	*
1277	Hart Camp-Ninemile association	23,750	3.4
1278	Boltz-Hart Camp association	1,910	0.3
1279	Hart Camp-Nutzan-Westbutte association	1,710	0.2
1285	Zymans-Indian Creek association	2,400	0.3
1286	Zymans-Cotant-Hart Camp association	2,490	0.4
1290	Hapgood-Badgercamp-Hackwood association	1,980	0.3
1295	Devoy-Blizzard complex, 2 to 15 percent slopes	130	*
1296	Blizzard very cobbly silty clay loam, 0 to 15 percent slopes	90	*
1305	Updike-Maruma association	7,620	1.1
1306	Updike-Longdis association	2,300	0.3
1310	Longdis-Updike association	37,298	5.3
1311	Longdis-Macyflet-Aeric Epiaquents association	5,290	0.8
1312	Longdis-Dugway association	9,730	1.4
1313	Longdis silt loam, 0 to 2 percent slopes	830	0.1
1320	Dugway fine sandy loam, 0 to 2 percent slopes	6,100	0.9
1321	Dugway-Updike association	8,620	1.2
1325	Reywat-Devada-Hart Camp association	2,590	0.4
1326	Reywat very stony loam, 8 to 30 percent slopes	3,490	0.5
1327	Reywat-Westbutte-Hapgood association	3,110	0.4
1328	Reywat-Fernpoint association	8,260	1.2
1329	Reywat-Devada association	3,530	0.5
1335	Westbutte-Rock Outcrop association	650	*
1336	Westbutte-Ashtre-Tusune association	4,990	0.7
1345	Layview-Hapgood association	1,710	0.2
1346	Layview-Westbutte-Hapgood association	9,990	1.4
1355	Badgercamp-Hackwood-Easte association, 4 to 30 percent slopes	670	*
1356	Badgercamp-Hackwood-Easte association, 30 to 70 percent slopes	510	*
1358	Badgercamp-Hackwood association	370	*
1360	Welch clay loam, 0 to 4 percent slopes	530	*
1361	Wetvit association	610	*

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	Percent
1365	Rubble Land-Dosie association	7,410	1.1
1366	Dosie very stony loam, 15 to 50 percent slopes	1,380	0.2
1367	Dosie-Fiddler-Rubble Land association	4,070	0.6
1375	Cotant-Madeline association	2,960	0.4
1380	Weimer-Boulder Lake association	4,540	0.6
1385	Fernpoint very gravelly sandy loam, 8 to 30 percent slopes	2,440	0.3
1395	Orr-Fernpoint association	5,980	0.9
1400	Bombadil-Ceejay association	17,380	2.5
1410	Fulstone-Saraph-Tuffo association	5,460	0.8
1412	Fulstone-Nellspring-Buffaran association	8,100	1.2
1420	Hangrock very gravelly loam, 2 to 15 percent slopes	3,650	0.5
1430	Grassycan association	3,740	0.5
1431	Esmod-Powlow association	5,050	0.7
1440	Tusune-Hartig association	10,970	1.6
1450	Emagert-Wetvit association	1,080	0.2
1460	Weerweed loam, 0 to 2 percent slopes	1,700	0.2
1470	Ninemile very cobbly loam, 2 to 15 percent slopes	140	*
9901	Playas	15,490	2.2
9902	Rock Outcrop-Rubble Land complex, 50 to 75 percent slopes	325	*
W	Water	104	*
	Total	703,478	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
1010:	
Macyflet	Short frost-free season Water table
Boulder Lake	Ponding Poor tilth Potential for ground-water pollution Short frost-free season Water table
1011:	
Macyflet	Short frost-free season Water table
1012:	
Macyflet	Short frost-free season Water table
Indian Creek	Limited available water capacity Restricted permeability Root restrictive layer Short frost-free season Surface rock fragments
1015:	
Powlow	Erosion by water Limited available water capacity Root restrictive layer Slope Surface rock fragments
1020:	
Bearbutte	Erosion by water Limited available water capacity Short frost-free season Slope
Welch	Potential for ground-water pollution Short frost-free season Water table
1025:	
Mesman	Limited available water capacity Salt content Sodium content Surface crusting

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1030:	
Zorravista	Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface crusting
1035:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Madeline	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Crocan	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones
1036:	
Tinpan	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Surface rock fragments
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
1040:	
Langston	Limited available water capacity Potential for ground-water pollution Soil blowing

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1041:	
Langston	Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing
Old Camp	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface crusting Surface rock fragments
Paypoint	Limited available water capacity Potential for ground-water pollution Soil blowing
1045:	
Paypoint	Limited available water capacity Potential for ground-water pollution Soil blowing
Langston	Limited available water capacity Potential for ground-water pollution Soil blowing
1050:	
Skullwak	Flooding Lime content Potential for ground-water pollution Salt content Sodium content Surface crusting Water table

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1055:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Hapgood	Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
1060:	
Bombadil	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface stones
Chime	Depth to rock Erosion by water Limited available water capacity Slope
1061:	
Old Camp	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface crusting

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1062:	
Old Camp	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface crusting Surface rock fragments
Corral	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
1063:	
Old Camp	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface crusting Surface stones
1070:	
Oreneva	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
1075:	
Surprise	Slope

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1080:	
Bucklake	Areas of rock outcrop Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones
Rock outcrop	Nonsoil material
Corral	Areas of rock outcrop Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
1090:	
Jaybee	Depth to rock Limited available water capacity Potential for ground-water pollution Soil blowing Surface crusting Surface rock fragments
Verdico	Depth to rock Erosion by water Limited available water capacity Slope Surface stones
1095:	
Corral	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Mahala	Depth to rock Limited available water capacity Short frost-free season Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1105:	
Freznik	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones
1110:	
Indian Creek	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Surface rock fragments
Buffaran	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Soil blowing Surface stones
1115:	
Lofftus	Lime content Limited available water capacity Potential for ground-water pollution Root restrictive layer Salt content Sodium content Soil blowing Surface crusting Water table
Mesman	Limited available water capacity Salt content Sodium content Surface crusting
1120:	
McConnel	Limited available water capacity Potential for ground-water pollution Salt content Soil blowing Surface stones
1121:	
McConnel	Limited available water capacity Potential for ground-water pollution Salt content Soil blowing Surface crusting

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1125:	
Halvert	Depth to rock Limited available water capacity Root restrictive layer
Jaybee	Depth to rock Limited available water capacity Potential for ground-water pollution Soil blowing Surface crusting Surface rock fragments
Tunnison	Depth to rock Limited available water capacity Poor tilth Potential for ground-water pollution Soil blowing Surface rock fragments
1130:	
Soughe	Areas of rock outcrop Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface crusting Surface rock fragments
Rock outcrop	Nonsoil material
1131:	
Soughe	Areas of rock outcrop Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface crusting Surface rock fragments
Rock outcrop	Nonsoil material

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1135:	
McWatt	Limited available water capacity Potential for ground-water pollution Slope Surface stones
Old Camp	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Surface crusting Surface stones
1140:	
Valmy	Flooding Salt content Sodium content Surface crusting
1141:	
Valmy	Erosion by water Potential for ground-water pollution Salt content Sodium content Surface crusting
Langston	Limited available water capacity Potential for ground-water pollution Soil blowing
Paypoint	Limited available water capacity Potential for ground-water pollution Soil blowing
1145:	
Wendane	Lime content Potential for ground-water pollution Salt content Sodium content Surface crusting Water table

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1150:	
Saraph	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing Surface rock fragments
Hangrock	Limited available water capacity Root restrictive layer Slope Surface rock fragments
Tuffo	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing Surface rock fragments
1151:	
Saraph	Depth to rock Limited available water capacity Soil blowing
Tuffo	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
Yellowhills	None
1155:	
Madeline	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1160:	
Wylo	Areas of rock outcrop Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Bucklake	Areas of rock outcrop Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones
Rock outcrop	Nonsoil material
1162:	
Devada	Depth to rock Limited available water capacity Potential for ground-water pollution Slope Surface rock fragments
Nitpac	Depth to rock Limited available water capacity Root restrictive layer Surface rock fragments
1163:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface rock fragments
Deseed	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1164:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface rock fragments
Ashcamp	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
1165:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface rock fragments
Nitpac	Depth to rock Limited available water capacity Root restrictive layer Slope Surface rock fragments
Bidrim	Depth to rock Limited available water capacity Potential for ground-water pollution Slope Surface stones
1166:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Bieber	Erosion by water Limited available water capacity Root restrictive layer Short frost-free season Slope Soil blowing Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1167:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Reywat	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
1168:	
Devada	Depth to rock Limited available water capacity Potential for ground-water pollution Slope Surface rock fragments
1170:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Bucklake	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1171:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface stones
Indian Creek	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Surface rock fragments
1172:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Madeline	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1173:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface rock fragments
Nitpac	Depth to rock Limited available water capacity Root restrictive layer Slope Surface rock fragments
Uhaldi	Depth to rock Erosion by water Limited available water capacity Slope Surface stones
1174:	
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface rock fragments
Uhaldi	Depth to rock Erosion by water Limited available water capacity Slope Surface stones
1175:	
Ferver	Limited available water capacity Root restrictive layer Surface rock fragments
Tunnison	Depth to rock Limited available water capacity Poor tilth Potential for ground-water pollution Soil blowing Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1180:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Karlo	Depth to rock Limited available water capacity Poor tilth Potential for ground-water pollution Short frost-free season Surface rock fragments
1181:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Madeline	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Tinpan	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1182:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Westbutte	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones
1184:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Tinpan	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Surface rock fragments
1185:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1186:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Tinpan	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Surface rock fragments
Crocan	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones
1187:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Tinpan	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Surface rock fragments
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1188:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Newlands	Erosion by water Potential for ground-water pollution Short frost-free season Slope Surface stones
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
1189:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Badgercamp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Crocan	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1190:	
Ferver	Erosion by water Limited available water capacity Root restrictive layer Slope Surface rock fragments
Nitpac	Depth to rock Limited available water capacity Root restrictive layer Slope Surface rock fragments
1195:	
Bitner	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
Ashcamp	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing
1205:	
Davey	Erosion by water Potential for ground-water pollution Slope Soil blowing
1206:	
Davey	Erosion by water Potential for ground-water pollution Short frost-free season Slope Soil blowing
Corral	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Soil blowing

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1210:	
Mazuma	Lime content Salt content Sodium content Surface crusting
Bighat	Erosion by water Excessive permeability below restriction Lime content Limited available water capacity Potential for ground-water pollution Slope Sodium content Soil blowing Surface crusting Surface stones
1215:	
Raglan	Salt content Sodium content Surface crusting
Isolde	Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface crusting
1220:	
Schamp	Erosion by water Short frost-free season Slope Surface stones
1223:	
Schamp	Erosion by water Short frost-free season Slope
1230:	
Raglan	Salt content Sodium content Surface crusting
Mazuma	Lime content Salt content Sodium content Surface crusting

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1235:	
Chime	Depth to rock Erosion by water Limited available water capacity Slope
1240:	
Toney	Depth to rock Limited available water capacity Short frost-free season Surface rock fragments
Millerlux	Depth to rock Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
1245:	
Saraph	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Soil blowing Surface rock fragments
Uhaldi	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Frentera	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1250:	
Ashone	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface rock fragments
Ashdos	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface rock fragments
Bearbutte	Erosion by water Limited available water capacity Short frost-free season Slope
1251:	
Ashone	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface rock fragments
Ashdos	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface rock fragments
Ashtre	Depth to rock Erosion by water Short frost-free season Slope Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1255:	
Newlands	Erosion by water Potential for ground-water pollution Short frost-free season Slope Surface stones
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
1256:	
Newlands	Erosion by water Potential for ground-water pollution Short frost-free season Slope Surface stones
Menbo	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
1257:	
Newlands	Erosion by water Potential for ground-water pollution Short frost-free season Slope Surface stones
Hapgood	Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1258:	
Newlands	Erosion by water Potential for ground-water pollution Short frost-free season Slope Surface stones
Badgercamp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Hackwood	Erosion by water Short frost-free season Slope
1270:	
Hartig	Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope
1272:	
Hartig	Areas of rock outcrop Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
Rock outcrop	Nonsoil material
1275:	
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1277:	
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
1278:	
Boltz	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Soil blowing
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
1279:	
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Nutzan	Depth to rock Erosion by water Short frost-free season Slope Soil blowing
Westbutte	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1285:	
Zymans	Erosion by water Slope Surface rock fragments
Indian Creek	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Surface rock fragments
1286:	
Zymans	Erosion by water Short frost-free season Slope Surface rock fragments
Cotant	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface rock fragments
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
1290:	
Hapgood	Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
Badgercamp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Hackwood	Short frost-free season Slope

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1295:	
Devoy	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
Blizzard	Depth to rock Erosion by water Limited available water capacity Poor tilth Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
1296:	
Blizzard	Depth to rock Erosion by water Limited available water capacity Poor tilth Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
1305:	
Updike	Lime content Salt content Sodium content Soil blowing Surface crusting Water table
Mazuma	Lime content Salt content Sodium content Surface crusting
1306:	
Updike	Lime content Salt content Sodium content Soil blowing Surface crusting Water table
Longdis	Sodium content Surface crusting

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1310:	
Longdis	Sodium content Surface crusting
Updike	Flooding Lime content Salt content Sodium content Soil blowing Surface crusting Water table
1311:	
Longdis	Flooding Short frost-free season Sodium content Soil blowing Surface crusting
Macyflet	Short frost-free season Water table
Aeric Epiaquents	Ponding Potential for ground-water pollution Short frost-free season Surface crusting Water table
1312:	
Longdis	Sodium content Surface crusting
Dugway	Root restrictive layer Sodium content Soil blowing Surface crusting Water table
1313:	
Longdis	Flooding Sodium content Soil blowing Surface crusting
1320:	
Dugway	Root restrictive layer Sodium content Soil blowing Surface crusting Water table

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1321:	
Dugway	Root restrictive layer Sodium content Soil blowing Surface crusting Water table
Updike	Flooding Lime content Salt content Sodium content Soil blowing Surface crusting Water table
1325:	
Reywat	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Hart Camp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
1326:	
Reywat	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1327:	
Reywat	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Westbutte	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones
Hapgood	Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
1328:	
Reywat	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Fernpoint	Erosion by water Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1329:	
Reywat	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
Devada	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface stones
1335:	
Westbutte	Areas of rock outcrop Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Surface stones
Rock outcrop	Nonsoil material
1336:	
Westbutte	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
Ashtre	Depth to rock Erosion by water Short frost-free season Slope
Tusune	Depth to rock Erosion by water Short frost-free season Slope Surface stones

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1345:	
Layview	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Hapgood	Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments
1346:	
Layview	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
Westbutte	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface stones
Hapgood	Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1355:	
Badgercamp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Hackwood	Erosion by water Short frost-free season Slope
Easte	Erosion by water Limited available water capacity Short frost-free season Slope Surface rock fragments
1358:	
Badgercamp	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface stones
Hackwood	Erosion by water Short frost-free season Slope
1360:	
Welch	Flooding Potential for ground-water pollution Short frost-free season Water table
1361:	
Wetvit	Flooding Potential for ground-water pollution Water table
Wetvit	Flooding Potential for ground-water pollution Water table

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1375:	
Cotant	Depth to rock Erosion by water Limited available water capacity Short frost-free season Slope Surface rock fragments
Madeline	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
1380:	
Weimer	Ponding Poor tilth Potential for ground-water pollution Short frost-free season Water table
Boulder Lake	Ponding Poor tilth Potential for ground-water pollution Short frost-free season Water table
1385:	
Fernpoint	Erosion by water Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Slope Surface rock fragments
1395:	
Orr	None
Fernpoint	Erosion by water Excessive permeability below restriction Limited available water capacity Potential for ground-water pollution Slope Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1400:	
Bombadil	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface stones
Ceejay	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Slope Soil blowing Surface stones
1410:	
Fulstone	Erosion by water Limited available water capacity Root restrictive layer Slope Soil blowing Surface rock fragments
Saraph	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing Surface rock fragments
Tuffo	Depth to rock Erosion by water Limited available water capacity Slope Soil blowing Surface rock fragments

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1412:	
Fulstone	Erosion by water Limited available water capacity Root restrictive layer Slope Soil blowing Surface rock fragments
Nellspring	Erosion by water Root restrictive layer Slope Soil blowing Surface rock fragments
Buffaran	Erosion by water Limited available water capacity Restricted permeability Root restrictive layer Slope Soil blowing
1420:	
Hangrock	Limited available water capacity Root restrictive layer Slope Surface rock fragments
1430:	
Grassycan	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Root restrictive layer Slope Soil blowing Surface stones
Grassycan	Depth to rock Limited available water capacity Potential for ground-water pollution Root restrictive layer Surface stones

TABLE 5.--CROPLAND LIMITATIONS AND HAZARDS--Continued

Soil name and map symbol	Cropland limitations or hazards
1431:	
Esmod	Erosion by water Limited available water capacity Root restrictive layer Slope Soil blowing Surface rock fragments
Powlow	Erosion by water Limited available water capacity Root restrictive layer Slope Surface rock fragments
1450:	
Emagert	Water table
Wetvit	Flooding Potential for ground-water pollution Water table
1460:	
Weezweed	Water table
1470:	
Ninemile	Depth to rock Erosion by water Limited available water capacity Potential for ground-water pollution Short frost-free season Slope Soil blowing Surface rock fragments
9901:	
Playas	Nonsoil material

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
1121:		
McConnel	4S	5.2
1140:		
Valmy	2W	5.0
1215:		
Raglan	2C	---
Isolde	4S	4.0
1395:		
Orr	3E	4.5
Fernpoint		---

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1010:		
Macyflet	Poorly suited	Rooting depth.
Boulder Lake	Suited	Too arid, too clayey.
1011:		
Macyflet	Poorly suited	Rooting depth.
1012:		
Macyflet	Poorly suited	Rooting depth.
Indian Creek	Poorly suited	Droughty, rooting depth.
1015:		
Powlow	Poorly suited	Droughty, small stones, rooting depth.
1020:		
Bearbutte	Suited	Too arid
Welch	Well suited	
1025:		
Mesman	Poorly suited	Too arid, droughty, rooting depth.
1030:		
Zorravista	Poorly suited	Droughty, too sandy, soil blowing.
1035:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Madeline	Poorly suited	Rooting depth.
Crocan	Poorly suited	Droughty, rooting depth.
1036:		
Tinpan	Poorly suited	Rooting depth.
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
1040:		
Langston	Poorly suited	Rooting depth.
1041:		
Langston	Poorly suited	Rooting depth.
Old Camp	Poorly suited	Droughty, large stones, rooting depth.
Paypoint	Suited	Too arid.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1045:		
Paypoint	Suited	Too arid.
Langston	Poorly suited	Rooting depth.
1050:		
Skullwak	Poorly suited	Rooting depth, excess salt, excess sodium.
1055:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Hapgood	Poorly suited	Small stones.
Hart Camp	Suited	Too arid, droughty, depth to rock.
1060:		
Bombadil	Poorly suited	Droughty.
Chime	Suited	Too arid, droughty.
1061:		
Old Camp	Poorly suited	Droughty, large stones.
1062:		
Old Camp	Poorly suited	Droughty, small stones, rooting depth.
Corral	Poorly suited	Droughty.
1063:		
Old Camp	Poorly suited	Droughty, small stones, rooting depth.
1065:		
Old Camp	Poorly suited	Droughty, small stones, rooting depth.
Reywat	Poorly suited	Droughty, large stones, rooting depth.
Rubble Land	Poorly suited	Too arid, droughty, large stones.
1070:		
Oreneva	Suited	Too arid, droughty.
1075:		
Surprise	Suited	Too arid, droughty.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1080:		
Bucklake	Poorly suited	Small stones.
Rock Outcrop	Not rated	
Corral	Poorly suited	Droughty.
1081:		
Bucklake	Poorly suited	Small stones.
Fiddler	Poorly suited	Rooting depth.
1083:		
Bucklake	Poorly suited	Small stones.
Rubble Land	Poorly suited	Too arid, droughty, large stones.
1090:		
Jaybee	Poorly suited	Droughty, small stones, rooting depth.
Verdico	Poorly suited	Rooting depth.
1095:		
Corral	Poorly suited	Droughty, erodes easily.
Mahala	Poorly suited	Small stones, rooting depth.
1105:		
Frezmik	Poorly suited	Rooting depth.
1110:		
Indian Creek	Poorly suited	Droughty, rooting depth.
Buffaran	Poorly suited	Droughty, rooting depth.
1115:		
Lofftus	Poorly suited	Droughty, excess salt, excess sodium.
Mesman	Poorly suited	Too arid, droughty, rooting depth.
1120:		
Mcconnel	Poorly suited	Small stones, excess salt.
1121:		
Mcconnel	Poorly suited	Excess salt.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1125:		
Halvert	Poorly suited	Rooting depth.
Jaybee	Poorly suited	Droughty, small stones, rooting depth.
Tunnison	Poorly suited	Too arid.
1130:		
Soughe	Poorly suited	Droughty, small stones.
Rock Outcrop	Not rated	
1131:		
Soughe	Poorly suited	Droughty, small stones.
Rock Outcrop	Not rated	
1135:		
Mcwatt	Poorly suited	Droughty, large stones.
Old Camp	Poorly suited	Droughty, small stones, rooting depth.
1140:		
Valmy	Poorly suited	Excess salt, excess sodium.
1141:		
Valmy	Poorly suited	Excess salt, excess sodium.
Langston	Poorly suited	Rooting depth.
Paypoint	Suited	Too arid.
1145:		
Wendane	Poorly suited	Too arid, excess salt, excess sodium.
1150:		
Saraph	Poorly suited	Droughty.
Hangrock	Poorly suited	Small stones.
Tuffo	Poorly suited	Droughty, depth to rock.
1151:		
Saraph	Poorly suited	Droughty, too sandy.
Tuffo	Poorly suited	Droughty, depth to rock.
Yellowhills	Suited	Too arid.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1155:		
Madeline	Poorly suited	Rooting depth.
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
1160:		
Wylo	Poorly suited	Droughty, rooting depth.
Bucklake	Poorly suited	Large stones.
Rock Outcrop	Not rated	
1162:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Nitpac	Poorly suited	Small stones, rooting depth.
1163:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Deseed	Suited	Too arid.
1164:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Ashcamp	Poorly suited	Droughty.
1165:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Nitpac	Poorly suited	Small stones, rooting depth.
Bidrim	Poorly suited	Droughty, rooting depth.
1166:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Bieber	Poorly suited	Droughty, small stones, rooting depth.
1167:		
Devada	Poorly suited	Droughty, rooting depth.
Reywat	Poorly suited	Droughty, rooting depth.
1168:		
Devada	Poorly suited	Droughty, small stones, rooting depth.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1170:		
Devada	Poorly suited	Droughty, rooting depth.
Bucklake	Poorly suited	Small stones.
1171:		
Devada	Poorly suited	Droughty, rooting depth.
Indian Creek	Poorly suited	Droughty, rooting depth.
1172:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Madeline	Poorly suited	Rooting depth.
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
1173:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Nitpac	Poorly suited	Small stones, rooting depth.
Uhaldi	Poorly suited	Rooting depth.
1174:		
Devada	Poorly suited	Droughty, small stones, rooting depth.
Uhaldi	Poorly suited	Rooting depth.
1175:		
Ferver	Poorly suited	Rooting depth.
Tunnison	Poorly suited	Too arid.
1180:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Karlo	Suited	Too arid, droughty, too clayey.
1181:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Madeline	Poorly suited	Rooting depth.
Tinpan	Poorly suited	Rooting depth.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1182:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Westbutte	Poorly suited	Droughty.
1183:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Westbutte	Poorly suited	Droughty.
1184:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Tinpan	Poorly suited	Rooting depth.
1185:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Hart Camp	Suited	Too arid, droughty, depth to rock.
1186:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Tinpan	Poorly suited	Rooting depth.
Crocan	Poorly suited	Droughty, rooting depth.
1187:		
Ninemile	Poorly suited	Droughty, rooting depth.
Tinpan	Poorly suited	Rooting depth.
Hart Camp	Suited	Too arid, droughty, depth to rock.
1188:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Newlands	Well suited	
Hart Camp	Suited	Too arid, droughty, depth to rock.
1189:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
Badgercamp	Poorly suited	Droughty.
Crocan	Poorly suited	Droughty, rooting depth.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1190:		
Ferver	Poorly suited	Rooting depth.
Nitpac	Poorly suited	Small stones, rooting depth.
1195:		
Bitner	Suited	Too arid, droughty.
Ashcamp	Poorly suited	Droughty.
1205:		
Davey	Suited	Too arid, droughty, too sandy.
1206:		
Davey	Suited	Too arid, droughty, too sandy.
Corral	Poorly suited	Droughty, rooting depth.
1210:		
Maruma	Poorly suited	Too arid, excess salt, excess sodium.
Bighat	Poorly suited	Too arid, droughty, rooting depth.
1215:		
Raglan	Poorly suited	Too arid, excess salt, excess sodium.
Isolde	Poorly suited	Too arid, too sandy.
1220:		
Schamp	Poorly suited	Rooting depth.
1221:		
Schamp	Poorly suited	Rooting depth, erodes easily.
1223:		
Schamp	Poorly suited	Rooting depth.
1230:		
Raglan	Poorly suited	Too arid, excess salt, excess sodium.
Maruma	Poorly suited	Too arid, excess salt, excess sodium.
1235:		
Chime	Suited	Too arid, droughty.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1240:		
Toney	Poorly suited	Small stones, rooting depth.
Millerlux	Poorly suited	Droughty, rooting depth.
Hart Camp	Suited	Too arid, droughty, depth to rock.
1245:		
Saraph	Poorly suited	Droughty.
Uhaldi	Poorly suited	Rooting depth.
Frentera	Suited	Too arid, droughty.
1250:		
Ashone	Suited	Too arid.
Ashdos	Suited	Too arid, droughty.
Bearbutte	Suited	Too arid
1251:		
Ashone	Suited	Too arid.
Ashdos	Suited	Too arid, droughty.
Ashtre	Suited	Too arid.
1253:		
Ashdos	Suited	Too arid, droughty, erodes easily.
Ashtre	Suited	Too arid.
Hackwood	Well suited	
1255:		
Newlands	Well suited	
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
1256:		
Newlands	Well suited	
Menbo	Poorly suited	Rooting depth.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1257:		
Newlands	Suited	Erodes easily.
Hapgood	Poorly suited	Small stones.
1258:		
Newlands	Well suited	
Badgercamp	Poorly suited	Droughty.
Hackwood	Well suited	
1265:		
Fitswater	Poorly suited	Droughty, large stones.
Westbutte	Poorly suited	Droughty.
1270:		
Hartig	Suited	Too arid, droughty.
1271:		
Hartig	Suited	Too arid, droughty, large stones.
Newlands	Well suited	
1272:		
Hartig	Poorly suited	Droughty, small stones.
Rock Outcrop	Not rated	
1273:		
Hartig	Poorly suited	Droughty, small stones, erodes easily.
Hapgood	Poorly suited	Small stones.
1275:		
Hart Camp	Suited	Too arid, droughty, depth to rock.
1276:		
Hart Camp	Poorly suited	Erodes easily.
Reywat	Poorly suited	Droughty.
Westbutte	Poorly suited	Droughty, large stones.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1277:		
Hart Camp	Suited	Too arid, droughty, depth to rock.
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
1278:		
Boltz	Suited	Too arid.
Hart Camp	Suited	Too arid, droughty, depth to rock.
1279:		
Hart Camp	Suited	Too arid, droughty, depth to rock.
Nutzan	Suited	Too arid.
Westbutte	Poorly suited	Droughty, small stones.
1285:		
Zymans	Poorly suited	Rooting depth.
Indian Creek	Poorly suited	Droughty, rooting depth.
1286:		
Zymans	Poorly suited	Rooting depth.
Cotant	Poorly suited	Rooting depth.
Hart Camp	Suited	Too arid, droughty, depth to rock.
1290:		
Hapgood	Poorly suited	Small stones.
Badgercamp	Poorly suited	Droughty.
Hackwood	Well suited	
1295:		
Devoy	Suited	Droughty, large stones.
Blizzard	Poorly suited	Droughty, rooting depth.
1296:		
Blizzard	Poorly suited	Droughty, rooting depth.
1305:		
Updike	Poorly suited	Too arid, rooting depth, excess salt.
Maruma	Poorly suited	Too arid, excess salt, excess sodium.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1306:		
Updike	Poorly suited	Too arid, rooting depth, excess salt.
Longdis	Poorly suited	Excess sodium.
1310:		
Longdis	Poorly suited	Excess sodium.
Updike	Poorly suited	Too arid, rooting depth, excess salt.
1311:		
Longdis	Poorly suited	Rooting depth, excess sodium.
Macyflet	Poorly suited	Rooting depth.
Aeric Epiaquents	Poorly suited	Rooting depth.
1312:		
Longdis	Poorly suited	Excess sodium.
Dugway	Poorly suited	Rooting depth, excess sodium.
1313:		
Longdis	Poorly suited	Rooting depth, excess sodium.
1320:		
Dugway	Poorly suited	Rooting depth, excess sodium.
1321:		
Dugway	Poorly suited	Rooting depth, excess sodium.
Updike	Poorly suited	Too arid, rooting depth, excess salt.
1325:		
Reywat	Poorly suited	Droughty, rooting depth.
Devada	Poorly suited	Droughty, small stones, rooting depth.
Hart Camp	Suited	Too arid, droughty, depth to rock.
1326:		
Reywat	Poorly suited	Droughty, rooting depth.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1327:		
Reywat	Poorly suited	Droughty.
Westbutte	Poorly suited	Droughty.
Hapgood	Poorly suited	Small stones.
1328:		
Reywat	Poorly suited	Droughty.
Fernpoint	Poorly suited	Small stones.
1329:		
Reywat	Poorly suited	Droughty, rooting depth.
Devada	Poorly suited	Droughty, rooting depth.
1335:		
Westbutte	Poorly suited	Droughty.
Rock Outcrop	Not rated	
1336:		
Westbutte	Poorly suited	Droughty, small stones.
Ashtre	Suited	Too arid.
Tusune	Well suited	
1345:		
Layview	Poorly suited	Droughty, small stones.
Hapgood	Poorly suited	Small stones.
1346:		
Layview	Poorly suited	Droughty, small stones.
Westbutte	Poorly suited	Droughty.
Hapgood	Poorly suited	Small stones.
1355:		
Badgercamp	Poorly suited	Droughty.
Hackwood	Well suited	
Easte	Poorly suited	Small stones.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1356:		
Badgercamp	Poorly suited	Droughty, erodes easily.
Hackwood	Well suited	
Kaste	Poorly suited	Small stones.
1358:		
Badgercamp	Poorly suited	Droughty.
Hackwood	Well suited	
1360:		
Welch	Well suited	
1361:		
Wetvit	Well suited	
Wetvit	Well suited	
1365:		
Rubble Land	Poorly suited	, droughty, large stones.
Dosie	Poorly suited	Small stones, rooting depth.
1366:		
Dosie	Poorly suited	Small stones, rooting depth.
1367:		
Dosie	Poorly suited	Small stones, rooting depth.
Fiddler	Poorly suited	Rooting depth.
Rubble Land	Poorly suited	Too arid, droughty, large stones.
1375:		
Cotant	Poorly suited	Rooting depth.
Madeline	Poorly suited	Rooting depth.
1380:		
Weimer	Suited	Too arid, too clayey.
Boulder Lake	Suited	Too arid, too clayey.
1385:		
Fernpoint	Poorly suited	Small stones.

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1395:		
Orr	Suited	Too arid, droughty.
Fernpoint	Poorly suited	Small stones.
1400:		
Bombadil	Poorly suited	Droughty.
Ceejay	Poorly suited	Droughty, rooting depth.
1410:		
Fulstone	Poorly suited	Droughty, rooting depth.
Saraph	Poorly suited	Droughty.
Tuffo	Poorly suited	Droughty, depth to rock.
1412:		
Fulstone	Poorly suited	Droughty, rooting depth.
Nellspring	Poorly suited	Rooting depth.
Buffaran	Poorly suited	Droughty, rooting depth.
1420:		
Hangrock	Poorly suited	Small stones.
1430:		
Grassycan	Poorly suited	Too arid, droughty, rooting depth.
Grassycan	Poorly suited	Too arid, droughty, rooting depth.
1431:		
Esmod	Poorly suited	Droughty, small stones, rooting depth.
Powlow	Poorly suited	Droughty, small stones, rooting depth.
1440:		
Tusune	Poorly suited	Erodes easily.
Hartig	Poorly suited	Droughty, small stones.
1450:		
Emagert	Suited	Too arid.
Wetvit	Well suited	

Table 7.--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1460:		
Weerweed	Suited	Too arid.
1470:		
Ninemile	Poorly suited	Droughty, small stones, rooting depth.
9901:		
Playas	Poorly suited	Too arid, droughty, excess salt.
9902:		
Rock Outcrop	Not rated	
Rubble Land	Poorly suited	Too arid, droughty, large stones.
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
1035: Ninemile. Madeline. Crocan----------	1X	Slight	Moderate	Moderate	Slight	Severe	Western juniper-----	15	1
1081: Bucklake. Fiddler---------	1R	Moderate	Severe	Moderate	Slight	Moderate	Western juniper-----	20	1
1165: Devada. Nitpac. Bidrim----------	1X	Slight	Moderate	Moderate	Slight	Severe	Western juniper-----	15	1
1186: Ninemile. Tinpan. Crocan----------	1X	Slight	Moderate	Moderate	Slight	Severe	Western juniper-----	15	1
1189: Ninemile. Badgercamp. Crocan----------	1X	Slight	Moderate	Moderate	Slight	Severe	Western juniper-----	15	1
1253: Ashdos. Ashtre. Hackwood--------	1R	Severe	Severe	Slight	Moderate	Slight	Quaking aspen-------	40	1
1258: Newlands. Badgercamp. Hackwood--------	1A	Moderate	Moderate	Slight	Moderate	Slight	Quaking aspen-------	40	1
1290: Hapgood. Badgercamp. Hackwood--------	1A	Slight	Slight	Slight	Moderate	Slight	Quaking aspen-------	40	1

TABLE 8.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

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
1355: Badgercamp.									
Hackwood	1A	Moderate	Moderate	Slight	Moderate	Slight	Quaking aspen	40	1
Easte	5F	Slight	Slight	Severe	Slight	Slight	White fir	42	5
1356: Badgercamp.									
Hackwood	1R	Severe	Severe	Slight	Moderate	Slight	Quaking aspen	40	1
Easte	5R	Slight	Severe	Severe	Slight	Slight	White fir	42	5
1358: Badgercamp.									
Hackwood	1A	Moderate	Moderate	Slight	Moderate	Slight	Quaking aspen	40	1
1367: Dosie.									
Fiddler	1R	Moderate	Severe	Moderate	Slight	Moderate	Western juniper	20	1
Rubble Land.									

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
1010:												
Macyflet	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Boulder Lake	---	---	Poor	---	---	Poor	Good	Good	---	---	Good	Poor
1011:												
Macyflet	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1012:												
Macyflet	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Indian Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1015:												
Powlow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1020:												
Bearbutte	---	---	Good	---	---	Good	---	---	---	---	---	Good
Welch	---	---	Fair	---	---	Fair	Poor	Good	---	---	Fair	Fair
1025:												
Mesman	Very Poor	Very Poor	Poor	---	---	Poor	---	---	Poor	---	---	Poor
1030:												
Zorravista	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1035:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Madeline	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Crocan	---	---	Fair	---	Fair	Fair	---	---	---	Fair	---	Fair
1036:												
Tinpan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1040:												
Langston	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1041:												
Langston	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Old Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Paypoint	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1045:												
Paypoint	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Langston	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1050:												
Skullwak	---	---	Very Poor	---	---	Very Poor	Very Poor	Fair	---	---	Poor	Very 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
1055:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1060:												
Bombadil	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Chime	---	---	Fair	---	---	Poor	---	---	---	---	---	Poor
1061:												
Old Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1062:												
Old Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Corral	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1063:												
Old Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1065:												
Old Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reywat	Very Poor	Very Poor	Poor	---	---	Poor	Very Poor	Very Poor	Very Poor	---	Very Poor	Poor
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
1070:												
Oreneva	Fair	Fair	Good	---	---	Good	Very Poor	Very Poor	Fair	---	Very Poor	Good
1075:												
Surprise	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1080:												
Bucklake	Very Poor	Very Poor	Fair	Very Poor	---	Fair	Very Poor	Very Poor	---	---	---	Fair
Rock Outcrop.												
Corral	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1081:												
Bucklake	Very Poor	Very Poor	Fair	Very Poor	---	Fair	Very Poor	Very Poor	---	---	---	Fair
Fiddler	---	Poor	Good	---	Fair	Good	---	---	---	Fair	---	Good
1083:												
Bucklake	Very Poor	Very Poor	Fair	Very Poor	---	Fair	Very Poor	Very Poor	---	---	---	Fair
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

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
1090:												
Jaybee	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Verdico	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1095:												
Corral	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Mahala	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1105:												
Freznik	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1110:												
Indian Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Buffaran	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1115:												
Lofftus	Poor	Fair	Very Poor	---	---	Very Poor	Poor	Poor	Poor	---	Poor	Very Poor
Mesman	Very Poor	Very Poor	Poor	---	---	Poor	---	---	Poor	---	---	Poor
1120:												
McConnel	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1121:												
McConnel	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1125:												
Halvert	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Jaybee	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Tunnison	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1130:												
Soughe	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
1131:												
Soughe	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
1135:												
Mcwatt	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Old Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1140:												
Valmy	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1141:												
Valmy	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Langston	---	---	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
1141 (con.):												
Paypoint	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1145:												
Wendane	---	---	Very Poor	---	---	Very Poor	Very Poor	Fair	---	---	Poor	Very Poor
1150:												
Saraph	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Mangrock	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tuffo	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1151:												
Saraph	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Tuffo	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Yellowhills	---	---	Good	---	---	Good	---	---	---	---	---	Good
1155:												
Madeline	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1160:												
Wylo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bucklake	Very Poor	Very Poor	Fair	Very Poor	---	Fair	Very Poor	Very Poor	---	---	---	Fair
Rock Outcrop.												
1162:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Nitpac	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1163:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Deseed	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1164:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ashcamp	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1165:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Nitpac	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Bidrim	---	---	Fair	---	Fair	Fair	---	---	---	Fair	---	Fair
1166:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bieber	---	---	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
1167:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reywat	Poor	Poor	Fair	---	---	Poor	Very Poor	Very Poor	Poor	---	Very Poor	Poor
1168:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1170:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Bucklake	Very Poor	Very Poor	Fair	Very Poor	---	Fair	Very Poor	Very Poor	---	---	---	Fair
1171:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Indian Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1172:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Madeline	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1173:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Nitpac	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Uhaldi	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1174:												
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Uhaldi	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1175:												
Ferver	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Tunnison	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1180:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Karlo	---	---	Poor	---	---	Very Poor	---	---	---	---	---	Poor
1181:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Madeline	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tinpan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1182:												
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
1182 (con.):												
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
1183:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
1184:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tinpan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1185:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1186:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tinpan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Crocan	---	---	Fair	---	Fair	Fair	---	---	---	Fair	---	Fair
1187:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tinpan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1188:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Newlands	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1189:												
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Badgercamp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Crocan	---	---	Fair	---	Fair	Fair	---	---	---	Fair	---	Fair
1190:												
Ferver	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Nitpac	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1195:												
Bitner	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ashcamp	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1205:												
Davey	---	---	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
1206:												
Davey	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Corral	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1210:												
Mazuma	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very Poor
Bighat	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1215:												
Raglan	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very Poor
Isolde	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1220:												
Schamp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1221:												
Schamp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1223:												
Schamp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1230:												
Raglan	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very Poor
Mazuma	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very Poor
1235:												
Chime	---	---	Fair	---	---	Poor	---	---	---	---	---	Poor
1240:												
Toney	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Millerlux	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1245:												
Saraph	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Uhaldi	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Frentera	---	---	Good	---	---	Good	---	---	---	---	---	Good
1250:												
Ashone	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ashdos	---	---	Fair	---	---	Fair	---	---	---	---	---	Good
Bearbutte	---	---	Good	---	---	Good	---	---	---	---	---	Good
1251:												
Ashone	---	---	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
1251 (con.):												
Ashdos	---	---	Fair	---	---	Fair	---	---	---	---	---	Good
Ashtre	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1253:												
Ashdos	---	---	Fair	---	---	Fair	---	---	---	---	---	Good
Ashtre	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good
1255:												
Newlands	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1256:												
Newlands	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Menbo	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1257:												
Newlands	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1258:												
Newlands	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Badgercamp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good
1265:												
Fitzwater	Poor	Fair	Fair	---	---	Fair	---	---	Fair	---	---	Fair
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
1270:												
Hartig	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1271:												
Hartig	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Newlands	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1272:												
Hartig	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Rock Outcrop.												
1273:												
Hartig	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1275:												
Hart Camp	---	---	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
1276:												
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Reywat	Very Poor	Very Poor	Poor	---	---	Poor	Very Poor	Very Poor	Very Poor	---	Very Poor	Poor
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
1277:												
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1278:												
Boltz	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1279:												
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Nutzan	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
1285:												
Zymans	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Indian Creek	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1286:												
Zymans	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Cotant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1290:												
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Badgercamp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good
1295:												
Devoy	Poor	Poor	Fair	---	---	Fair	---	---	Poor	---	---	Fair
Blizzard	Poor	Poor	Fair	---	---	Fair	Very Poor	Very Poor	Poor	Fair	Very Poor	Fair
1296:												
Blizzard	Poor	Poor	Fair	---	---	Fair	Very Poor	Very Poor	Poor	Fair	Very Poor	Fair
1305:												
Updike	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very 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
1305 (con.):												
Mazuma	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very Poor
1306:												
Updike	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very Poor
Longdis	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1310:												
Longdis	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Updike	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very Poor
1311:												
Longdis	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Macyflet	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Aeric Epiaquents	---	---	---	---	---	---	Good	Good	---	---	Good	---
1312:												
Longdis	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Dugway	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1313:												
Longdis	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1320:												
Dugway	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1321:												
Dugway	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Updike	---	---	Very Poor	---	---	Very Poor	---	---	---	---	---	Very Poor
1325:												
Reywat	Poor	Poor	Fair	---	---	Poor	Very Poor	Very Poor	Poor	---	Very Poor	Poor
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hart Camp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1326:												
Reywat	Poor	Poor	Fair	---	---	Poor	Very Poor	Very Poor	Poor	---	Very Poor	Poor
1327:												
Reywat	Poor	Poor	Fair	---	---	Poor	Very Poor	Very Poor	Poor	---	Very Poor	Poor
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
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
1328:												
Reywat	Poor	Poor	Fair	---	---	Poor	Very Poor	Very Poor	Poor	---	Very Poor	Poor
Fernpoint	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1329:												
Reywat	Poor	Poor	Fair	---	---	Poor	Very Poor	Very Poor	Poor	---	Very Poor	Poor
Devada	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1335:												
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
Rock Outcrop.												
1336:												
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
Ashtre	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Tusune	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1345:												
Layview	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1346:												
Layview	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Westbutte	Very Poor	Very Poor	Fair	---	Very Poor	Fair	Very Poor	Very Poor	Poor	Very Poor	Very Poor	Fair
Hapgood	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1355:												
Badgercamp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good
Easte	---	Very Poor	---	Poor	---	---	---	---	---	---	---	---
1356:												
Badgercamp	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hackwood	---	---	Good	---	Good	Good	---	---	---	Good	---	Good
Easte	---	Very Poor	---	Poor	---	---	---	---	---	---	---	---
1358:												
Badgercamp	---	---	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
1360:												
Welch	---	---	Fair	---	---	Fair	Poor	Good	---	---	Fair	Fair
1361:												
Wetvit	---	---	---	---	---	---	Good	Good	---	---	Good	---
Wetvit	---	---	---	---	---	---	Good	Good	---	---	Good	---
1365:												
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
Dosie	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1366:												
Dosie	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1367:												
Dosie	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Fiddler	---	Poor	Good	---	Fair	Good	---	---	---	Fair	---	Good
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
1375:												
Cotant	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Madeline	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1380:												
Weimer	---	---	Fair	---	---	Fair	Good	Good	---	---	Good	Fair
Boulder Lake	---	---	Poor	---	---	Poor	Good	Good	---	---	Good	Poor
1385:												
Fernpoint	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1395:												
Orr	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Fernpoint	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1400:												
Bombadil	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Ceejay	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1410:												
Fulstone	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Saraph	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Tuffo	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1412:												
Fulstone	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Nellspring	---	---	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
1412 (con.): Buffaran	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1420: Hangrock	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1430: Grassycan	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
Grassycan	---	---	Poor	---	---	Poor	---	---	---	---	---	Poor
1431: Esmod	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Powlow	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1440: Tusune	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
Hartig	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
1450: Emagert	Fair	Fair	Fair	---	---	Fair	Poor	Poor	Fair	---	Poor	Fair
Wetvit	---	---	---	---	---	---	Good	Good	---	---	Good	---
1460: Weerweed	Fair	Fair	Fair	---	---	Fair	Poor	Poor	Fair	---	Poor	Fair
1470: Ninemile	---	---	Fair	---	---	Fair	---	---	---	---	---	Fair
9901: Playas	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Good	Very Poor	Very Poor	Fair	Very Poor
9902: 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

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
1010: Macyflet	Moderate: percs slowly	Moderate: percs slowly	Moderate: percs slowly	Slight	Slight
Boulder Lake	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding, too clayey
1011: Macyflet	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: dusty	Slight
1012: Macyflet	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: dusty	Slight
Indian Creek	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, small stones, cemented pan	Severe: large stones	Severe: large stones, cemented pan
1015: Powlow	Severe: small stones, cemented pan	Severe: small stones, cemented pan	Severe: slope, small stones, cemented pan	Severe: small stones	Severe: small stones, cemented pan
1020: Bearbutte	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: droughty, slope
Welch	Severe: flooding, wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness
1025: Mesman	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium, droughty
1030: Zorravista	Severe: too sandy	Severe: too sandy	Severe: slope, too sandy	Severe: too sandy	Moderate: droughty, slope
1035: 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
Madeline	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: 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
1035 (con.):					
Crocan	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
1036:					
Tinpan	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: small stones, large stones
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
1040:					
Langston	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Severe: droughty
1041:					
Langston	Moderate: slope, small stones	Moderate: slope, small stones	Severe: slope, small stones	Slight	Severe: droughty
Old Camp	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
Paypoint	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Moderate: small stones, droughty
1045:					
Paypoint	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Moderate: small stones, droughty
Langston	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Severe: droughty
1050:					
Skullwak	Severe: flooding, percs slowly, excess sodium	Severe: excess sodium, excess salt, percs slowly	Severe: flooding, percs slowly, excess sodium	Moderate: wetness, flooding	Severe: excess salt, excess sodium, flooding
1055:					
Devada	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	Moderate: slope	Severe: small stones, slope
Hart Camp	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

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1060: Bombadil	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, 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
1061: Old Camp	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
1062: Old Camp	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
Corral	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Moderate: dusty	Severe: depth to rock
1063: Old Camp	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
1065: Old Camp	Severe: slope, large stones, depth to rock	Severe: slope, large stones, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: slope, depth to rock
Reywat	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
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
1070: Oreneva	Severe: small stones	Severe: small stones	Severe: slope, small stones	Moderate: dusty	Severe: small stones
1075: Surprise	Moderate: slope, small stones	Moderate: slope, small stones	Severe: slope, small stones	Slight	Moderate: small stones, droughty, slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1080:					
Bucklake	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope
Rock Outcrop.					
Corral	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, depth to rock	Severe: slope	Severe: slope, depth to rock
1081:					
Bucklake	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope
Fiddler	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: large stones, slope	Severe: large stones, slope
1083:					
Bucklake	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope
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
1090:					
Jaybee	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones	Severe: large stones, depth to rock
Verdico	Moderate: slope, large stones, percs slowly	Moderate: slope, large stones, percs slowly	Severe: large stones, slope	Slight	Moderate: large stones, slope, depth to rock
1095:					
Corral	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, depth to rock	Severe: slope	Severe: slope, depth to rock
Mahala	Severe: large stones	Severe: large stones	Severe: large stones, small stones	Severe: large stones	Severe: large stones
1105:					
Freznik	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

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1110:					
Indian Creek----	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, cemented pan
Buffaran--------	Severe: cemented pan	Severe: cemented pan	Severe: large stones, slope, cemented pan	Moderate: dusty	Severe: cemented pan
1115:					
Lofftus---------	Severe: wetness, excess salt	Severe: excess salt	Severe: wetness, excess salt	Moderate: wetness, dusty	Severe: excess salt, droughty
Mesman----------	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium, droughty
1120:					
McConnel--------	Severe: flooding	Moderate: large stones, small stones	Severe: large stones, small stones	Slight	Moderate: small stones, large stones, droughty
1121:					
McConnel--------	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Moderate: small stones, droughty
1125:					
Halvert---------	Moderate: small stones, percs slowly, dusty	Moderate: small stones, percs slowly, dusty	Severe: small stones	Moderate: dusty	Moderate: small stones, large stones, depth to rock
Jaybee----------	Severe: large stones, depth to rock	Severe: large stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones	Severe: large stones, depth to rock
Tunnison--------	Moderate: large stones, too clayey	Moderate: large stones, too clayey	Severe: large stones	Moderate: large stones, too clayey	Severe: large stones, too clayey
1130:					
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.					
1131:					
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
Rock Outcrop.					

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1135:					
Mcwatt	Severe: slope, large stones, small stones	Severe: slope, large stones, small stones	Severe: large stones, slope, small stones	Severe: small stones	Severe: small stones, large stones, droughty
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
1140:					
Valmy	Severe: flooding	Moderate: excess salt, dusty	Moderate: small stones, flooding, dusty	Moderate: dusty	Moderate: excess salt, droughty, flooding
1141:					
Valmy	Moderate: excess salt	Moderate: excess salt	Moderate: slope, small stones, excess salt	Slight	Moderate: excess salt, droughty
Langston	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Severe: droughty
Paypoint	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Moderate: small stones, droughty
1145:					
Wendane	Severe: flooding, excess sodium, excess salt	Severe: excess sodium, excess salt	Severe: excess sodium, excess salt	Slight	Severe: excess salt, excess sodium
1150:					
Saraph	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
Hangrock	Severe: small stones, cemented pan	Severe: small stones, cemented pan	Severe: slope, small stones, cemented pan	Severe: small stones	Severe: small stones, cemented pan
Tuffo	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
1151:					
Saraph	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Severe: depth to rock
Tuffo	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, depth to rock	Moderate: slope	Severe: slope, depth to rock
Yellowhills	Severe: flooding	Slight	Moderate: small stones	Slight	Slight

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1155:					
Madeline	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Moderate: dusty	Severe: 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
1160:					
Wylo	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, depth to rock
Bucklake	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: slope	Severe: large stones, slope
Rock Outcrop.					
1162:					
Devada	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones, small stones	Severe: small stones, large stones, depth to rock
Nitpac	Severe: large stones	Severe: large stones	Severe: large stones, small stones	Severe: large stones	Severe: large stones
1163:					
Devada	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
Dezeed	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope, depth to rock
1164:					
Devada	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
Ashcamp	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Slight	Severe: depth to rock
1165:					
Devada	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
Nitpac	Severe: large stones	Severe: large stones	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1165 (con.):					
Bidrim	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
1166:					
Devada	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
Bieber	Severe: small stones, cemented pan	Severe: small stones, cemented pan	Severe: slope, small stones, cemented pan	Moderate: dusty	Severe: small stones, cemented pan
1167:					
Devada	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, depth to rock
Reywat	Severe: depth to rock	Severe: depth to rock	Severe: large stones, slope, small stones	Moderate: dusty	Severe: depth to rock
1168:					
Devada	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones, small stones	Severe: small stones, large stones, depth to rock
1170:					
Devada	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: slope, depth to rock
Bucklake	Severe: slope, large stones	Severe: slope, large stones	Severe: large stones, slope, small stones	Severe: large stones, slope	Severe: large stones, slope
1171:					
Devada	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, depth to rock
Indian Creek	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, cemented pan
1172:					
Devada	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
1172 (con.):					
Madeline	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
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
1173:					
Devada	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
Nitpac	Severe: large stones	Severe: large stones	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones
Uhaldi	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
1174:					
Devada	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
Uhaldi	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
1175:					
Ferver	Severe: large stones	Severe: large stones	Severe: large stones, small stones	Severe: large stones	Severe: large stones
Tunnison	Moderate: large stones, too clayey	Moderate: large stones, too clayey	Severe: large stones	Moderate: large stones, too clayey	Severe: large stones, too clayey
1180:					
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
Karlo	Severe: large stones	Severe: large stones	Severe: large stones, small stones	Severe: large stones	Severe: large stones, too clayey
1181:					
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
1181 (con.):					
Madeline	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
Tinpan	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: small stones, large stones
1182:					
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
Westbutte	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, large stones, droughty
1183:					
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
Westbutte	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
1184:					
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
Tinpan	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: small stones, large stones
1185:					
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
Hart Camp	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
1186:					
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
Tinpan	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: small stones, large stones

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1186 (con.): Crocan	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
1187: 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
Tinpan	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: small stones, large stones
Hart Camp	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
1188: 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
Newlands	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Hart Camp	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
1189: 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
Badgercamp	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope	Severe: slope, depth to rock
Crocan	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
1190: Ferver	Severe: small stones	Severe: small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones
Nitpac	Severe: large stones	Severe: large stones	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1195:					
Bitner	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Ashcamp	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Slight	Severe: depth to rock
1205:					
Davey	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: droughty, slope
1206:					
Davey	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: droughty, slope
Corral	Severe: depth to rock	Severe: depth to rock	Severe: slope, depth to rock	Slight	Severe: depth to rock
1210:					
Mazuma	Slight	Slight	Moderate: slope, small stones	Slight	Slight
Bighat	Severe: excess sodium	Severe: excess sodium	Severe: large stones, slope, small stones	Slight	Severe: excess sodium, droughty
1215:					
Raglan	Moderate: dusty, excess salt	Moderate: excess salt, dusty	Moderate: dusty, excess salt	Moderate: dusty	Moderate: excess salt
Isolde	Severe: too sandy	Severe: too sandy	Severe: slope, too sandy	Severe: too sandy	Moderate: droughty, slope
1220:					
Schamp	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
1221:					
Schamp	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: slope
1223:					
Schamp	Moderate: slope, dusty	Moderate: slope, dusty	Severe: slope	Severe: erodes easily	Moderate: slope
1230:					
Raglan	Moderate: dusty, excess salt	Moderate: excess salt, dusty	Moderate: dusty, excess salt	Moderate: dusty	Moderate: excess salt

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1230 (con.): Mazuma	Slight	Slight	Moderate: small stones	Slight	Slight
1235: Chime	Moderate: slope, small stones, dusty	Moderate: slope, small stones, dusty	Severe: slope, small stones	Moderate: dusty	Moderate: small stones, slope, depth to rock
1240: Toney	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones, small stones	Severe: large stones	Severe: small stones, large stones
Millerlux	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
Hart Camp	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
1245: Saraph	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
Uhaldi	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Frentera	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
1250: Ashone	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
Ashdos	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
Bearbutte	Moderate: slope	Moderate: slope	Severe: slope	Slight	Moderate: droughty, slope
1251: Ashone	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
Ashdos	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: 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
1251 (con.):					
Ashtre	Severe: small stones	Severe: small stones	Severe: slope, small stones	Moderate: dusty	Severe: small stones
1253:					
Ashdos	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Ashtre	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, small stones	Severe: slope	Severe: slope
1255:					
Newlands	Moderate: slope, small stones	Moderate: slope, small stones	Severe: slope, small stones	Slight	Moderate: small stones, large stones, 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
1256:					
Newlands	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Menbo	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope, dusty	Severe: small stones, slope
1257:					
Newlands	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1258:					
Newlands	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Badgercamp	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope	Severe: slope, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1265:					
Fitrwater	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, droughty
Westbutte	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
1270:					
Hartig	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
1271:					
Hartig	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Severe: slope	Severe: droughty, slope
Newlands	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
1272:					
Hartig	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, droughty, slope
Rock Outcrop.					
1273:					
Hartig	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, droughty, slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1275:					
Hart Camp	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
1276:					
Hart Camp	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Reywat	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: slope, small stones, depth to rock	Severe: slope	Severe: slope, depth to rock
Westbutte	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
1277:					
Hart Camp	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
Ninemile	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
1278:					
Boltz	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Hart Camp	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
1279:					
Hart Camp	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
Nutzan	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Westbutte	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
1285:					
Zymans	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
Indian Creek	Severe: large stones, cemented pan	Severe: large stones, cemented pan	Severe: large stones, slope, small stones	Severe: large stones	Severe: large stones, cemented pan
1286:					
Zymans	Severe: slope	Severe: slope	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope
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
Hart Camp	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

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1290:					
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
Badgercamp	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope	Severe: slope, depth to rock
Hackwood	Moderate: slope, small stones	Moderate: slope, small stones	Severe: slope, small stones	Slight	Moderate: small stones, large stones, slope
1295:					
Devoy	Moderate: slope, large stones, small stones	Moderate: slope, large stones, small stones	Severe: large stones, slope, small stones	Moderate: large stones	Severe: large stones
Blizzard	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: small stones, large stones, depth to rock
1296:					
Blizzard	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, slope, small stones	Severe: large stones	Severe: small stones, large stones, depth to rock
1305:					
Updike	Severe: flooding, excess sodium, excess salt	Severe: excess sodium, excess salt	Severe: excess sodium, excess salt	Moderate: dusty	Severe: excess salt, excess sodium
Mazuma	Slight	Slight	Moderate: slope, small stones	Slight	Slight
1306:					
Updike	Severe: flooding, excess sodium, excess salt	Severe: excess sodium, excess salt	Severe: excess sodium, excess salt	Moderate: dusty	Severe: excess salt, excess sodium
Longdis	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
1310:					
Longdis	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Updike	Severe: flooding, excess sodium, excess salt	Severe: excess sodium, excess salt	Severe: excess sodium, excess salt	Moderate: dusty	Severe: excess salt, excess sodium

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1311:					
Longdis	Severe: flooding, excess sodium	Severe: excess sodium	Severe: excess sodium	Moderate: dusty	Severe: excess sodium
Macyflet	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: percs slowly, dusty	Moderate: dusty	Slight
Aeric Epiaquents	Severe: ponding, percs slowly	Severe: ponding, percs slowly	Severe: ponding, percs slowly	Severe: ponding	Severe: ponding
1312:					
Longdis	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Dugway	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
1313:					
Longdis	Severe: flooding, excess sodium	Severe: excess sodium	Severe: excess sodium	Moderate: dusty	Severe: excess sodium
1320:					
Dugway	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
1321:					
Dugway	Severe: excess sodium	Severe: excess sodium	Severe: excess sodium	Slight	Severe: excess sodium
Updike	Severe: flooding, excess sodium, excess salt	Severe: excess sodium, excess salt	Severe: excess sodium, excess salt	Moderate: dusty	Severe: excess salt, excess sodium
1325:					
Reywat	Severe: depth to rock	Severe: depth to rock	Severe: large stones, slope, small stones	Moderate: dusty	Severe: depth to rock
Devada	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
Hart Camp	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
1326:					
Reywat	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: 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
1327:					
Reywat	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Westbutte	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1328:					
Reywat	Severe: depth to rock	Severe: depth to rock	Severe: slope, small stones, depth to rock	Moderate: dusty	Severe: depth to rock
Fernpoint	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1329:					
Reywat	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, depth to rock
Devada	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, depth to rock
1335:					
Westbutte	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Rock Outcrop.					
1336:					
Westbutte	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
Ashtre	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Tusune	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
1345:					
Layview	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
1345 (con.):					
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1346:					
Layview	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
Westbutte	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope, dusty	Severe: slope
Hapgood	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1355:					
Badgercamp	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope	Severe: slope, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
Easte	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones, slope
1356:					
Badgercamp	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Severe: slope	Severe: slope, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope, small stones	Severe: slope	Severe: slope
Easte	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: small stones, slope
1358:					
Badgercamp	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope	Severe: slope, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope, small stones	Moderate: slope	Severe: slope
1360:					
Welch	Severe: flooding, wetness	Severe: wetness	Severe: wetness	Severe: wetness	Severe: wetness

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1361:					
Wetvit	Severe: flooding, wetness	Severe: wetness	Severe: wetness, flooding	Severe: wetness	Severe: wetness, flooding
Wetvit	Severe: flooding, wetness	Moderate: wetness, percs slowly	Severe: wetness	Moderate: wetness	Moderate: wetness, flooding
1365:					
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
Dosie	Severe: slope, small stones	Severe: slope, small stones	Severe: large stones, slope, small stones	Severe: slope	Severe: small stones, slope
1366:					
Dosie	Severe: slope, small stones	Severe: slope, small stones	Severe: large stones, slope, small stones	Severe: slope	Severe: small stones, slope
1367:					
Dosie	Severe: slope, small stones	Severe: slope, small stones	Severe: large stones, slope, small stones	Severe: slope	Severe: small stones, slope
Fiddler	Severe: slope	Severe: slope	Severe: large stones, slope	Severe: large stones, slope	Severe: large stones, slope
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
1375:					
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
Madeline	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
1380:					
Weimer	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding, too clayey
Boulder Lake	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding, too clayey

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1385:					
Fernpoint	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1395:					
Orr	Moderate: small stones	Moderate: small stones	Severe: small stones	Slight	Moderate: small stones, large stones
Fernpoint	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Moderate: slope	Severe: small stones, slope
1400:					
Bombadil	Severe: slope, depth to rock	Severe: slope, depth to rock	Severe: large stones, slope, small stones	Moderate: slope, dusty	Severe: slope, depth to rock
Ceejay	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
1410:					
Pulstone	Severe: small stones, cemented pan	Severe: small stones, cemented pan	Severe: slope, small stones, cemented pan	Slight	Severe: small stones, cemented pan
Saraph	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
Tuffo	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
1412:					
Pulstone	Severe: small stones, cemented pan	Severe: small stones, cemented pan	Severe: slope, small stones, cemented pan	Slight	Severe: small stones, cemented pan
Nellspring	Severe: small stones	Severe: small stones	Severe: slope, small stones	Severe: small stones	Severe: small stones
Buffaran	Severe: cemented pan	Severe: cemented pan	Severe: slope, small stones, cemented pan	Moderate: dusty	Severe: cemented pan
1420:					
Hangrock	Severe: small stones, cemented pan	Severe: small stones, cemented pan	Severe: slope, small stones, cemented pan	Severe: small stones	Severe: small stones, cemented pan

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
1430:					
Grassycan	Severe: small stones, depth to rock, cemented pan	Severe: small stones, depth to rock, cemented pan	Severe: large stones, slope, small stones	Slight	Severe: small stones, depth to rock
Grassycan	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: large stones, small stones, depth to rock	Severe: small stones	Severe: small stones, depth to rock
1431:					
Esmod	Severe: small stones, cemented pan	Severe: small stones, cemented pan	Severe: slope, small stones, cemented pan	Severe: small stones	Severe: small stones, cemented pan
Powlow	Severe: small stones, cemented pan	Severe: small stones, cemented pan	Severe: slope, small stones, cemented pan	Severe: small stones	Severe: small stones, cemented pan
1440:					
Tusune	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, slope
Hartig	Severe: slope, small stones	Severe: slope, small stones	Severe: slope, small stones	Severe: slope	Severe: small stones, droughty, slope
1450:					
Emagert	Severe: flooding	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
Wetvit	Severe: flooding, wetness	Severe: wetness	Severe: wetness, flooding	Severe: wetness	Severe: wetness, flooding
1460:					
Weezweed	Severe: flooding	Moderate: dusty	Moderate: small stones, dusty	Moderate: dusty	Slight
1470:					
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
9901:					
Playas	Severe: ponding, percs slowly	Severe: ponding, too clayey, excess salt	Severe: too clayey, ponding, percs slowly	Severe: ponding, too clayey	Severe: excess salt, ponding, droughty
9902:					
Rock Outcrop.					

TABLE 10.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
9902 (con.): 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

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
1010:						
Macyflet	Severe: cutbanks cave	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Slight
Boulder Lake	Severe: cutbanks cave, ponding	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: shrink-swell, low strength, ponding	Severe: ponding, too clayey
1011:						
Macyflet	Severe: cutbanks cave	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Slight
1012:						
Macyflet	Severe: cutbanks cave	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Slight
Indian Creek	Severe: cemented pan, cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: large stones, cemented pan
1015:						
Powlow	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones, cemented pan
1020:						
Bearbutte	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope, frost action	Moderate: droughty, slope
Welch	Severe: wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: wetness, frost action	Severe: wetness
1025:						
Mesman	Slight	Slight	Slight	Slight	Moderate: low strength	Severe: excess sodium, droughty
1030:						
Zorravista	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: droughty, slope
1035:						
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
1035 (con.):						
Madeline	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
Crocan	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
1036:						
Tinpan	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: small stones, large stones
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
1040:						
Langston	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: droughty
1041:						
Langston	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope, frost action	Severe: droughty
Old Camp	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
Paypoint	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones, droughty
1045:						
Paypoint	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones, droughty
Langston	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: droughty
1050:						
Skullwak	Severe: wetness	Severe: flooding, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: excess salt, excess sodium, flooding
1055:						
Devada	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, slope, depth to rock
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
1055 (con.): Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1060: Bombadil	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
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
1061: 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
1062: Old Camp	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
Corral	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: depth to rock
1063: 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
1065: 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
Reywat	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
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
1070: Oreneva	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope, frost action	Severe: small stones
1075: Surprise	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope, frost action	Moderate: small 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
1080:						
Bucklake	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
Rock Outcrop.						
Corral	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1081:						
Bucklake	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
Fiddler	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
1083:						
Bucklake	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
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
1090:						
Jaybee	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	Severe: large stones, depth to rock
Verdico	Moderate: depth to rock, too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: large stones, slope, depth to rock
1095:						
Corral	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Mahala	Moderate: depth to rock, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: large stones
1105:						
Freznik	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, 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
1110:						
Indian Creek----	Severe: cemented pan, cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: large stones, cemented pan
Buffaran--------	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
1115:						
Lofftus---------	Severe: cemented pan, wetness	Severe: wetness	Severe: wetness, cemented pan	Severe: wetness	Severe: low strength	Severe: excess salt, droughty
Mesman----------	Slight	Slight	Slight	Slight	Moderate: low strength	Severe: excess sodium, droughty
1120:						
McConnel--------	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding	Moderate: small stones, large stones, droughty
1121:						
McConnel--------	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones, droughty
1125:						
Halvert---------	Moderate: depth to rock, cemented pan, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Moderate: small stones, large stones, depth to rock
Jaybee----------	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	Severe: large stones, depth to rock
Tunnison--------	Severe: depth to rock, cutbanks cave	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: large stones, too clayey
1130:						
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.						
1131:						
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.						

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
1135:						
Mcwatt	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, large stones, droughty
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
1140:						
Valmy	Moderate: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: excess salt, droughty, flooding
1141:						
Valmy	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: excess salt, droughty
Langston	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: droughty
Paypoint	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones, droughty
1145:						
Wendane	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: low strength, frost action	Severe: excess salt, excess sodium
1150:						
Saraph	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope, depth to rock
Hangrock	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Severe: cemented pan	Severe: slope	Moderate: cemented pan, shrink-swell, slope	Severe: small stones, cemented pan
Tuffo	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope, depth to rock
1151:						
Saraph	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	Severe: 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
Yellowhills	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Severe: 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
1155:						
Madeline	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
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
1160:						
Wylo	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, slope	Severe: slope, depth to rock
Bucklake	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
Rock Outcrop.						
1162:						
Devada	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
Nitpac	Moderate: depth to rock, cemented pan, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: large stones
1163:						
Devada	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
Deseed	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
1164:						
Devada	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, depth to rock
Ashcamp	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope	Severe: depth to rock
1165:						
Devada	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
1165 (con.):						
Nitpac	Moderate: depth to rock, cemented pan, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: large stones
Bidrim	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
1166:						
Devada	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
Bieber	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: small stones, cemented pan
1167:						
Devada	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
Reywat	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
1168:						
Devada	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
1170:						
Devada	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
Bucklake	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
1171:						
Devada	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
Indian Creek	Severe: cemented pan, cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: 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
1172:						
Devada	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, slope, depth to rock
Madeline	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
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
1173:						
Devada	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
Nitpac	Moderate: depth to rock, cemented pan, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: large stones
Uhaldi	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1174:						
Devada	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
Uhaldi	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1175:						
Ferver	Moderate: cemented pan, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: large stones
Tunnison	Severe: depth to rock, cutbanks cave	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: large stones, too clayey
1180:						
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
Karlo	Severe: depth to rock, cutbanks cave	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: large stones, too clayey

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
1181:						
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
Madeline	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
Tinpan	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: small stones, large stones
1182:						
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
Westbutte	Severe: depth to rock	Moderate: slope, depth to rock, large stones	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope, frost action	Moderate: small stones, large stones, droughty
1183:						
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
Westbutte	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
1184:						
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
Tinpan	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: small stones, large stones
1185:						
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
Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1186:						
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
1186 (con.):						
Tinpan	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: small stones, large stones
Crocan	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
1187:						
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
Tinpan	Severe: depth to rock	Severe: shrink-swell	Severe: depth to rock, shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: small stones, large stones
Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1188:						
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
Newlands	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1189:						
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
Badgercamp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Crocan	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
1190:						
Ferver	Moderate: cemented pan, too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones
Nitpac	Moderate: depth to rock, cemented pan, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, 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
1195:						
Bitner	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Ashcamp	Severe: depth to rock	Moderate: slope, depth to rock	Severe: depth to rock	Severe: slope	Moderate: depth to rock, slope	Severe: depth to rock
1205:						
Davey	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: droughty, slope
1206:						
Davey	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: droughty, slope
Corral	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: depth to rock
1210:						
Maruma	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Bighat	Severe: cutbanks cave	Moderate: slope, large stones	Moderate: slope, large stones	Severe: slope	Moderate: slope, large stones	Severe: excess sodium, droughty
1215:						
Raglan	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, low strength	Moderate: excess salt
Isolde	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: droughty, slope
1220:						
Schamp	Moderate: too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, large stones, slope
1221:						
Schamp	Severe: slope	Severe: shrink-swell, slope	Severe: slope, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength, slope	Severe: slope
1223:						
Schamp	Moderate: too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: slope
1230:						
Raglan	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, low strength	Moderate: excess salt

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
1230 (con.): Maruma	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
1235: 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
1240: Toney	Moderate: depth to rock, too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: small stones, large stones
Millerlux	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
Hart Camp	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: depth to rock
1245: Saraph	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope, depth to rock
Uhaldi	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Frentera	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
1250: Ashone	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Ashdos	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Bearbutte	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope, frost action	Moderate: droughty, slope
1251: Ashone	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Ashdos	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
1251 (con.):						
Ashtre	Moderate: depth to rock, slope	Moderate: shrink-swell, slope	Moderate: depth to rock, slope, shrink-swell	Severe: slope	Severe: low strength	Severe: small stones
1253:						
Ashdos	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Ashtre	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: small stones, slope
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1255:						
Newlands	Moderate: depth to rock, slope	Moderate: shrink-swell, slope	Moderate: depth to rock, slope, shrink-swell	Severe: slope	Moderate: shrink-swell, low strength, slope	Moderate: small stones, large stones, 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
1256:						
Newlands	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Menbo	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
1257:						
Newlands	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
1258:						
Newlands	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Badgercamp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1265:						
Fitzwater	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

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
1265 (con.): Westbutte	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
1270: Hartig	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1271: Hartig	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: droughty, slope
Newlands	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1272: Hartig	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, droughty, slope
Rock Outcrop.						
1273: Hartig	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, droughty, slope
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1275: Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1276: Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Reywat	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
Westbutte	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
1277: Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, 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: 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
1278:						
Boltz	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1279:						
Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Nutran	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Westbutte	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
1285:						
Zymans	Moderate: too clayey, slope	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Moderate: small stones, large stones, slope
Indian Creek	Severe: cemented pan, cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: large stones, cemented pan
1286:						
Zymans	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: small stones, slope, depth to rock
Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1290:						
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Badgercamp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Hackwood	Moderate: slope	Moderate: shrink-swell, slope	Moderate: slope, shrink-swell	Severe: slope	Moderate: shrink-swell, slope, frost action	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
1295:						
Devoy	Severe: depth to rock, large stones	Severe: shrink-swell, large stones	Severe: depth to rock, shrink-swell, large stones	Severe: shrink-swell, slope, large stones	Severe: shrink-swell, low strength, frost action	Severe: large stones
Blizzard	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
1296:						
Blizzard	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, large stones, depth to rock
1305:						
Updike	Moderate: too clayey, wetness	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength	Severe: excess salt, excess sodium
Mazuma	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
1306:						
Updike	Moderate: too clayey, wetness	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength	Severe: excess salt, excess sodium
Longdis	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: excess sodium
1310:						
Longdis	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: excess sodium
Updike	Moderate: too clayey, wetness, flooding	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: excess salt, excess sodium
1311:						
Longdis	Moderate: too clayey, flooding	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: excess sodium
Macyflet	Severe: cutbanks cave	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Slight
Aeric Epiaquents	Severe: ponding	Severe: ponding	Severe: ponding	Severe: ponding	Severe: low strength, ponding, frost action	Severe: ponding

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
1312:						
Longdis	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell, low strength	Severe: excess sodium
Dugway	Moderate: cemented pan, wetness	Moderate: shrink-swell	Moderate: wetness, cemented pan, shrink-swell	Moderate: shrink-swell	Severe: low strength	Severe: excess sodium
1313:						
Longdis	Moderate: too clayey, flooding	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: excess sodium
1320:						
Dugway	Moderate: cemented pan, wetness	Moderate: shrink-swell	Moderate: wetness, cemented pan, shrink-swell	Moderate: shrink-swell	Severe: low strength	Severe: excess sodium
1321:						
Dugway	Moderate: cemented pan, wetness	Moderate: shrink-swell	Moderate: wetness, cemented pan, shrink-swell	Moderate: shrink-swell	Severe: low strength	Severe: excess sodium
Updike	Moderate: too clayey, wetness, flooding	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: flooding, shrink-swell	Severe: shrink-swell, low strength, flooding	Severe: excess salt, excess sodium
1325:						
Reywat	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
Devada	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
Hart Camp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
1326:						
Reywat	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
1327:						
Reywat	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
Westbutte	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
1327 (con.): Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1328: Reywat	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
Fernpoint	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1329: Reywat	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
Devada	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
1335: Westbutte	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Rock Outcrop.						
1336: Westbutte	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: small stones, slope
Ashtre	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: slope
Tusune	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1345: Layview	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
1346: Layview	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
1346 (con.):						
Westbutte	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope
Hapgood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1355:						
Badgercamp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Kaste	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1356:						
Badgercamp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Kaste	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1358:						
Badgercamp	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: slope	Severe: slope, depth to rock
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1360:						
Welch	Severe: wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: wetness, flooding, frost action	Severe: wetness
1361:						
Wetvit	Severe: cutbanks cave, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: wetness, flooding, frost action	Severe: wetness, flooding
Wetvit	Severe: cutbanks cave, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, frost action	Moderate: wetness, flooding
1365:						
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

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
1365 (con.): Dosie	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1366: Dosie	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1367: Dosie	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Fiddler	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
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
1375: 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
Madeline	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
1380: Weimar	Severe: cutbanks cave, ponding	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: shrink-swell, low strength, ponding	Severe: ponding, too clayey
Boulder Lake	Severe: cutbanks cave, ponding	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: shrink-swell, low strength, ponding	Severe: ponding, too clayey
1385: Fernpoint	Severe: cutbanks cave, slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
1395: Orr	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell, slope	Moderate: shrink-swell, frost action	Moderate: small stones, large stones
Fernpoint	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
1400:						
Bombadil	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
Ceejay	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, slope	Severe: slope, depth to rock
1410:						
Fulstone	Severe: cemented pan, cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: small stones, cemented pan
Saraph	Severe: depth to rock, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Severe: 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: small stones, slope, depth to rock
1412:						
Fulstone	Severe: cemented pan, cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: slope, cemented pan	Severe: cemented pan	Severe: small stones, cemented pan
Nellspring	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones
Buffaran	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
1420:						
Hangrock	Severe: cemented pan	Moderate: shrink-swell, slope, cemented pan	Severe: cemented pan	Severe: slope	Moderate: cemented pan, shrink-swell, slope	Severe: small stones, cemented pan
1430:						
Grassycan	Severe: depth to rock, cemented pan	Severe: shrink-swell, depth to rock	Severe: depth to rock, cemented pan, shrink-swell	Severe: shrink-swell, slope, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: small stones, depth to rock
Grassycan	Severe: depth to rock, cemented pan	Severe: shrink-swell, depth to rock	Severe: depth to rock, cemented pan, shrink-swell	Severe: shrink-swell, depth to rock	Severe: depth to rock, shrink-swell, low strength	Severe: small stones, depth to rock
1431:						
Esmod	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, 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
1431 (con.): Powlow	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan, shrink-swell	Severe: shrink-swell, slope	Severe: shrink-swell, low strength	Severe: small stones, cemented pan
1440: Tusune	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, slope
Hartig	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: small stones, droughty, slope
1450: Emagert	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Slight
Wetvit	Severe: cutbanks cave, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: wetness, flooding, frost action	Severe: wetness, flooding
1460: Weerweed	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Slight
1470: 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
9901: Playas	Severe: ponding	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: ponding, shrink-swell	Severe: shrink-swell, low strength, ponding	Severe: excess salt, ponding, droughty
9902: 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

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
1010:					
Macyflat	Severe: percs slowly	Moderate: seepage	Severe: wetness	Slight	Poor: hard to pack
Boulder Lake	Severe: ponding, percs slowly	Severe: ponding	Severe: ponding, too clayey	Severe: ponding	Poor: too clayey, hard to pack, ponding
1011:					
Macyflat	Severe: percs slowly	Moderate: seepage	Severe: wetness	Slight	Poor: hard to pack
1012:					
Macyflat	Severe: percs slowly	Moderate: seepage	Severe: wetness	Slight	Poor: hard to pack
Indian Creek	Severe: cemented pan, percs slowly	Severe: seepage, cemented pan	Severe: cemented pan	Slight	Poor: cemented pan, seepage, small stones
1015:					
Powlow	Severe: cemented pan	Severe: cemented pan, slope	Severe: too clayey	Severe: cemented pan	Poor: cemented pan, too clayey, hard to pack
1020:					
Bearbutte	Moderate: depth to rock, percs slowly, slope	Severe: slope	Severe: depth to rock	Moderate: depth to rock, slope	Poor: small stones
Welch	Severe: wetness, percs slowly	Severe: wetness	Severe: wetness	Severe: wetness	Poor: wetness
1025:					
Mesman	Severe: percs slowly	Moderate: slope	Severe: excess salt	Slight	Good
1030:					
Zorravista	Severe: poor filter	Severe: seepage, slope	Severe: too sandy	Moderate: slope	Poor: seepage, too sandy
1035:					
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
Madeline	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
1035 (con.):					
Crocan	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
1036:					
Tinpan	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
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
1040:					
Langston	Severe: poor filter	Severe: seepage	Severe: too sandy	Slight	Poor: seepage, too sandy, small stones
1041:					
Langston	Severe: poor filter	Severe: seepage, slope	Severe: too sandy	Moderate: slope	Poor: seepage, too sandy, small stones
Old Camp	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
Paypoint	Severe: poor filter	Severe: seepage	Severe: too sandy	Slight	Poor: seepage, too sandy, small stones
1045:					
Paypoint	Severe: poor filter	Severe: seepage	Severe: too sandy	Slight	Poor: seepage, too sandy, small stones
Langston	Severe: poor filter	Severe: seepage	Severe: too sandy	Slight	Poor: seepage, too sandy, small stones
1050:					
Skullwak	Severe: flooding, wetness, percs slowly	Severe: flooding	Severe: flooding, wetness, too clayey	Severe: flooding, wetness	Poor: too clayey, hard to pack, excess sodium
1055:					
Devada	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
1055 (con.): Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Hart 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
1060: Bombadil	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Chime	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
1061: Old Camp	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
1062: Old Camp	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
Corral	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
1063: 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
1065: 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
Reywat	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
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
1070: Oreneva	Severe: depth to rock, percs slowly	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
1075:					
Surprise	Moderate: slope	Severe: seepage, slope	Moderate: slope	Moderate: slope	Poor: small stones
1080:					
Bucklake	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
Rock Outcrop.					
Corral	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
1081:					
Bucklake	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
Fiddler	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
1083:					
Bucklake	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
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
1090:					
Jaybee	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, small stones
Verdico	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
1095:					
Corral	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Mahala	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack
1105:					
Freznik	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
1110: Indian Creek----	Severe: cemented pan, percs slowly	Severe: seepage, cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, seepage, small stones
Buffaran--------	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
1115: Lofftus---------	Severe: cemented pan, wetness	Severe: cemented pan, wetness	Severe: cemented pan, wetness	Severe: wetness	Poor: cemented pan, hard to pack, wetness
Mesman----------	Severe: percs slowly	Slight	Severe: excess salt	Slight	Good
1120: McConnel--------	Severe: poor filter	Severe: seepage	Severe: too sandy	Moderate: flooding	Poor: seepage, too sandy, small stones
1121: McConnel--------	Severe: poor filter	Severe: seepage	Severe: too sandy, excess salt	Slight	Poor: seepage, too sandy, small stones
1125: Halvert---------	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan	Severe: depth to rock, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
Jaybee----------	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, small stones
Tunnison--------	Severe: depth to rock, percs slowly	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack
1130: 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.					
1131: 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.					

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
1135:					
Mcwatt	Severe: poor filter, slope	Severe: seepage, slope	Severe: depth to rock, slope, too sandy	Severe: slope	Poor: seepage, too sandy, small stones
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
1140:					
Valmy	Severe: flooding	Severe: seepage, flooding	Severe: flooding	Severe: flooding	Fair: small stones
1141:					
Valmy	Slight	Severe: seepage	Slight	Slight	Fair: small stones, thin layer
Langston	Severe: poor filter	Severe: seepage	Severe: too sandy	Slight	Poor: seepage, too sandy, small stones
Paypoint	Severe: poor filter	Severe: seepage	Severe: too sandy	Slight	Poor: seepage, too sandy, small stones
1145:					
Wendane	Severe: wetness, percs slowly	Severe: wetness	Severe: wetness, excess sodium, excess salt	Severe: wetness	Poor: excess salt, excess sodium
1150:					
Saraph	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Hangrock	Severe: cemented pan	Severe: cemented pan, slope	Moderate: cemented pan, slope	Moderate: slope	Poor: cemented pan, small stones
Tuffo	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
1151:					
Saraph	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock
Tuffo	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Yellowhills	Moderate: flooding	Severe: seepage	Severe: seepage	Severe: seepage	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
1155: Madeline	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
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
1160: Wylo	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
Bucklake	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
Rock Outcrop.					
1162: Devada	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
Nitpac	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan	Severe: depth to rock, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
1163: Devada	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
Deseed	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
1164: Devada	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
Ashcamp	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, seepage	Severe: depth to rock	Poor: depth to rock
1165: Devada	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
1165 (con.):					
Nitpac	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan, slope	Severe: depth to rock, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
Bidrim	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
1166:					
Devada	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
Bieber	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Severe: cemented pan	Poor: cemented pan, small stones
1167:					
Devada	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
Reywat	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock, small stones
1168:					
Devada	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
1170:					
Devada	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
Bucklake	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
1171:					
Devada	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
Indian Creek	Severe: cemented pan, percs slowly	Severe: seepage, cemented pan, slope	Severe: cemented pan	Moderate: 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
1172:					
Devada	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
Madeline	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
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
1173:					
Devada	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
Nitpac	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan, slope	Severe: depth to rock, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
Uhaldi	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1174:					
Devada	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
Uhaldi	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1175:					
Ferver	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: depth to rock	Slight	Poor: cemented pan, hard to pack
Tunnison	Severe: depth to rock, percs slowly	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack
1180:					
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
Karlo	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

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
1181:					
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
Madeline	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
Tinpan	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
1182:					
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
Westbutte	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
1183:					
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
Westbutte	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
1184:					
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
Tinpan	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
1185:					
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
Hart 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

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
1186:					
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
Tinpan	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
Crocan	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
1187:					
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
Tinpan	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
Hart 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
1188:					
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
Newlands	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: slope
Hart 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
1189:					
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
Badgercamp	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, seepage, small stones
Crocan	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
1190:					
Ferver	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: depth to rock	Moderate: slope	Poor: cemented pan, hard to pack
Nitpac	Severe: depth to rock, cemented pan, percs slowly	Severe: depth to rock, cemented pan, slope	Severe: depth to rock, too clayey	Severe: depth to rock, cemented pan	Poor: depth to rock, too clayey, hard to pack
1195:					
Bitner	Severe: depth to rock, slope	Severe: seepage, depth to rock, slope	Severe: depth to rock, seepage, slope	Severe: depth to rock, seepage, slope	Poor: depth to rock, slope
Ashcamp	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock, seepage	Severe: depth to rock	Poor: depth to rock
1205:					
Davey	Severe: poor filter	Severe: seepage, slope	Severe: too sandy	Moderate: slope	Poor: too sandy
1206:					
Davey	Severe: poor filter	Severe: seepage, slope	Severe: too sandy	Moderate: slope	Poor: too sandy
Corral	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
1210:					
Maruma	Slight	Severe: seepage	Severe: too sandy	Slight	Poor: too sandy
Bighat	Severe: poor filter	Severe: seepage, slope	Severe: too sandy	Moderate: slope	Poor: seepage, too sandy, small stones
1215:					
Raglan	Severe: percs slowly	Moderate: seepage	Severe: excess salt	Slight	Good
Isolde	Severe: poor filter	Severe: seepage, slope	Severe: too sandy	Moderate: slope	Poor: seepage, too sandy
1220:					
Schamp	Severe: percs slowly	Severe: seepage, slope	Moderate: slope, large stones	Moderate: slope	Poor: hard to pack
1221:					
Schamp	Severe: percs slowly, slope	Severe: seepage, slope	Severe: slope	Severe: slope	Poor: 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: Schamp	Severe: percs slowly	Severe: seepage, slope	Moderate: slope, large stones	Moderate: slope	Poor: hard to pack
1230: Raglan	Severe: percs slowly	Moderate: seepage	Severe: excess salt	Slight	Good
Mazuma	Slight	Severe: seepage	Severe: too sandy	Slight	Poor: too sandy
1235: Chime	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock
1240: Toney	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack
Millerlux	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Hart Camp	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, small stones
1245: Saraph	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Uhaldi	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
Frentera	Severe: depth to rock, slope	Severe: seepage, depth to rock, slope	Severe: depth to rock, seepage, slope	Severe: depth to rock, seepage, slope	Poor: depth to rock, small stones, slope
1250: Ashone	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
Ashdos	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
Bearbutte	Moderate: depth to rock, percs slowly, slope	Severe: slope	Severe: depth to rock	Moderate: depth to rock, 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
1251:					
Ashone	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
Ashdos	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
Ashtre	Severe: depth to rock, percs slowly	Severe: depth to rock, slope	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock
1253:					
Ashdos	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
Ashtre	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, slope
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1255:					
Newlands	Severe: percs slowly	Severe: slope	Severe: depth to rock	Moderate: depth to rock, slope	Fair: 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
1256:					
Newlands	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: slope
Menbo	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
1257:					
Newlands	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: slope
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
1258:					
Newlands	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: 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
1258 (con.): Badgercamp	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, seepage, small stones
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1265: Fitzwater	Severe: slope, large stones	Severe: seepage, slope, large stones	Severe: slope, large stones	Severe: slope	Poor: small stones, slope
Westbutte	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
1270: Hartig	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
1271: Hartig	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Newlands	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: slope
1272: Hartig	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Rock Outcrop.					
1273: Hartig	Severe: 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
1275: Hart 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
1276: Hart 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

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
1276 (con.):					
Reywat	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
Westbutte	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
1277:					
Hart 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
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
1278:					
Boltz	Severe: depth to rock, slope	Severe: seepage, depth to rock, slope	Severe: depth to rock, seepage, slope	Severe: depth to rock, seepage, slope	Poor: depth to rock, slope
Hart 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
1279:					
Hart 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
Nutran	Severe: depth to rock, slope	Severe: seepage, depth to rock, slope	Severe: depth to rock, seepage, slope	Severe: depth to rock, seepage, slope	Poor: depth to rock, small stones, slope
Westbutte	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, large stones, slope
1285:					
Zymans	Severe: percs slowly	Severe: slope	Severe: depth to rock	Moderate: slope	Poor: hard to pack
Indian Creek	Severe: cemented pan, percs slowly	Severe: seepage, cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, seepage, small stones
1286:					
Zymans	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: 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
1286 (con.): 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
Hart 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
1290: Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
Badgercamp	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, seepage, small stones
Hackwood	Moderate: percs slowly, slope	Severe: slope	Moderate: slope, too clayey	Moderate: slope	Poor: small stones
1295: Devoy	Severe: depth to rock, percs slowly, 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, hard to pack
Blizzard	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
1296: Blizzard	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
1305: Updike	Severe: percs slowly	Slight	Severe: wetness	Moderate: flooding	Poor: hard to pack
Mazuma	Slight	Severe: seepage	Severe: too sandy	Slight	Poor: too sandy
1306: Updike	Severe: percs slowly	Slight	Severe: wetness	Moderate: flooding	Poor: hard to pack
Longdis	Severe: percs slowly	Slight	Slight	Slight	Poor: hard to pack
1310: Longdis	Severe: percs slowly	Slight	Slight	Slight	Poor: 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
1310 (con.):					
Updike	Severe: flooding, percs slowly	Severe: flooding	Severe: flooding, wetness	Severe: flooding	Poor: hard to pack
1311:					
Longdis	Severe: flooding, percs slowly	Severe: flooding	Severe: flooding	Severe: flooding	Poor: hard to pack
Macyflet	Severe: percs slowly	Moderate: seepage	Severe: wetness	Slight	Poor: hard to pack
Aeric Epiaquents	Severe: ponding, percs slowly	Severe: ponding	Severe: ponding, too clayey	Severe: ponding	Poor: too clayey, hard to pack, ponding
1312:					
Longdis	Severe: percs slowly	Slight	Slight	Slight	Poor: hard to pack
Dugway	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: wetness	Slight	Poor: cemented pan
1313:					
Longdis	Severe: flooding, percs slowly	Severe: flooding	Severe: flooding	Severe: flooding	Poor: hard to pack
1320:					
Dugway	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: wetness	Slight	Poor: cemented pan
1321:					
Dugway	Severe: cemented pan, percs slowly	Severe: cemented pan	Severe: wetness	Slight	Poor: cemented pan
Updike	Severe: flooding, percs slowly	Severe: flooding	Severe: flooding, wetness	Severe: flooding	Poor: hard to pack
1325:					
Reywat	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock, small stones
Devada	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
Hart 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

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
1326:					
Reywat	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
1327:					
Reywat	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock, small stones
Westbutte	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
Mapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
1328:					
Reywat	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Severe: depth to rock	Poor: depth to rock, small stones
Fernpoint	Severe: poor filter, slope	Severe: seepage, slope	Severe: slope, too sandy	Severe: slope	Poor: seepage, too sandy, small stones
1329:					
Reywat	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
Devada	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
1335:					
Westbutte	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
Rock Outcrop.					
1336:					
Westbutte	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, large stones, slope
Ashtre	Severe: depth to rock, percs slowly, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, 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
1336 (con.):					
Tusuna	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
1345:					
Layview	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
Hapgood	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
1346:					
Layview	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
Westbutte	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
1355:					
Badgercamp	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, seepage, small stones
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
Easte	Severe: slope	Severe: seepage, slope	Severe: depth to rock, seepage, slope	Severe: seepage, slope	Poor: seepage, small stones, slope
1356:					
Badgercamp	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, seepage, small stones
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
Easte	Severe: slope	Severe: seepage, slope	Severe: depth to rock, seepage, slope	Severe: seepage, slope	Poor: seepage, 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
1358:					
Badgercamp	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Poor: depth to rock, seepage, small stones
Hackwood	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Poor: small stones, slope
1360:					
Welch	Severe: flooding, wetness, percs slowly	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Poor: wetness
1361:					
Wetvit	Severe: flooding, wetness, percs slowly	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Poor: wetness
Wetvit	Severe: flooding, wetness, percs slowly	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Poor: wetness
1365:					
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
Dosie	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, too clayey	Severe: slope	Poor: too clayey, small stones, slope
1366:					
Dosie	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, too clayey	Severe: slope	Poor: too clayey, small stones, slope
1367:					
Dosie	Severe: percs slowly, slope	Severe: slope	Severe: depth to rock, slope, too clayey	Severe: slope	Poor: too clayey, small stones, slope
Piddler	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
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

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
1375:					
Cotant	Severe: depth to rock	Severe: depth to rock, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Madeline	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
1380:					
Weimer	Severe: ponding, percs slowly	Severe: ponding	Severe: ponding, too clayey	Severe: ponding	Poor: too clayey, hard to pack, ponding
Boulder Lake	Severe: ponding, percs slowly	Severe: ponding	Severe: ponding, too clayey	Severe: ponding	Poor: too clayey, hard to pack, ponding
1385:					
Fernpoint	Severe: poor filter, slope	Severe: seepage, slope	Severe: slope, too sandy	Severe: slope	Poor: seepage, too sandy, small stones
1395:					
Orr	Severe: percs slowly	Moderate: seepage, slope	Slight	Slight	Fair: small stones
Fernpoint	Severe: poor filter, slope	Severe: seepage, slope	Severe: slope, too sandy	Severe: slope	Poor: seepage, too sandy, small stones
1400:					
Bombadil	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Ceejay	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, small stones, slope
1410:					
Fulstone	Severe: cemented pan	Severe: seepage, cemented pan, slope	Severe: cemented pan, too sandy	Moderate: slope	Poor: cemented pan, seepage, too sandy
Saraph	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: depth to rock, slope	Severe: slope	Poor: depth to rock, slope
Tuffo	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
1412:					
Fulstone	Severe: cemented pan	Severe: seepage, cemented pan, slope	Severe: cemented pan, too sandy	Moderate: slope	Poor: cemented pan, seepage, too sandy
Nellspring	Severe: cemented pan, percs slowly	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
Buffaran	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
1420:					
Hangrock	Severe: cemented pan	Severe: cemented pan, slope	Moderate: cemented pan, slope	Moderate: slope	Poor: cemented pan, small stones
1430:					
Grassycan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan, slope	Severe: depth to rock	Moderate: slope	Poor: depth to rock, hard to pack
Grassycan	Severe: depth to rock, cemented pan	Severe: depth to rock, cemented pan	Severe: depth to rock	Slight	Poor: depth to rock, hard to pack
1431:					
Esmod	Severe: cemented pan	Severe: cemented pan, slope	Severe: cemented pan	Moderate: slope	Poor: cemented pan, hard to pack
Powlow	Severe: cemented pan	Severe: cemented pan, slope	Severe: too clayey	Severe: cemented pan	Poor: cemented pan, too clayey, hard to pack
1440:					
Tusune	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
Hartig	Severe: slope	Severe: slope	Severe: depth to rock, slope	Severe: slope	Poor: small stones, slope
1450:					
Emagert	Severe: percs slowly	Moderate: seepage	Severe: wetness	Moderate: flooding	Fair: too clayey
Wetvit	Severe: flooding, wetness, percs slowly	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Poor: wetness
1460:					
Weezweed	Severe: percs slowly	Moderate: seepage	Severe: wetness	Moderate: flooding	Fair: too clayey, too sandy

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
1470:					
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
9901:					
Playas----------	Severe: ponding, percs slowly	Severe: ponding	Severe: ponding, too clayey, excess salt	Severe: ponding	Poor: too clayey, hard to pack, ponding
9902:					
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

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
1010:				
Macyflet	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Boulder Lake	Poor: shrink-swell, low strength, wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, wetness
1011:				
Macyflet	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
1012:				
Macyflet	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Indian Creek	Poor: cemented pan	Probable	Probable	Poor: cemented pan, small stones, area reclaim
1015:				
Powlow	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
1020:				
Bearbutte	Fair: depth to rock, thin layer	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim
Welch	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
1025:				
Mesman	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt, excess sodium
1030:				
Zorravista	Good	Probable	Improbable: too sandy	Poor: too sandy
1035:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Madeline	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
1035 (con.): Crocan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1036: Tinpan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
1040: Langston	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
1041: Langston	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
Old Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Paypoint	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
1045: Paypoint	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
Langston	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
1050: Skullwak	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess salt, excess sodium
1055: Devada	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
1055 (con.):				
Hapgood	Fair: depth to rock, thin layer, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1060:				
Bombadil	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Chime	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1061:				
Old Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1062:				
Old Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Corral	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
1063:				
Old Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1065:				
Old Camp	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Reywat	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Rubble Land	Poor: large stones, slope	Improbable: small stones, large stones	Improbable: large stones	Poor: area reclaim, small stones, slope
1070:				
Oreneva	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
1075:				
Surprise	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim
1080:				
Bucklake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Rock Outcrop.				
Corral	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1081:				
Bucklake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Fiddler	Poor: depth to rock, low strength, large stones	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, large stones, slope
1083:				
Bucklake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Rubble Land	Poor: large stones, slope	Improbable: small stones, large stones	Improbable: large stones	Poor: area reclaim, small stones, slope
1090:				
Jaybee	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Verdico	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1095:				
Corral	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Mahala	Poor: depth to rock, 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
1105: Freznik	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1110: Indian Creek	Poor: cemented pan	Probable	Probable	Poor: cemented pan, small stones, area reclaim
Buffaran	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
1115: Lofftus	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Mesman	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt, excess sodium
1120: McConnel	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
1121: McConnel	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
1125: Halvert	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Jaybee	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Tunnison	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
1130: Soughe	Poor: depth to rock	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
1131:				
Soughe	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Rock Outcrop.				
1135:				
Mcwatt	Fair: depth to rock, thin layer, large stones	Improbable: thin layer	Improbable: thin layer	Poor: too sandy, small stones, area reclaim
Old Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1140:				
Valmy	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1141:				
Valmy	Good	Probable	Probable	Poor: small stones
Langston	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
Paypoint	Good	Probable	Probable	Poor: too sandy, small stones, area reclaim
1145:				
Wendane	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt, excess sodium
1150:				
Saraph	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Hangrock	Poor: thin layer	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
Tuffo	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1151:				
Saraph	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock

TABLE 13--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1151 (con.):				
Tuffo	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Yellowhills	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
1155:				
Madeline	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, large stones
1160:				
Wylo	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Bucklake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
Rock Outcrop.				
1162:				
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Nitpac	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1163:				
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Deseed	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1164:				
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Ashcamp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock

TABLE 13--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1165:				
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Nitpac	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Bidrim	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
1166:				
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Bieber	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones, area reclaim
1167:				
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Reywat	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
1168:				
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1170:				
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Bucklake	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1171:				
Devada	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
1171 (con.):				
Indian Creek----	Poor: cemented pan	Probable	Probable	Poor: cemented pan, small stones, area reclaim
1172:				
Devada----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Madeline--------	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, large stones
1173:				
Devada----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Nitpac----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Uhaldi----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1174:				
Devada----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Uhaldi----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1175:				
Ferver----------	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Tunnison--------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
1180:				
Ninemile--------	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
1180 (con.):				
Karlo	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
1181:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Madeline	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Tinpan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
1182:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Westbutte	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1183:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Westbutte	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1184:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Tinpan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
1185:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Hart Camp	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
1186:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Tinpan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Crocan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1187:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Tinpan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1188:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Newlands	Fair: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1189:				
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
Badgercamp	Poor: depth to rock	Improbable: small stones	Improbable: thin layer	Poor: depth to rock, small stones, slope
Crocan	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
1190:				
Ferver	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Nitpac	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
1195:				
Bitner	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Ashcamp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
1205:				
Davey	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy
1206:				
Davey	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy
Corral	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
1210:				
Mazuma	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy, excess salt
Bighat	Fair: large stones	Probable	Probable	Poor: too sandy, small stones, area reclaim
1215:				
Raglan	Fair: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Isolde	Good	Probable	Improbable: too sandy	Poor: too sandy
1220:				
Schamp	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, area reclaim, small stones
1221:				
Schamp	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, area reclaim, small stones
1223:				
Schamp	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, area reclaim

TABLE 13--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1230: Raglan	Fair: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Maxuma	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy, excess salt
1235: Chime	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1240: Toney	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, large stones
Millerlux	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
1245: Saraph	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Uhaldi	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Frentera	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1250: Ashone	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Ashdos	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Bearbutte	Fair: depth to rock, thin layer	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim
1251: Ashone	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Ashdos	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
1251 (con.):				
Ashtre	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1253:				
Ashdos	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Ashtre	Poor: depth to rock, low strength, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hackwood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1255:				
Newlands	Fair: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Ninemile	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
1256:				
Newlands	Fair: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Menbo	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, slope
1257:				
Newlands	Fair: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hapgood	Fair: depth to rock, thin layer, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1258:				
Newlands	Fair: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Badgercamp	Poor: depth to rock	Improbable: small stones	Improbable: thin layer	Poor: depth to rock, small stones, slope

TABLE 13--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1258 (con.): Hackwood	Fair: shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1265: Fitzwater	Poor: large stones, slope	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: small stones, area reclaim, slope
Westbutte	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1270: Hartig	Fair: depth to rock, thin layer, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1271: Hartig	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Newlands	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1272: Hartig	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Rock Outcrop.				
1273: Hartig	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
1275: Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1276: Hart Camp	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
1276 (con.):				
Reywat	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Westbutte	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
1277:				
Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, 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
1278:				
Boltz	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1279:				
Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Nutzan	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Westbutte	Poor: depth to rock	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: small stones, slope
1285:				
Zymans	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones
Indian Creek	Poor: cemented pan	Probable	Probable	Poor: cemented pan, small stones, area reclaim
1286:				
Zymans	Poor: 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
1286 (con.):				
Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Hart Camp	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1290:				
Hapgood	Fair: depth to rock, thin layer, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Badgercamp	Poor: depth to rock	Improbable: small stones	Improbable: thin layer	Poor: depth to rock, small stones, slope
Hackwood	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim
1295:				
Devoy	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: too clayey, large stones
Blizzard	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
1296:				
Blizzard	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, large stones
1305:				
Updike	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess salt, excess sodium
Mazuma	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy, excess salt
1306:				
Updike	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess salt, excess sodium
Longdis	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess sodium

TABLE 13--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1310:				
Longdis	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess sodium
Updike	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess salt, excess sodium
1311:				
Longdis	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess sodium
Macyflet	Good	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Aeric Epiaquents	Poor: shrink-swell, wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, wetness
1312:				
Longdis	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess sodium
Dugway	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium
1313:				
Longdis	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess sodium
1320:				
Dugway	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium
1321:				
Dugway	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium
Updike	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess salt, excess sodium
1325:				
Reywat	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Devada	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Hart Camp	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
1326:				
Reywat----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1327:				
Reywat----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Westbutte-------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hapgood---------	Fair: depth to rock, thin layer, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1328:				
Reywat----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones
Fernpoint-------	Fair: slope	Probable	Probable	Poor: too sandy, small stones, area reclaim
1329:				
Reywat----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Devada----------	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1335:				
Westbutte-------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Rock Outcrop.				
1336:				
Westbutte-------	Poor: depth to rock	Improbable: excess fines, large stones	Improbable: excess fines, large stones	Poor: small stones, slope
Ashtre----------	Poor: depth to rock, low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Tusune----------	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
1345:				
Layview	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Hapgood	Fair: depth to rock, thin layer, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1346:				
Layview	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Westbutte	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hapgood	Fair: depth to rock, thin layer, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1355:				
Badgercamp	Poor: depth to rock	Improbable: small stones	Improbable: thin layer	Poor: depth to rock, small stones, slope
Hackwood	Fair: shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Easte	Fair: depth to rock, thin layer, slope	Improbable: thin layer	Improbable: thin layer	Poor: small stones, area reclaim, slope
1356:				
Badgercamp	Poor: depth to rock, slope	Improbable: small stones	Improbable: thin layer	Poor: depth to rock, small stones, slope
Hackwood	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
Easte	Poor: slope	Improbable: thin layer	Improbable: thin layer	Poor: small stones, area reclaim, slope
1358:				
Badgercamp	Poor: depth to rock	Improbable: small stones	Improbable: thin layer	Poor: depth to rock, small stones, slope

TABLE 13--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1358 (con.): Hackwood	Fair: shrink-swell, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1360: Welch	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
1361: Wetvit	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
Wetvit	Fair: shrink-swell, wetness	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones
1365: Rubble Land	Poor: large stones, slope	Improbable: small stones, large stones	Improbable: large stones	Poor: area reclaim, small stones, slope
Dosie	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
1366: Dosie	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
1367: Dosie	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, small stones, area reclaim
Fiddler	Poor: depth to rock, low strength, large stones	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, large stones, slope
Rubble Land	Poor: large stones, slope	Improbable: small stones, large stones	Improbable: large stones	Poor: area reclaim, small stones, slope
1375: Cotant	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
Madeline	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
1380:				
Weimer----------	Poor: shrink-swell, low strength, wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, wetness
Boulder Lake----	Poor: shrink-swell, low strength, wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, wetness
1385:				
Fernpoint-------	Fair: slope	Probable	Probable	Poor: too sandy, small stones, area reclaim
1395:				
Orr-------------	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Fernpoint-------	Fair: slope	Probable	Probable	Poor: too sandy, small stones, area reclaim
1400:				
Bombadil--------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Ceejay----------	Poor: depth to rock, shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, too clayey, small stones
1410:				
Pulstone--------	Poor: cemented pan	Probable	Probable	Poor: cemented pan, too sandy, small stones
Saraph----------	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
Tuffo-----------	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, small stones, slope
1412:				
Pulstone--------	Poor: cemented pan	Probable	Probable	Poor: cemented pan, too sandy, small stones
Nellspring------	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
1412 (con.): Buffaran	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
1420: Hangrock	Poor: thin layer	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, small stones
1430: Grassycan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, cemented pan, too clayey
Grassycan	Poor: depth to rock, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock, cemented pan, too clayey
1431: Esmod	Poor: cemented pan, shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
Powlow	Poor: shrink-swell, low strength	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan, too clayey, small stones
1440: Tusune	Poor: depth to rock, slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, slope
Hartig	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: small stones, area reclaim, slope
1450: Emagert	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: too clayey, small stones
Wetvit	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
1460: Weezweed	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: too sandy, too clayey, small stones
1470: Ninemile	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
9901: Playas----------	Poor: shrink-swell, low strength, wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey, excess salt, wetness
9902: Rock Outcrop.				
Rubble Land-----	Poor: large stones, slope	Improbable: small stones, large stones	Improbable: large stones	Poor: area reclaim, small stones, slope

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
1010:						
Macyflet--------	Moderate: seepage	Severe: hard to pack	Severe: no water	Deep to water	Percs slowly, erodes easily	Erodes easily, percs slowly
Boulder Lake----	Slight	Severe: hard to pack, ponding	Severe: no water	Ponding, percs slowly	Ponding slow intake, percs slowly	Ponding percs slowly
1011:						
Macyflet--------	Moderate: seepage	Severe: hard to pack	Severe: no water	Deep to water	Percs slowly, erodes easily	Erodes easily, percs slowly
1012:						
Macyflet--------	Moderate: seepage	Severe: hard to pack	Severe: no water	Deep to water	Percs slowly, erodes easily	Erodes easily, percs slowly
Indian Creek----	Severe: seepage, cemented pan	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, percs slowly	Large stones, cemented pan, too sandy
1015:						
Powlow----------	Severe: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, cemented pan	Slope, cemented pan, percs slowly
1020:						
Bearbutte-------	Severe: slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, soil blowing	Slope, soil blowing
Welch-----------	Slight	Severe: wetness	Severe: slow refill	Frost action	Wetness	Wetness
1025:						
Mesman----------	Slight	Severe: piping, excess sodium, excess salt	Severe: no water	Deep to water	Droughty, soil blowing, percs slowly	Erodes easily, soil blowing, percs slowly
1030:						
Zorravista------	Severe: seepage, slope	Severe: seepage, piping	Severe: no water	Deep to water	Slope, droughty, fast intake	Slope, too sandy, soil blowing
1035:						
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
Madeline--------	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
1035 (con.):						
Crocan	Severe: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, percs slowly
1036:						
Tinpan	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
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
1040:						
Langston	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Large stones, too sandy
1041:						
Langston	Severe: seepage, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope, large stones, too sandy
Old Camp	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Paypoint	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Droughty, soil blowing	Too sandy, soil blowing
1045:						
Paypoint	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Droughty, soil blowing	Too sandy, soil blowing
Langston	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Large stones, too sandy
1050:						
Skullwak	Slight	Severe: wetness, excess sodium, excess salt	Severe: slow refill	Percs slowly, flooding, excess salt	Wetness, percs slowly, erodes easily	Erodes easily, wetness, percs slowly
1055:						
Devada	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, depth to rock, percs slowly
Hapgood	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, droughty	Slope, large stones
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, 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
1060:						
Bombadil	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Chime	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1061:						
Old Camp	Severe: depth to rock, slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
1062:						
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
Corral	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1063:						
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
1065:						
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
Reywat	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Rubble Land	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones
1070:						
Oreneva	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, large stones, depth to rock
1075:						
Surprise	Severe: seepage, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, fast intake	Slope, soil blowing
1080:						
Bucklake	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Rock Outcrop.						
Corral	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, 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
1081:						
Bucklake	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Fiddler	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
1083:						
Bucklake	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Rubble Land	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones
1090:						
Jaybee	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
Verdico	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, percs slowly
1095:						
Corral	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Mahala	Moderate: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Large stones, depth to rock, percs slowly
1105:						
Frezník	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, erodes easily
1110:						
Indian Creek	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, large stones, cemented pan
Buffaran	Severe: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, cemented pan	Slope, cemented pan, percs slowly
1115:						
Lofftus	Moderate: seepage, cemented pan	Severe: piping, hard to pack	Severe: no water	Cemented pan, excess salt	Wetness, droughty, cemented pan	Cemented pan, erodes easily, wetness
Mesman	Slight	Severe: piping, excess sodium, excess salt	Severe: no water	Deep to water	Droughty, 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
1120:						
McConnel--------	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, excess salt	Too sandy
1121:						
McConnel--------	Severe: seepage	Severe: seepage, excess salt	Severe: no water	Deep to water	Droughty, excess salt	Too sandy
1125:						
Halvert---------	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, percs slowly
Jaybee----------	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
Tunnison--------	Moderate: depth to rock	Severe: hard to pack	Severe: no water	Deep to water	Droughty, slow intake, percs slowly	Depth to rock, percs slowly
1130:						
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
Rock Outcrop.						
1131:						
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
Rock Outcrop.						
1135:						
Mcwatt----------	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, too sandy
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
1140:						
Valmy-----------	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Droughty, soil blowing, erodes easily	Erodes easily, soil blowing
1141:						
Valmy-----------	Severe: seepage	Severe: piping	Severe: no water	Deep to water	Slope, droughty, soil blowing	Soil blowing
Langston--------	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Large stones, too sandy

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
1141 (con.):						
Paypoint	Severe: seepage	Severe: seepage	Severe: no water	Deep to water	Droughty, soil blowing	Too sandy, soil blowing
1145:						
Wendane	Slight	Severe: excess sodium, excess salt	Severe: slow refill, salty water	Frost action, excess salt, excess sodium	Wetness, erodes easily, excess sodium	Erodes easily, wetness
1150:						
Saraph	Severe: depth to rock, slope	Severe: piping	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, percs slowly
Hangrock	Severe: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, cemented pan	Slope, cemented pan
Tuffo	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1151:						
Saraph	Severe: depth to rock	Severe: piping	Severe: no water	Deep to water	Slope, fast intake, soil blowing	Depth to rock, soil blowing, percs slowly
Tuffo	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
Yellowhills	Severe: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, erodes easily	Erodes easily, soil blowing
1155:						
Madeline	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
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
1160:						
Wylo	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
Bucklake	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, large stones, depth to rock
Rock Outcrop.						
1162:						
Devada	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
1162 (con.):						
Nitpac	Moderate: depth to rock, cemented pan, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Large stones, depth to rock, cemented pan
1163:						
Devada	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
Deseed	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, erodes easily
1164:						
Devada	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, depth to rock, percs slowly
Ashcamp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1165:						
Devada	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
Nitpac	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, large stones, depth to rock
Bidrim	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
1166:						
Devada	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
Bieber	Severe: cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, cemented pan, percs slowly
1167:						
Devada	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
Reywat	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
1168:						
Devada	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
1170:						
Devada	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
Bucklake	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
1171:						
Devada	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
Indian Creek	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, large stones, cemented pan
1172:						
Devada	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, depth to rock, percs slowly
Madeline	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
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
1173:						
Devada	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
Nitpac	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, large stones, depth to rock
Uhaldi	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1174:						
Devada	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
Uhaldi	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1175:						
Ferver	Moderate: depth to rock, cemented pan, slope	Severe: 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
1175 (con.):						
Tunnison	Moderate: depth to rock	Severe: hard to pack	Severe: no water	Deep to water	Droughty, slow intake, percs slowly	Depth to rock, percs slowly
1180:						
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
Karlo	Moderate: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, slow intake, percs slowly	Depth to rock, percs slowly
1181:						
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
Madeline	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
Tinpan	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
1182:						
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
Westbutte	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
1183:						
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
Westbutte	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
1184:						
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
Tinpan	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
1185:						
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
1185 (con.):						
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1186:						
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
Tinpan	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
Crocan	Severe: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, percs slowly
1187:						
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
Tinpan	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
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1188:						
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
Newlands	Severe: slope	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope	Slope
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1189:						
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
Badgercamp	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Crocan	Severe: depth to rock, slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, percs slowly
1190:						
Ferver	Severe: slope	Severe: 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
1190 (con.): Nitpac	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, large stones, depth to rock
1195: Bitner	Severe: seepage, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Ashcamp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1205: Davey	Severe: seepage, slope	Severe: seepage, piping	Severe: no water	Deep to water	Slope, droughty, fast intake	Slope, too sandy, soil blowing
1206: Davey	Severe: seepage, slope	Severe: seepage, piping	Severe: no water	Deep to water	Slope, droughty, fast intake	Slope, too sandy, soil blowing
Corral	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, fast intake, soil blowing	Slope, depth to rock, soil blowing
1210: Mazuma	Severe: seepage	Severe: piping	Severe: no water	Deep to water	Slope, soil blowing, excess salt	Too sandy, soil blowing
Bighat	Severe: seepage, slope	Severe: seepage, excess sodium	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, too sandy
1215: Raglan	Slight	Severe: piping, excess salt	Severe: no water	Deep to water	Soil blowing, erodes easily, excess salt	Erodes easily soil blowing
Isolde	Severe: seepage, slope	Severe: seepage, piping	Severe: no water	Deep to water	Slope, droughty, fast intake	Slope, too sandy, soil blowing
1220: Schamp	Severe: seepage, slope	Moderate: hard to pack	Severe: no water	Deep to water	Slope, excess salt	Slope, erodes easily
1221: Schamp	Severe: seepage, slope	Moderate: hard to pack	Severe: no water	Deep to water	Slope, excess salt	Slope, erodes easily
1223: Schamp	Severe: seepage, slope	Moderate: hard to pack	Severe: no water	Deep to water	Slope, percs slowly, erodes easily	Slope, 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
1230:						
Raglan	Slight	Severe: piping, excess salt	Severe: no water	Deep to water	Soil blowing, erodes easily, excess salt	Erodes easily, soil blowing
Maruma	Severe: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, excess salt	Too sandy, soil blowing
1235:						
Chime	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1240:						
Toney	Moderate: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Large stones, depth to rock, percs slowly
Millerlux	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
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1245:						
Saraph	Severe: depth to rock, slope	Severe: piping	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, percs slowly
Uhaldi	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Prentera	Severe: seepage, slope	Severe: piping	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1250:						
Ashone	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Ashdos	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Bearbutte	Severe: slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, soil blowing	Slope, soil blowing
1251:						
Ashone	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Ashdos	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Ashtre	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, 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
1253:						
Ashdos	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Ashtre	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Hackwood	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
1255:						
Newlands	Severe: slope	Moderate: thin layer, piping	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
1256:						
Newlands	Severe: slope	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope	Slope
Menbo	Severe: slope	Moderate: thin layer, hard to pack, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
1257:						
Newlands	Severe: slope	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope	Slope
Hapgood	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, droughty	Slope, large stones
1258:						
Newlands	Severe: slope	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope	Slope
Badgercamp	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Hackwood	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
1265:						
Fitzwater	Severe: seepage, slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones
Westbutte	Severe: 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
1270:						
Hartig----------	Severe: slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope
1271:						
Hartig----------	Severe: slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope
Newlands--------	Severe: slope	Moderate: thin layer, piping	Severe: no water	Deep to water	Slope	Slope
1272:						
Hartig----------	Severe: slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope
Rock Outcrop.						
1273:						
Hartig----------	Severe: slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope
Hapgood---------	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, droughty	Slope, large stones
1275:						
Hart Camp-------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1276:						
Hart Camp-------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Reywat----------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, large stones, depth to rock
Westbutte-------	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
1277:						
Hart Camp-------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, 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

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
1278:						
Boltz	Severe: seepage, slope	Moderate: thin layer, seepage, piping	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1279:						
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Nutzan	Severe: seepage, slope	Severe: seepage	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Westbutte	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
1285:						
Zymans	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly	Slope, percs slowly
Indian Creek	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, large stones, cemented pan
1286:						
Zymans	Severe: slope	Severe: hard to pack	Severe: no water	Deep to water	Slope, percs slowly	Slope, 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
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1290:						
Hapgood	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, droughty	Slope, large stones
Badgercamp	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Hackwood	Severe: slope	Slight	Severe: no water	Deep to water	Slope	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
1295:						
Devoy	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Blizzard	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
1296:						
Blizzard	Severe: depth to rock	Severe: thin layer	Severe: no water	Deep to water	Slope, large stones, percs slowly	Large stones, depth to rock, percs slowly
1305:						
Updike	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, excess sodium	Erodes easily, percs slowly
Maxuma	Severe: seepage	Severe: piping	Severe: no water	Deep to water	Soil blowing, excess salt	Too sandy, soil blowing
1306:						
Updike	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, excess sodium	Erodes easily, percs slowly
Longdis	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, excess sodium	Erodes easily, percs slowly
1310:						
Longdis	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, excess sodium	Erodes easily, percs slowly
Updike	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, flooding	Erodes easily, percs slowly
1311:						
Longdis	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, flooding	Erodes easily, percs slowly
Macyflet	Moderate: seepage	Severe: hard to pack	Severe: no water	Deep to water	Percs slowly, erodes easily	Erodes easily, percs slowly
Aeric Epiaquents	Slight	Severe: hard to pack, ponding	Severe: no water	Ponding, percs slowly, frost action	Ponding, percs slowly, erodes easily	Erodes easily, ponding, percs slowly
1312:						
Longdis	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, excess sodium	Erodes easily, percs slowly
Dugway	Moderate: cemented pan	Severe: piping, excess sodium	Severe: no water	Deep to water	Soil blowing, percs slowly, cemented pan	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
1313:						
Longdis	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, flooding	Erodes easily, percs slowly
1320:						
Dugway	Moderate: cemented pan	Severe: piping, excess sodium	Severe: no water	Deep to water	Soil blowing, percs slowly, cemented pan	Cemented pan, erodes easily, soil blowing
1321:						
Dugway	Moderate: cemented pan	Severe: piping, excess sodium	Severe: no water	Deep to water	Soil blowing, percs slowly, cemented pan	Cemented pan, erodes easily, soil blowing
Updike	Slight	Severe: excess sodium	Severe: no water	Deep to water	Percs slowly, erodes easily, flooding	Erodes easily, percs slowly
1325:						
Reywat	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
Devada	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
Hart Camp	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1326:						
Reywat	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
1327:						
Reywat	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, large stones, depth to rock
Westbutte	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Hapgood	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, droughty	Slope, large stones
1328:						
Reywat	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, large stones, depth to rock
Fernpoint	Severe: seepage, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope, large stones, too sandy

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
1329:						
Reywat	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
Devada	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
1335:						
Westbutte	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Rock Outcrop.						
1336:						
Westbutte	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Ashtre	Severe: slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Tusune	Severe: slope	Moderate: thin layer, seepage	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
1345:						
Layview	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Hapgood	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, droughty	Slope, large stones
1346:						
Layview	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Westbutte	Severe: slope	Severe: large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, depth to rock
Hapgood	Severe: slope	Moderate: thin layer, large stones	Severe: no water	Deep to water	Slope, droughty	Slope, large stones
1355:						
Badgercamp	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Hackwood	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
Baste	Severe: seepage, slope	Severe: seepage	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
1356:						
Badgercamp------	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Hackwood--------	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
Kaste-----------	Severe: seepage, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope, large stones
1358:						
Badgercamp------	Severe: depth to rock, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, depth to rock	Slope, depth to rock
Hackwood--------	Severe: slope	Slight	Severe: no water	Deep to water	Slope	Slope
1360:						
Welch-----------	Slight	Severe: wetness	Severe: slow refill	Flooding, frost action	Wetness, flooding	Wetness
1361:						
Wetvit----------	Slight	Severe: piping, wetness	Severe: slow refill, cutbanks cave	Flooding, frost action	Wetness, soil blowing, flooding	Wetness, soil blowing
Wetvit----------	Slight	Severe: piping, wetness	Severe: slow refill, cutbanks cave	Flooding, frost action	Wetness, soil blowing, flooding	Wetness, soil blowing
1365:						
Rubble Land-----	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones
Dosie-----------	Severe: slope	Moderate: thin layer, seepage, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, percs slowly
1366:						
Dosie-----------	Severe: slope	Moderate: thin layer, seepage, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, percs slowly
1367:						
Dosie-----------	Severe: slope	Moderate: thin layer, seepage, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones, percs slowly
Fiddler---------	Severe: 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
1367 (con.):						
Rubble Land-----	Severe: seepage, slope	Severe: seepage, large stones	Severe: no water	Deep to water	Slope, large stones, droughty	Slope, large stones
1375:						
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
Madeline--------	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
1380:						
Weimer----------	Slight	Severe: hard to pack, ponding	Severe: no water	Ponding, percs slowly	Ponding, slow intake, percs slowly	Ponding, percs slowly
Boulder Lake----	Slight	Severe: hard to pack, ponding	Severe: no water	Ponding, percs slowly	Ponding, slow intake, percs slowly	Ponding, percs slowly
1385:						
Fernpoint-------	Severe: seepage, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope, large stones, too sandy
1395:						
Orr-------------	Moderate: seepage, slope	Slight	Severe: no water	Deep to water	Slope	Favorable
Fernpoint-------	Severe: seepage, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope, large stones, too sandy
1400:						
Bombadil--------	Severe: depth to rock, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Ceejay----------	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
1410:						
Fulstone--------	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, large stones, cemented pan
Saraph----------	Severe: depth to rock, slope	Severe: piping	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: thin layer	Severe: no water	Deep to water	Slope, depth to rock	Slope, 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
1412:						
Fulstone	Severe: seepage, cemented pan, slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty, percs slowly	Slope, large stones, cemented pan
Nellspring	Severe: slope	Moderate: thin layer, hard to pack	Severe: no water	Deep to water	Slope, percs slowly, cemented pan	Slope, cemented pan, percs slowly
Buffaran	Severe: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, cemented pan	Slope, cemented pan, percs slowly
1420:						
Hangrock	Severe: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, cemented pan	Slope, cemented pan
1430:						
Grassycan	Severe: depth to rock, cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Slope, depth to rock, cemented pan
Grassycan	Severe: depth to rock, cemented pan	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, depth to rock	Depth to rock, cemented pan, percs slowly
1431:						
Esmod	Severe: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, cemented pan	Slope, cemented pan, percs slowly
Powlow	Severe: cemented pan, slope	Severe: thin layer	Severe: no water	Deep to water	Slope, percs slowly, cemented pan	Slope, cemented pan, percs slowly
1440:						
Tusune	Severe: slope	Moderate: thin layer, seepage	Severe: no water	Deep to water	Slope, depth to rock	Slope, depth to rock
Hartig	Severe: slope	Severe: seepage	Severe: no water	Deep to water	Slope, droughty	Slope
1450:						
Emagert	Slight	Severe: piping	Severe: no water	Deep to water	Favorable	Favorable
Wetvit	Slight	Severe: piping, wetness	Severe: slow refill, cutbanks cave	Flooding, frost action	Wetness, soil blowing, flooding	Wetness, soil blowing
1460:						
Weerweed	Slight	Severe: piping	Severe: no water	Deep to water	Favorable	Too sandy

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
1470:						
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
9901:						
Playas----------	Slight	Severe: hard to pack, ponding, excess salt	Severe: slow refill, salty water	Ponding, percs slowly, excess salt	Ponding, droughty, slow intake	Erodes easily, ponding, percs slowly
9902:						
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 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	
1010:												
Macyflet--------	0-9	Silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-100	35-45	15-25
	9-47	Clay	CH	A-7	0	0	100	100	80-100	75-100	65-75	35-45
	47-60	Loamy sand, loamy fine sand	SM	A-2	0	0	100	100	75-90	15-30	---	NP
Boulder Lake----	0-2	Silty clay	CH	A-7	0	0	100	100	90-100	80-95	60-70	45-55
	2-60	Clay, silty clay	CH	A-7	0	0	100	100	90-100	80-95	60-70	45-55
1011:												
Macyflet--------	0-9	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
	9-47	Clay	CH	A-7	0	0	100	100	80-100	75-100	65-75	35-45
	47-60	Loamy sand, loamy fine sand	SM	A-2	0	0	100	100	75-90	15-30	---	NP
1012:												
Macyflet--------	0-9	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
	9-47	Clay	CH	A-7	0	0	100	100	80-100	75-100	65-75	35-45
	47-60	Loamy sand, loamy fine sand	SM	A-2	0	0	100	100	75-90	15-30	---	NP
Indian Creek----	0-5	Very cobbly loam	SC, SC-SM	A-2, A-6, A-4	0-5	30-55	70-90	60-85	55-75	30-50	25-35	5-15
	5-18	Gravelly clay, clay, sandy clay	CH, CL	A-7	0	0-5	80-100	60-90	55-80	50-80	45-60	25-40
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Stratified extremely gravelly loamy coarse sand to gravelly sandy clay loam	GP-GM, GM-GC, GM	A-2, A-1	0-5	5-30	35-55	30-55	15-25	5-15	15-30	NP-10
1015:												
Powlow----------	0-6	Very gravelly loam	GM	A-2, A-1	0	0-5	40-60	30-50	25-45	20-30	25-35	NP-10
	6-15	Gravelly clay, clay, gravelly clay loam	CH, CL	A-7	0	0-5	80-100	70-100	60-70	50-65	40-55	20-30
	15-60	Cemented			0	0	0	0	0	0	---	NP
1020:												
Bearbutte-------	0-9	Fine sandy loam	SM	A-2, A-4	0	0	85-95	75-85	60-75	30-40	---	NP
	9-24	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0	65-95	55-90	35-75	25-50	25-30	NP-5
	24-40	Extremely stony sandy loam	SM	A-2, A-4	60-75	0-10	90-100	85-90	50-70	25-50	---	NP
	40-53	Gravelly sandy loam	SM	A-1, A-2, A-4	0	0-10	60-80	55-75	35-65	15-50	---	NP
	53-57	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	
1020 (con.):												
Welch----------	0-5	Loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	5-60	Stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
1025:												
Mesman----------	0-4	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-25	NP-5
	4-13	Sandy clay loam, loam, clay loam	SC, CL	A-6, A-7	0	0	100	100	80-95	45-75	30-45	10-20
	13-60	Very fine sandy loam, silt loam, loam	CL, ML, CL-ML	A-4, A-6	0	0	100	100	85-95	55-85	25-40	5-15
1030:												
Zorravista------	0-4	Fine sand	SP-SM, SM	A-2, A-3	0	0	100	100	75-90	5-20	0-14	NP
	4-60	Fine sand, sand, loamy fine sand	SP-SM, SM	A-2, A-3	0	0	100	100	65-80	5-30	0-14	NP
1035:												
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Madeline--------	0-2	Very stony loam	GC, SC, CL	A-6	5-10	5-20	70-85	65-80	55-75	45-55	30-35	10-15
	2-6	Sandy clay loam, clay loam, sandy clay	SC, CL	A-2, A-6, A-7	0	0-10	85-95	80-90	65-80	30-60	35-45	15-20
	6-19	Sandy clay, gravelly clay, stony sandy clay	SC, CL, CH, GC	A-2, A-7	0-5	5-15	60-95	55-90	45-75	30-55	45-65	25-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Crocan----------	0-3	Extremely stony loam	GM	A-2, A-4	25-40	25-35	40-60	35-60	30-50	25-40	20-25	NP-5
	3-5	Clay loam	CL	A-7	0-1	0-5	80-95	75-95	70-90	55-70	40-45	15-20
	5-14	Clay	MH, CH	A-7	0-1	0-5	90-95	85-95	80-90	65-75	55-70	25-40
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
1036:												
Tinpan----------	0-2	Extremely cobbly loam	GC	A-2, A-6	5-15	50-70	40-55	30-50	25-45	20-40	30-35	10-15
	2-5	Silty clay loam	CL	A-6	0-5	0-5	80-100	75-100	70-95	65-85	35-40	15-20
	5-36	Clay	CH	A-7	0	0	100	100	90-100	80-95	60-75	40-50
	36-46	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	
1036 (con.):												
Ninemile	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
1040:												
Langston	0-3	Gravelly sandy loam	SM	A-2, A-1	0	0-10	80-90	65-75	40-50	20-30	0-14	NP
	3-11	Sandy clay loam, gravelly clay loam, gravelly loam	SC, CL, GC	A-2, A-6	0	0-10	60-85	50-80	35-60	25-55	30-40	10-20
	11-60	Stratified gravelly sand to extremely gravelly coarse sand	GP, GW	A-1	0	10-25	10-40	5-25	0-15	0-5	0-14	NP
1041:												
Langston	0-3	Gravelly sandy loam	SM	A-2, A-1	0	0-10	80-90	65-75	40-50	20-30	0-14	NP
	3-11	Sandy clay loam, gravelly clay loam, gravelly loam	SC, CL, GC	A-2, A-6	0	0-10	60-85	50-80	35-60	25-55	30-40	10-20
	11-60	Stratified gravelly sand to extremely gravelly coarse sand	GP, GW	A-1	0	10-25	10-40	5-25	0-15	0-5	0-14	NP
Old Camp	0-2	Very gravelly loam	GM, GM-GC	A-1, A-2	0-1	0-15	50-60	35-45	30-40	20-30	15-25	NP-10
	2-15	Very cobbly clay loam, extremely stony sandy clay loam, very stony clay loam	GC	A-2, A-6	25-50	25-50	40-55	35-50	30-45	25-40	30-40	15-25
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Paypoint	0-5	Gravelly fine sandy loam	SM	A-2, A-4	0	0	70-90	65-75	50-75	20-40	---	NP
	5-17	Sandy clay loam, loam	CL-ML	A-4	0	0	90-100	90-100	75-90	60-75	25-30	5-10
	17-60	Stratified very gravelly sand to gravelly loamy sand	SP, SP-SM, SM	A-1	0	0	50-70	35-45	25-40	0-20	---	NP

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1045:												
Paypoint--------	0-5	Gravelly fine sandy loam	SM	A-2, A-4	0	0	70-90	65-75	50-75	20-40	---	NP
	5-17	Sandy clay loam, loam	CL-ML	A-4	0	0	90-100	90-100	75-90	60-75	25-30	5-10
	17-60	Stratified very gravelly sand to gravelly loamy sand	SP, SP-SM, SM	A-1	0	0	50-70	35-45	25-40	0-20	---	NP
Langston--------	0-3	Gravelly sandy loam	SM	A-2, A-1	0	0-10	80-90	65-75	40-50	20-30	0-14	NP
	3-11	Sandy clay loam, gravelly clay loam, gravelly loam	SC, CL, GC	A-2, A-6	0	0-10	60-85	50-80	35-60	25-55	30-40	10-20
	11-60	Stratified gravelly sand to extremely gravelly coarse sand	GP, GW	A-1	0	10-25	10-40	5-25	0-15	0-5	0-14	NP
1050:												
Skullwak---------	0-5	Silt loam	CL	A-6	0	0	100	100	90-100	85-100	30-40	10-20
	5-60	Stratified silty clay loam to silty clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-60	20-40
1055:												
Devada----------	0-6	Very gravelly loam	GC	A-2	0	0-5	35-50	30-45	25-40	20-35	25-35	10-15
	6-17	Clay, gravelly clay	GC, CH	A-7	0	0-10	60-100	55-100	50-85	45-75	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-17	Very gravelly loam	GM-GC	A-2	0	5-10	50-60	35-50	30-45	25-35	25-30	5-10
	17-40	Very gravelly loam	GC, GM-GC	A-2	0	5-25	50-60	35-50	30-40	20-35	25-35	5-15
	40-50	Very cobbly loam, very gravelly loam	GC, GM-GC	A-2	0-5	15-40	55-65	50-60	35-45	25-35	25-35	5-15
	50-54	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	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	
1060:												
Bombadil--------	0-3	Very stony loam	SM, ML, SC-SM, CL-ML	A-4	5-15	15-25	70-90	65-85	50-80	40-75	20-30	NP-10
	3-6	Loam, gravelly loam	CL-ML, CL	A-4, A-6	0-5	0-10	75-100	70-90	65-85	50-70	25-35	5-15
	6-14	Loam, clay loam, gravelly clay loam	CL	A-6	0-5	0-10	75-100	70-90	65-85	55-75	30-40	10-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Chime-----------	0-7	Gravelly loam	GC, CL	A-6	0	0	60-80	55-75	50-70	40-60	25-35	10-15
	7-16	Clay loam, gravelly clay loam	CL	A-6, A-7	0	0	75-90	70-85	65-80	55-70	35-45	15-20
	16-25	Loam, gravelly loam, clay loam	CL, SC	A-6	0	0	75-95	70-90	60-75	40-60	25-35	10-15
	25-29	Weathered bedrock			0	0	0	0	0	0	---	NP
1061:												
Old Camp--------	0-2	Gravelly loam	SC-SM	A-4	0	0-5	70-85	60-75	50-65	35-50	25-30	5-10
	2-15	Very cobbly clay loam, extremely stony sandy clay loam, very stony clay loam	GC	A-2, A-6	25-50	25-50	40-55	35-50	30-45	25-40	30-40	15-25
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
1062:												
Old Camp--------	0-2	Very cobbly loam	GM, GM-GC	A-2, A-4	0-5	25-50	60-70	55-65	45-55	30-40	15-25	NP-10
	2-15	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
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Corral----------	0-7	Stony loam	CL-ML, ML	A-4	1-5	5-15	80-100	75-95	60-80	50-65	25-35	5-10
	7-16	Clay loam, loam, sandy clay loam	CL	A-6	0	0	80-100	75-95	65-90	50-75	30-40	10-20
	16-20	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	
1063:												
Old Camp--------	0-2	Very stony loam	GM, GM-GC	A-2, A-4	5-25	20-30	60-70	55-65	45-55	30-40	15-25	NP-10
	2-15	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
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
1065:												
Old Camp--------	0-2	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
	2-15	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
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Reywat----------	0-6	Extremely stony loam	GM, GM-GC	A-4	35-55	15-45	55-75	50-70	40-65	35-50	25-35	5-10
	6-18	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	18-22	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
1070:												
Oreneva---------	0-2	Very gravelly loam	GM, GM-GC	A-2, A-4	0	5-25	45-65	35-55	30-50	25-40	25-35	5-10
	2-10	Loam, clay loam	CL-ML, ML	A-4	0	0-5	85-100	75-100	65-95	50-75	25-35	5-10
	10-30	Very gravelly loam, very gravelly clay loam	GM-GC, GM	A-2, A-4	0	0-25	45-65	40-60	30-55	25-50	25-35	5-10
	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	
1075:												
Surprise--------	0-2	Gravelly loamy sand	SM	A-1, A-2	0	0	70-80	60-75	35-50	15-30	15-25	NP-5
	2-54	Stratified gravelly sandy loam to gravelly loam	SM	A-1, A-2	0	0-5	60-80	50-75	30-50	15-35	20-30	NP-5
	54-65	Stratified very gravelly sandy loam to gravelly sandy loam	SM, GM	A-1, A-2	0	0-15	50-70	35-60	20-40	10-30	15-25	NP-5
1080:												
Rock Outcrop.												
Bucklake--------	0-8	Very stony loam	CL, CL-ML, SC, SC-SM	A-4, A-6	5-25	10-60	70-85	65-80	55-70	40-55	25-35	5-15
	8-12	Gravelly clay loam	CL, GC	A-6	0	0-10	55-75	50-70	45-65	40-55	30-40	10-20
	12-24	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-75	50-70	45-65	40-60	40-60	20-35
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
Corral----------	0-7	Very stony loam	CL-ML, ML	A-4	10-20	15-20	80-90	75-85	60-80	50-65	25-35	5-10
	7-16	Clay loam, loam, sandy clay loam	CL	A-6	0	0-5	80-100	75-95	65-90	50-75	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1081:												
Bucklake--------	0-8	Very cobbly loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	35-60	70-85	65-80	55-70	40-55	25-35	5-15
	8-12	Gravelly clay loam	CL, GC	A-6	0	0-10	55-75	50-70	45-65	40-55	30-40	10-20
	12-24	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-75	50-70	45-65	40-60	40-60	20-35
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
Fiddler---------	0-7	Very stony loam	CL-ML, ML, CL	A-4	15-25	25-55	95-100	90-100	80-90	55-75	25-35	5-10
	7-28	Very stony clay loam, very stony clay, very cobbly clay loam	CL, CH	A-7	25-55	40-50	75-90	70-85	65-75	50-65	40-60	20-35
	28-32	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	
1083:												
Bucklake---------	0-8	Very cobbly loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	35-60	70-85	65-80	55-70	40-55	25-35	5-15
	8-12	Gravelly clay loam	CL, GC	A-6	0	0-10	55-75	50-70	45-65	40-55	30-40	10-20
	12-24	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-75	50-70	45-65	40-60	40-60	20-35
	24-28	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
1090:												
Jaybee----------	0-4	Very cobbly loam	SC, SC-SM, GC, GM-GC	A-4, A-6	0-2	45-60	65-75	55-65	45-55	35-45	25-35	5-15
	4-14	Gravelly clay, gravelly clay loam	SC, CL	A-7	0	0-10	75-85	50-75	45-65	40-55	40-50	20-30
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Verdico---------	0-3	Very stony sandy loam	SM	A-2	5-10	10-20	85-100	75-85	50-60	20-30	---	NP
	3-17	Clay	CH	A-7	0	0-5	85-95	85-95	75-95	65-90	50-65	30-45
	17-22	Gravelly clay	CH	A-7	0	0-5	75-95	65-75	60-75	50-70	50-65	30-45
	22-26	Weathered bedrock			0	0	0	0	0	0	---	NP
1095:												
Corral----------	0-7	Very stony loam	CL-ML, ML	A-4	10-20	15-20	80-90	75-85	60-80	50-65	25-35	5-10
	7-16	Clay loam, loam, sandy clay loam	CL	A-6	0	0-5	80-100	75-95	65-90	50-75	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
Mahala----------	0-7	Very cobbly silt loam	GM, ML	A-4	0-5	40-60	60-85	50-80	45-70	40-60	30-40	NP-10
	7-23	Clay, gravelly clay	CH	A-7	0	0	80-100	70-100	70-100	60-90	50-65	25-35
	23-27	Weathered bedrock			0	0	0	0	0	0	---	NP
1105:												
Freznik---------	0-3	Very stony loam	SM, SC-SM, ML, CL-ML	A-4	5-25	5-30	75-95	65-90	55-80	45-65	25-35	5-10
	3-15	Clay	CH	A-7	0	0	85-100	75-100	70-100	65-95	50-65	25-35
	15-23	Clay loam, clay	CL, CH	A-7	0	0	85-100	75-100	70-100	55-90	40-55	15-30
	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	
1110:												
Indian Creek----	0-5	Very cobbly loam	SC, SC-SM	A-2, A-6, A-4	0-5	30-55	70-90	60-85	55-75	30-50	25-35	5-15
	5-18	Gravelly clay, clay, sandy clay	CH, CL	A-7	0	0-5	80-100	60-90	55-80	50-80	45-60	25-40
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Stratified extremely gravelly loamy coarse sand to gravelly sandy clay loam	GP-GM, GM-GC, GM	A-2, A-1	0-5	5-30	35-55	30-55	15-25	5-15	15-30	NP-10
Buffaran--------	0-2	Very stony loam	SC, CL	A-6	5-15	5-25	75-90	75-85	50-75	40-60	25-35	10-15
	2-16	Gravelly clay loam, gravelly clay, clay	CL, CH	A-7	0	0-5	75-90	70-85	65-80	50-65	40-55	20-30
	16-27	Indurated			0	0	0	0	0	0	---	NP
	27-60	Cemented			0	0	0	0	0	0	---	NP
1115:												
Lofftus---------	0-2	Silt loam	ML, MH	A-5	0	0	100	100	95-100	80-90	45-55	5-10
	2-30	Silt loam	ML, MH	A-5	0	0	100	100	95-100	85-90	45-55	5-10
	30-50	Cemented			0	0	0	0	0	0	---	NP
	50-60	Variable	ML	A-4	0	0	100	100	80-100	70-90	0-14	NP
Mesman----------	0-4	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-25	NP-5
	4-13	Sandy clay loam, loam, clay loam	SC, CL	A-6, A-7	0	0	100	100	80-95	45-75	30-45	10-20
	13-60	Very fine sandy loam, silt loam, loam	CL, ML, CL-ML	A-4, A-6	0	0	100	100	85-95	55-85	25-40	5-15
1120:												
McConnel--------	0-5	Very stony sandy loam	SM	A-1, A-2	5-20	5-15	65-75	50-65	35-45	20-35	15-25	NP-5
	5-15	Very gravelly sandy loam	GM	A-1, A-2	0	0-15	50-60	35-50	25-45	15-30	15-25	NP-5
	15-60	Stratified very gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	0-15	25-40	15-35	5-15	0-10	---	NP
1121:												
McConnel--------	0-5	Gravelly fine sandy loam	GM	A-2, A-4	0	0	60-70	50-70	40-60	25-45	15-25	NP-5
	5-15	Loam, sandy loam, fine sandy loam	ML, SM	A-4	0	0	95-100	90-100	65-80	45-60	15-25	NP-5
	15-60	Stratified very gravelly sandy loam to extremely gravelly coarse sand	GP	A-1	0	0-15	25-35	10-35	5-15	0-5	0-14	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	
1125:												
Halvert	0-2	Gravelly loam	SC, GC	A-2, A-6	0-1	5-10	60-80	55-75	35-55	30-50	30-35	10-15
	2-5	Gravelly clay loam	CL, GC	A-6	0-1	5-10	60-80	55-75	50-70	40-60	35-40	15-20
	5-27	Clay, gravelly clay	CH, GC	A-7	0	5-10	60-95	55-85	50-80	40-75	60-75	40-50
	27-32	Indurated			0	0	0	0	0	0	---	NP
	32-40	Weathered bedrock			0	0	0	0	0	0	---	NP
Jaybee	0-4	Very cobbly loam	SC, SC-SM, GC, GM-GC	A-4, A-6	0-2	45-60	65-75	55-65	45-55	35-45	25-35	5-15
	4-14	Gravelly clay, gravelly clay loam	SC, CL	A-7	0	0-10	75-85	50-75	45-65	40-55	40-50	20-30
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Tunnison	0-2	Cobbly clay	CH	A-7	0	15-40	85-95	80-90	75-90	65-90	60-70	35-45
	2-27	Clay	CH	A-7	0	0	100	100	95-100	90-95	60-75	40-50
	27-30	Weathered bedrock			0	0	0	0	0	0	---	NP
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	NP
1130:												
Rock Outcrop.												
Soughe	0-4	Very cobbly loam	GM-GC, GM	A-4	0-1	20-40	55-70	50-60	45-55	35-45	20-30	NP-10
	4-17	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
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
1131:												
Rock Outcrop.												
Soughe	0-4	Very cobbly loam	GM-GC, GM	A-4	0-1	20-40	55-70	50-60	45-55	35-45	20-30	NP-10
	4-17	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
	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	
1135:												
Mcwatt----------	0-10	Extremely stony fine sandy loam	GM	A-1	25-40	15-35	30-50	20-40	15-35	10-15	10-25	NP-5
	10-20	Extremely gravelly fine sandy loam, very gravelly sandy loam	GP-GM	A-1	5-15	15-35	25-35	15-25	10-20	5-10	10-25	NP-5
	20-44	Extremely cobbly loamy sand, extremely gravelly sand, extremely gravelly loamy sand	GP	A-1	0-15	15-55	20-50	10-40	5-20	0-5	---	NP
	44-53	Unweathered bedrock			0	0	0	0	0	0	---	NP
Old Camp--------	0-2	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
	2-15	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
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
1140:												
Valmy-----------	0-2	Very fine sandy loam	SM	A-4	0	0-5	90-100	85-100	60-75	35-50	15-25	NP-5
	2-60	Stratified very fine sandy loam to gravelly coarse sandy loam	SM	A-4, A-2, A-1	0	0-5	65-95	60-90	45-70	15-45	15-25	NP-5
1141:												
Valmy-----------	0-2	Fine sandy loam	SM, ML	A-2, A-4	0	0-5	85-100	80-100	60-80	30-55	15-25	NP-5
	2-53	Stratified very fine sandy loam to gravelly coarse sandy loam	SM	A-4, A-2, A-1	0	0-5	80-100	75-100	40-70	20-45	15-25	NP-5
	53-60	Gravelly sand, very gravelly sand	SP-SM, SM, GP-GM, GM	A-1	0	0-10	40-75	30-70	20-45	5-15	---	NP

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1141 (con.):												
Langston	0-3	Gravelly sandy loam	SM	A-2, A-1	0	0-10	80-90	65-75	40-50	20-30	0-14	NP
	3-11	Sandy clay loam, gravelly clay loam, gravelly loam	SC, CL, GC	A-2, A-6	0	0-10	60-85	50-80	35-60	25-55	30-40	10-20
	11-60	Stratified gravelly sand to extremely gravelly coarse sand	GP, GW	A-1	0	10-25	10-40	5-25	0-15	0-5	0-14	NP
Paypoint	0-5	Gravelly fine sandy loam	SM	A-2, A-4	0	0	70-90	65-75	50-75	20-40	---	NP
	5-17	Sandy clay loam, loam	CL-ML	A-4	0	0	90-100	90-100	75-90	60-75	25-30	5-10
	17-60	Stratified very gravelly sand to gravelly loamy sand	SP, SP-SM, SM	A-1	0	0	50-70	35-45	25-40	0-20	---	NP
1145:												
Wendane	0-10	Silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	10-60	Stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
1150:												
Saraph	0-4	Very gravelly sandy loam	GM	A-1, A-2	0	0-2	40-60	35-50	25-40	15-30	15-20	NP
	4-9	Sandy loam, sandy clay loam	ML, SM	A-4, A-5	0	0	95-100	75-100	55-70	35-60	30-45	NP-5
	9-16	Sandy clay loam, clay loam	ML, SM	A-4, A-5	0	0	95-100	75-100	60-75	45-70	35-50	5-10
	16-30	Weathered bedrock			0	0	0	0	0	0	---	NP
Hangrock	0-4	Very gravelly loam	GM-GC	A-2	0	0-5	40-60	30-50	25-40	10-20	20-25	5-10
	4-17	Gravelly clay loam, gravelly loam	SC, GC	A-2, A-6	0	0-5	60-80	50-75	45-70	30-45	30-40	10-15
	17-60	Cemented			0	0	0	0	0	0	---	NP
Tuffo	0-1	Very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	35-50	25-40	15-30	15-20	NP-5
	1-8	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
	8-30	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	
1151:												
Saraph----------	0-4	Loamy sand	SM	A-1, A-2	0	0	95-100	75-100	45-60	20-35	---	NP
	4-9	Sandy loam, sandy clay loam	ML, SM	A-4, A-5	0	0	95-100	75-100	55-70	35-60	30-45	NP-5
	9-16	Clay loam, sandy clay loam	ML, SM	A-4, A-5	0	0	95-100	75-100	60-75	45-70	35-50	5-10
	16-30	Weathered bedrock			0	0	0	0	0	0	---	NP
Tuffo----------	0-5	Fine sandy loam	SM	A-2, A-4	0	0	80-95	75-90	60-80	30-45	15-20	NP-5
	5-8	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
	8-30	Weathered bedrock			0	0	0	0	0	0	---	NP
Yellowhills-----	0-16	Sandy loam	SM	A-2, A-4	0	0	90-100	85-100	50-70	20-50	25-35	NP-5
	16-34	Sandy loam, fine sandy loam	SM, ML	A-2, A-4	0	0	80-100	75-100	50-85	30-65	30-40	NP-5
	34-60	Sandy loam, fine sandy loam	SM, ML	A-2, A-4	0	0	80-100	75-100	50-85	30-65	30-40	NP-5
1155:												
Madeline--------	0-2	Stony loam	CL	A-6	1-5	5-10	80-90	75-85	70-80	50-60	30-35	10-15
	2-6	Sandy clay loam, clay loam, sandy clay	SC, CL	A-2, A-6, A-7	0	0-10	85-95	80-90	65-80	30-60	35-45	15-20
	6-19	Sandy clay, gravelly clay, stony sandy clay	SC, CL, CH, GC	A-2, A-7	0-5	5-15	60-95	55-90	45-75	30-55	45-65	25-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
1160:												
Rock Outcrop.												
Wylo----------	0-4	Very stony loam	SM, SC-SM, GM, GM-GC	A-2, A-4	5-25	0-15	60-85	50-80	40-60	30-50	25-35	5-10
	4-15	Gravelly clay, gravelly clay loam, cobbly clay	SC, GC	A-7	0-5	10-30	60-90	55-85	50-70	35-50	40-50	15-25
	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	
1160 (con.):												
Bucklake	0-8	Extremely stony loam	CL, CL-ML, SC, SC-SM	A-4, A-6	25-50	10-35	70-85	65-80	55-70	40-55	25-35	5-15
	8-12	Gravelly clay loam	CL, GC	A-6	0	0-10	55-75	50-70	45-65	40-55	30-40	10-20
	12-24	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-75	50-70	45-65	40-60	40-60	20-35
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
1162:												
Devada	0-6	Extremely cobbly loam	GM-GC, GC	A-2	0-5	45-55	25-40	20-35	15-30	10-20	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Nitpac	0-8	Very cobbly loam	SM, GM	A-2, A-4	0-5	40-55	60-80	50-70	40-60	30-50	30-40	NP-10
	8-21	Clay	CH	A-7	0	0-5	95-100	85-100	70-95	60-80	55-70	35-50
	21-26	Gravelly clay loam, gravelly clay	SC, CL, GC	A-7	0	0-5	60-85	50-75	45-65	40-60	40-50	15-25
	26-34	Cemented			0	0	0	0	0	0	---	NP
	34-40	Weathered bedrock			0	0	0	0	0	0	---	NP
1163:												
Devada	0-6	Very cobbly loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0-5	30-65	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Deseed	0-3	Silt loam	CL-ML	A-4	0	0	95-100	85-100	80-100	70-90	20-30	5-10
	3-9	Clay loam, silty clay loam	CL, ML	A-6	0	0-5	85-100	75-100	70-100	55-90	35-40	10-15
	9-25	Clay, clay loam, gravelly clay	CL, GC	A-7	0	0-5	70-100	60-95	55-90	45-85	40-50	15-25
	25-28	Cobbly loam, gravelly loam	CL-ML, SC-SM	A-4	0	5-30	80-95	70-90	65-80	45-65	25-30	5-10
	28-32	Unweathered bedrock			0	0	0	0	0	0	---	NP
1164:												
Devada	0-6	Very gravelly loam	GC	A-2	0	0-5	35-50	30-45	25-40	20-35	25-35	10-15
	6-17	Clay, gravelly clay	GC, CH	A-7	0	0-10	60-100	55-100	50-85	45-75	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ashcamp	0-3	Sandy loam	SM	A-2	0	0	85-100	75-100	60-75	20-30	25-30	NP-5
	3-7	Sandy loam	SM	A-2	0	0	85-100	75-100	60-75	20-35	30-35	NP-5
	7-23	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	
1165:												
Devada	0-6	Very cobbly loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0-5	30-65	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Nitpac	0-8	Very cobbly loam	SM, GM	A-2, A-4	0-5	40-55	60-80	50-70	40-60	30-50	30-40	NP-10
	8-21	Clay	CH	A-7	0	0-5	95-100	85-100	70-95	60-80	55-70	35-50
	21-26	Gravelly clay loam, gravelly clay	SC, CL, GC	A-7	0	0-5	60-85	50-75	45-65	40-60	40-50	15-25
	26-34	Cemented			0	0	0	0	0	0	---	NP
	34-40	Weathered bedrock			0	0	0	0	0	0	---	NP
Bidrim	0-3	Extremely stony loam	GM	A-2, A-4	25-40	25-35	40-60	35-60	30-50	25-40	20-25	NP-5
	3-8	Clay loam	CL	A-7	0-1	0-5	80-95	75-95	70-90	55-70	40-45	15-20
	8-13	Clay	CH	A-7	0-1	0-5	90-95	85-95	80-90	65-75	60-70	30-40
	13-17	Unweathered bedrock			0	0	0	0	0	0	---	NP
1166:												
Devada	0-6	Very cobbly loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0-5	30-65	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Bieber	0-6	Very gravelly loam	GM-GC, GM	A-2, A-1	0	0-5	45-60	35-50	25-30	20-25	20-30	NP-10
	6-10	Clay loam, gravelly clay loam	GC, CL	A-6, A-7	0	0-5	55-90	50-85	45-70	40-60	35-45	15-20
	10-16	Clay, clay loam, gravelly clay	CL, CH	A-7	0	0	65-95	60-90	55-85	50-80	45-60	20-35
	16-31	Indurated			0	0	0	0	0	0	---	NP
	31-60	Stratified cobbly sandy loam to very gravelly sandy loam	GM	A-1	0	15-25	35-55	35-50	20-35	15-25	15-25	NP-5
1167:												
Devada	0-6	Very stony loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	5-25	15-30	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	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	
1167 (con.):												
Reywat----------	0-6	Very stony loam	GM, ML, GM-GC, CL-ML	A-4	10-25	5-25	55-85	50-80	40-70	35-55	25-35	5-10
	6-18	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
1168:												
Devada----------	0-6	Extremely cobbly loam	GM-GC, GC	A-2	0-5	45-55	25-40	20-35	15-30	10-20	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
1170:												
Devada----------	0-6	Very stony loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	5-25	15-30	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Bucklake---------	0-8	Very cobbly loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	35-60	70-85	65-80	55-70	40-55	25-35	5-15
	8-12	Gravelly clay loam	CL, GC	A-6	0	0-10	55-75	50-70	45-65	40-55	30-40	10-20
	12-24	Gravelly clay, gravelly clay loam	CL, CH, GC	A-7	0	0-10	55-75	50-70	45-65	40-60	40-60	20-35
	24-28	Unweathered bedrock			0	0	0	0	0	0	---	NP
1171:												
Devada----------	0-6	Very stony loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	5-25	15-30	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Indian Creek----	0-5	Very cobbly loam	SC, SC-SM	A-2, A-6, A-4	0-5	30-55	70-90	60-85	55-75	30-50	25-35	5-15
	5-18	Gravelly clay, clay, sandy clay	CH, CL	A-7	0	0-5	80-100	60-90	55-80	50-80	45-60	25-40
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Stratified extremely gravelly loamy coarse sand to gravelly sandy clay loam	GP-GM, GM-GC, GM	A-2, A-1	0-5	5-30	35-55	30-55	15-25	5-15	15-30	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	
1172:												
Devada----------	0-6	Very gravelly loam	GC	A-2	0	0-5	35-50	30-45	25-40	20-35	25-35	10-15
	6-17	Clay, gravelly clay	GC, CH	A-7	0	0-10	60-100	55-100	50-85	45-75	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Madeline--------	0-2	Very cobbly loam	GC, SC, CL	A-6	0-5	40-60	65-85	60-80	50-75	35-55	30-35	10-15
	2-6	Sandy clay loam, clay loam, sandy clay	SC, CL	A-2, A-6, A-7	0	0-10	85-95	80-90	65-80	30-60	35-45	15-20
	6-19	Sandy clay, gravelly clay, stony sandy clay	SC, CL, CH, GC	A-2, A-7	0-5	5-15	60-95	55-90	45-75	30-55	45-65	25-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
1173:												
Devada----------	0-6	Very cobbly loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0-5	30-65	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Nitpac----------	0-8	Very cobbly loam	SM, GM	A-2, A-4	0-5	40-55	60-80	50-70	40-60	30-50	30-40	NP-10
	8-21	Clay	CH	A-7	0	0-5	95-100	85-100	70-95	60-80	55-70	35-50
	21-26	Gravelly clay loam, gravelly clay	SC, CL, GC	A-7	0	0-5	60-85	50-75	45-65	40-60	40-50	15-25
	26-34	Cemented			0	0	0	0	0	0	---	NP
	34-40	Weathered bedrock			0	0	0	0	0	0	---	NP
Uhaldi----------	0-4	Stony loam	SM, GM	A-4	1-5	5-15	65-75	55-65	50-60	35-45	15-25	NP-5
	4-22	Gravelly clay loam	GC, SC	A-2, A-6, A-7	0	0-10	55-85	50-75	45-60	30-50	35-45	15-25
	22-46	Weathered bedrock			0	0	0	0	0	0	---	NP
1174:												
Devada----------	0-6	Very cobbly loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0-5	30-65	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	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	
1174 (con.):												
Uhaldi----------	0-4	Stony loam	SM, GM	A-4	1-5	5-15	65-75	55-65	50-60	35-45	15-25	NP-5
	4-22	Gravelly clay loam	GC, SC	A-2, A-6, A-7	0	0-10	55-85	50-75	45-60	30-50	35-45	15-25
	22-46	Weathered bedrock			0	0	0	0	0	0	---	NP
1175:												
Ferver----------	0-2	Very cobbly silt loam	GM, SM, ML	A-4	0-5	40-55	60-80	50-70	45-65	40-60	30-40	NP-10
	2-5	Silt loam	ML	A-4	0	0	95-100	85-100	80-95	70-85	30-40	NP-10
	5-28	Clay	CH	A-7	0	0-5	85-100	75-100	70-95	65-85	60-75	40-55
	28-35	Clay loam	CL	A-7	0	0-5	85-100	75-100	70-90	50-70	40-45	15-20
	35-46	Cemented			0	0	0	0	0	0	---	NP
	46-53	Weathered bedrock			0	0	0	0	0	0	---	NP
Tunnison--------	0-2	Cobbly clay	CH	A-7	0	15-40	85-95	80-90	75-90	65-90	60-70	35-45
	2-27	Clay	CH	A-7	0	0	100	100	95-100	90-95	60-75	40-50
	27-30	Weathered bedrock			0	0	0	0	0	0	---	NP
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	NP
1180:												
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Karlo-----------	0-3	Very cobbly clay	CH	A-7	0	40-70	80-90	60-70	55-70	50-65	60-75	35-45
	3-30	Clay	CH	A-7	0	0	100	100	90-100	85-95	65-80	40-50
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	NP
1181:												
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Madeline--------	0-2	Very cobbly loam	GC, SC, CL	A-6	0-5	40-60	65-85	60-80	50-75	35-55	30-35	10-15
	2-6	Sandy clay loam, clay loam, sandy clay	SC, CL	A-2, A-6, A-7	0	0-10	85-95	80-90	65-80	30-60	35-45	15-20
	6-19	Sandy clay, gravelly clay, stony sandy clay	SC, CL, CH, GC	A-2, A-7	0-5	5-15	60-95	55-90	45-75	30-55	45-65	25-40
	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	
1181 (con.):												
Tinpan	0-2	Extremely cobbly loam	GC	A-2, A-6	5-15	50-70	40-55	30-50	25-45	20-40	30-35	10-15
	2-5	Silty clay loam	CL	A-6	0-5	0-5	80-100	75-100	70-95	65-85	35-40	15-20
	5-36	Clay	CH	A-7	0	0	100	100	90-100	80-95	60-75	40-50
	36-46	Unweathered bedrock			0	0	0	0	0	0	---	NP
1182:												
Ninemile	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Westbutte	0-3	Stony loam	SM, ML, CL-ML, SC-SM	A-4	1-5	15-25	75-95	70-90	60-80	40-65	25-35	5-10
	3-22	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	22-28	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	28-32	Unweathered bedrock			0	0	0	0	0	0	---	NP
1183:												
Ninemile	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Westbutte	0-3	Stony loam	SM, ML, CL-ML, SC-SM	A-4	1-5	15-25	75-95	70-90	60-80	40-65	25-35	5-10
	3-22	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	22-28	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	28-32	Unweathered bedrock			0	0	0	0	0	0	---	NP
1184:												
Ninemile	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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	
1184 (con.):												
Tinpan----------	0-2	Extremely cobbly loam	GC	A-2, A-6	5-15	50-70	40-55	30-50	25-45	20-40	30-35	10-15
	2-5	Silty clay loam	CL	A-6	0-5	0-5	80-100	75-100	70-95	65-85	35-40	15-20
	5-36	Clay	CH	A-7	0	0	100	100	90-100	80-95	60-75	40-50
	36-46	Unweathered bedrock			0	0	0	0	0	0	---	NP
1185:												
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1186:												
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Tinpan----------	0-2	Extremely cobbly loam	GC	A-2, A-6	5-15	50-70	40-55	30-50	25-45	20-40	30-35	10-15
	2-5	Silty clay loam	CL	A-6	0-5	0-5	80-100	75-100	70-95	65-85	35-40	15-20
	5-36	Clay	CH	A-7	0	0	100	100	90-100	80-95	60-75	40-50
	36-46	Unweathered bedrock			0	0	0	0	0	0	---	NP
Crocan----------	0-3	Extremely stony loam	GM	A-2, A-4	25-40	25-35	40-60	35-60	30-50	25-40	20-25	NP-5
	3-5	Clay loam	CL	A-7	0-1	0-5	80-95	75-95	70-90	55-70	40-45	15-20
	5-14	Clay	MH, CH	A-7	0-1	0-5	90-95	85-95	80-90	65-75	55-70	25-40
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
1187:												
Ninemile--------	0-7	Very stony loam	CL-ML	A-4	5-25	15-40	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Tinpan----------	0-2	Extremely cobbly loam	GC	A-2, A-6	5-15	50-70	40-55	30-50	25-45	20-40	30-35	10-15
	2-5	Silty clay loam	CL	A-6	0-5	0-5	80-100	75-100	70-95	65-85	35-40	15-20
	5-36	Clay	CH	A-7	0	0	100	100	90-100	80-95	60-75	40-50
	36-46	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	
1187 (con.):												
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1188:												
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Newlands--------	0-6	Stony loam	SM, SC-SM, ML, CL-ML	A-4	1-5	5-10	80-90	70-80	60-75	40-70	15-30	NP-10
	6-41	Clay loam, gravelly clay loam, sandy clay loam	CL, SC	A-6	0	0-5	75-95	60-90	50-80	40-70	25-40	10-20
	41-45	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1189:												
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
Badgercamp------	0-5	Bouldery loam	ML, SM	A-4	2-5	0-5	75-95	70-90	40-70	35-65	---	NP
	5-15	Extremely gravelly loam, very gravelly loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	2-4	5-10	15-50	10-45	5-35	5-30	20-30	NP-10
	15-19	Weathered bedrock			0	0	0	0	0	0	---	NP
Crocan----------	0-3	Extremely stony loam	GM	A-2, A-4	25-40	25-35	40-60	35-60	30-50	25-40	20-25	NP-5
	3-5	Clay loam	CL	A-7	0-1	0-5	80-95	75-95	70-90	55-70	40-45	15-20
	5-14	Clay	MH, CH	A-7	0-1	0-5	90-95	85-95	80-90	65-75	55-70	25-40
	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	
1190:												
Perver----------	0-2	Very gravelly loam	GM	A-2, A-1	0	0-5	40-60	30-50	25-45	20-30	25-35	NP-10
	2-5	Silt loam	ML	A-4	0	0	95-100	85-100	80-95	70-85	30-40	NP-10
	5-28	Clay	CH	A-7	0	0-5	85-100	75-100	70-95	65-85	60-75	40-55
	28-35	Clay loam	CL	A-7	0	0-5	85-100	75-100	70-90	50-70	40-45	15-20
	35-46	Cemented			0	0	0	0	0	0	---	NP
	46-53	Weathered bedrock			0	0	0	0	0	0	---	NP
Nitpac----------	0-8	Very cobbly loam	SM, GM	A-2, A-4	0-5	40-55	60-80	50-70	40-60	30-50	30-40	NP-10
	8-21	Clay	CH	A-7	0	0-5	95-100	85-100	70-95	60-80	55-70	35-50
	21-26	Gravelly clay loam, gravelly clay	SC, CL, GC	A-7	0	0-5	60-85	50-75	45-65	40-60	40-50	15-25
	26-34	Cemented			0	0	0	0	0	0	---	NP
	34-40	Weathered bedrock			0	0	0	0	0	0	---	NP
1195:												
Bitner----------	0-7	Gravelly sandy loam	SM	A-2	0	0	65-80	60-75	50-65	20-30	25-30	NP-5
	7-13	Gravelly sandy loam	SM	A-2	0	0	65-80	60-75	50-65	20-35	30-35	NP-5
	13-27	Gravelly sandy loam	SM	A-2	0	0	65-80	60-75	50-65	20-35	30-35	NP-5
	27-35	Weathered bedrock			0	0	0	0	0	0	---	NP
Ashcamp---------	0-3	Sandy loam	SM	A-2	0	0	85-100	75-100	60-75	20-30	25-30	NP-5
	3-7	Sandy loam	SM	A-2	0	0	85-100	75-100	60-75	20-35	30-35	NP-5
	7-23	Weathered bedrock			0	0	0	0	0	0	---	NP
1205:												
Davey----------	0-6	Loamy fine sand	SM	A-2	0	0	100	100	80-95	25-35	---	NP
	6-16	Fine sandy loam, sandy loam	SM	A-2, A-4	0	0	100	100	80-90	30-40	20-25	NP-5
	16-60	Fine sand, loamy fine sand	SM	A-2	0	0	85-100	85-100	70-80	10-20	---	NP
1206:												
Davey----------	0-6	Loamy fine sand	SM	A-2	0	0	100	100	80-95	25-35	---	NP
	6-16	Fine sandy loam, sandy loam	SM	A-2, A-4	0	0	100	100	80-90	30-40	20-25	NP-5
	16-60	Fine sand, loamy fine sand	SM	A-2	0	0	85-100	85-100	70-80	10-20	---	NP
Corral----------	0-5	Loamy fine sand	SM	A-2	0	0	95-100	95-100	80-100	20-35	---	NP
	5-16	Clay loam, loam, sandy clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-75	30-40	10-20
	16-20	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	
1210:												
Maruma----------	0-6	Fine sandy loam	SM	A-2, A-4	0	0	95-100	85-100	70-85	30-50	25-30	NP-5
	6-62	Stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	75-100	70-90	35-50	20-25	NP-5
Bighat----------	0-2	Very stony sandy loam	SM	A-2	5-15	15-25	75-85	60-80	40-60	25-35	15-25	NP-5
	2-9	Stony loam, stony sandy loam	GM, ML, SM	A-4	5-10	10-15	65-85	60-80	50-65	35-55	15-25	NP-5
	9-16	Stony sandy clay loam, stony clay loam	SC	A-2, A-6, A-7	5-10	5-15	70-85	65-80	50-70	30-50	35-45	15-25
	16-31	Extremely stony sand, extremely stony coarse sand, extremely cobbly sand	GP	A-1	15-50	15-45	25-50	20-45	10-25	0-5	---	NP
	31-60	Extremely gravelly sand, extremely gravelly coarse sand	GP	A-1	10-25	10-25	15-35	10-30	5-15	0-5	---	NP
1215:												
Raglan----------	0-3	Very fine sandy loam	CL-ML	A-4	0	0	95-100	95-100	85-95	70-80	20-30	5-10
	3-14	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	85-95	75-85	25-40	5-15
	14-60	Stratified very fine sandy loam to silty clay loam	CL, ML	A-4, A-6	0	0	95-100	95-100	85-95	70-80	30-40	5-15
Isolde----------	0-7	Fine sand	SP, SP-SM	A-3	0	0	100	100	75-90	0-10	---	NP
	7-60	Fine sand, sand	SP, SP-SM	A-3	0	0	100	100	50-80	0-10	---	NP
1220:												
Schamp----------	0-5	Very stony loam	CL-ML, SC-SM	A-4, A-6	5-25	5-25	75-100	60-95	55-90	45-70	20-30	5-10
	5-8	Clay loam	CL	A-6	0	0-5	90-100	80-100	65-95	60-80	30-40	10-15
	8-32	Clay, clay loam	CL, CH	A-7	0	0-5	80-100	75-100	60-100	55-95	45-65	20-35
	32-43	Sandy loam, sandy clay loam, gravelly sandy clay loam	SC, SC-SM	A-2, A-4, A-6	0	0-5	80-100	75-90	50-80	25-50	20-35	5-15
	43-60	Very cobbly loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0	35-60	60-70	50-60	40-55	30-45	20-35	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	
1221:												
Schamp	0-5	Very stony loam	CL-ML, SC-SM	A-4, A-6	5-25	5-25	75-100	60-95	55-90	45-70	20-30	5-10
	5-8	Clay loam	CL	A-6	0	0-5	90-100	80-100	65-95	60-80	30-40	10-15
	8-32	Clay, clay loam	CL, CH	A-7	0	0-5	80-100	75-100	60-100	55-95	45-65	20-35
	32-43	Sandy loam, sandy clay loam, gravelly sandy clay loam	SC, SC-SM	A-2, A-4, A-6	0	0-5	80-100	75-90	50-80	25-50	20-35	5-15
	43-60	Very cobbly loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0	35-60	60-70	50-60	40-55	30-45	20-35	5-15
1223:												
Schamp	0-5	Loam	ML, CL-ML	A-4	0	0-5	90-100	80-95	70-85	50-75	25-35	5-10
	5-8	Clay loam	CL	A-6	0	0-5	90-100	80-95	65-95	60-80	30-40	10-15
	8-32	Clay, clay loam	CL, CH	A-7	0	0-5	90-100	80-100	75-100	70-95	45-65	20-35
	32-43	Sandy loam, sandy clay loam	SC, SC-SM	A-2, A-4, A-6	0	0-5	90-100	80-95	50-80	25-50	20-35	5-15
	43-60	Very cobbly loam, very gravelly sandy clay loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0-5	25-60	50-70	45-60	40-55	30-45	20-35	5-15
1230:												
Raglan	0-3	Very fine sandy loam	CL-ML	A-4	0	0	95-100	95-100	85-95	70-80	20-30	5-10
	3-14	Silt loam	CL-ML, CL	A-4, A-6	0	0	95-100	95-100	85-95	75-85	25-40	5-15
	14-60	Stratified very fine sandy loam to silty clay loam	CL, ML	A-4, A-6	0	0	95-100	95-100	85-95	70-80	30-40	5-15
Mazuma	0-6	Fine sandy loam	SM	A-2, A-4	0	0	95-100	85-100	70-85	30-50	25-30	NP-5
	6-62	Stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	75-100	70-90	35-50	20-25	NP-5
1235:												
Chime	0-7	Gravelly loam	GC, CL	A-6	0	0	60-80	55-75	50-70	40-60	25-35	10-15
	7-16	Clay loam, gravelly clay loam	CL	A-6, A-7	0	0	75-90	70-85	65-80	55-70	35-45	15-20
	16-25	Loam, gravelly loam, clay loam	CL, SC	A-6	0	0	75-95	70-90	60-75	40-60	25-35	10-15
	25-29	Weathered bedrock			0	0	0	0	0	0	---	NP
1240:												
Toney	0-4	Extremely cobbly loam	GM-GC, GC	A-6, A-4, A-2	0	60-70	45-65	40-60	35-55	30-45	20-35	5-15
	4-23	Clay, silty clay	CH	A-7	0	0-5	95-100	95-100	90-100	75-95	50-65	25-35
	23-30	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	
1240 (con.):												
Millerlux-------	0-4	Very cobbly loam	GC, GM-GC	A-6, A-4	0-5	25-50	55-70	50-65	40-55	35-50	25-35	5-15
	4-12	Clay	CH	A-7	0	0-10	90-100	85-100	80-95	60-75	50-65	25-40
	12-15	Clay, clay loam, gravelly clay	CL, CH, SC, GC	A-7	0	0-15	70-90	65-85	60-80	45-60	40-55	15-30
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1245:												
Saraph----------	0-4	Very gravelly sandy loam	GM	A-1, A-2	0	0-2	40-60	35-50	25-40	15-30	15-20	NP
	4-9	Sandy loam, sandy clay loam	ML, SM	A-4, A-5	0	0	95-100	75-100	55-70	35-60	30-45	NP-5
	9-16	Sandy clay loam, clay loam	ML, SM	A-4, A-5	0	0	95-100	75-100	60-75	45-70	35-50	5-10
	16-30	Weathered bedrock			0	0	0	0	0	0	---	NP
Uhaldi----------	0-4	Stony loam	SM, GM	A-4	1-5	5-15	65-75	55-65	50-60	35-45	15-25	NP-5
	4-22	Gravelly clay loam	GC, SC	A-2, A-6, A-7	0	0-10	55-85	50-75	45-60	30-50	35-45	15-25
	22-46	Weathered bedrock			0	0	0	0	0	0	---	NP
Prentera--------	0-9	Gravelly sandy loam	SM	A-1, A-2	0	0	60-80	50-75	30-55	10-30	15-30	NP-5
	9-22	Gravelly sandy loam, gravelly loam	ML, GM, SM	A-2, A-4	0	0-5	55-80	50-75	40-65	30-55	20-35	NP-5
	22-26	Unweathered bedrock			0	0	0	0	0	0	---	NP
1250:												
Ashone----------	0-2	Very gravelly fine sandy loam	SM	A-1	0	0-5	60-75	35-50	25-40	10-20	---	NP
	2-8	Gravelly fine sandy loam	SM	A-1, A-2	0	0	65-85	55-75	40-65	20-35	25-30	NP-5
	8-22	Gravelly sandy clay loam	SM, GM	A-4, A-5	0	0	60-80	55-75	45-65	40-50	35-45	5-10
	22-60	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	
1250 (con.):												
Ashdos----------	0-2	Very gravelly fine sandy loam	SM	A-1	0	0-5	60-75	35-50	30-40	10-20	---	NP
	2-12	Gravelly fine sandy loam	SM	A-2	0	0	65-85	55-75	50-65	20-35	20-30	NP-5
	12-24	Gravelly sandy clay loam	SM, GM	A-4	0	0	60-80	55-75	45-65	35-50	30-40	5-10
	24-60	Weathered bedrock			0	0	0	0	0	0	---	NP
Bearbutte-------	0-9	Fine sandy loam	SM	A-2, A-4	0	0	85-95	75-85	60-75	30-40	---	NP
	9-24	Sandy loam, gravelly sandy loam, loam	SM	A-2, A-4	0	0	65-95	55-90	35-75	25-50	25-30	NP-5
	24-30	Extremely stony sandy loam	SM	A-2, A-4	60-75	0-10	90-100	85-90	50-70	25-50	---	NP
	30-53	Gravelly sandy loam	SM	A-1, A-2, A-4	0	0-10	60-80	55-75	35-65	15-50	---	NP
	53-57	Weathered bedrock			0	0	0	0	0	0	---	NP
1251:												
Ashone----------	0-2	Very gravelly fine sandy loam	SM	A-1	0	0-5	60-75	35-50	25-40	10-20	---	NP
	2-8	Gravelly fine sandy loam	SM	A-1, A-2	0	0	65-85	55-75	40-65	20-35	25-30	NP-5
	8-22	Gravelly sandy clay loam	SM, GM	A-4, A-5	0	0	60-80	55-75	45-65	40-50	35-45	5-10
	22-60	Weathered bedrock			0	0	0	0	0	0	---	NP
Ashdos----------	0-2	Very gravelly fine sandy loam	SM	A-1	0	0-5	60-75	35-50	30-40	10-20	---	NP
	2-12	Gravelly fine sandy loam	SM	A-2	0	0	65-85	55-75	50-65	20-35	20-30	NP-5
	12-24	Gravelly sandy clay loam	SM, GM	A-4	0	0	60-80	55-75	45-65	35-50	30-40	5-10
	24-60	Weathered bedrock			0	0	0	0	0	0	---	NP
Ashtre----------	0-2	Very gravelly loam	GM	A-1, A-2	0	0-5	40-50	35-50	30-45	20-35	25-30	NP-5
	2-11	Loam	ML	A-4	0	0-1	85-95	75-95	60-80	50-70	30-40	5-10
	11-26	Clay loam	CL, ML	A-7	0	0-5	85-95	70-95	55-75	50-70	40-50	15-20
	26-60	Weathered bedrock			0	0	0	0	0	0	---	NP
1253:												
Ashdos----------	0-2	Very gravelly fine sandy loam	SM	A-1	0	0-5	60-75	35-50	30-40	10-20	---	NP
	2-12	Gravelly fine sandy loam	SM	A-2	0	0	65-85	55-75	50-65	20-35	20-30	NP-5
	12-24	Gravelly sandy clay loam	SM, GM	A-4	0	0	60-80	55-75	45-65	35-50	30-40	5-10
	24-60	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	
1253 (con.):												
Ashtre----------	0-2	Very gravelly loam	GM	A-1, A-2	0	0-5	40-50	35-50	30-45	20-35	25-30	NP-5
	2-11	Loam	ML	A-4	0	0-1	85-95	75-95	60-80	50-70	30-40	5-10
	11-26	Clay loam	CL, ML	A-7	0	0-5	85-95	70-95	55-75	50-70	40-50	15-20
	26-60	Weathered bedrock			0	0	0	0	0	0	---	NP
Hackwood--------	0-13	Gravelly loam	CL	A-6	0	5-10	75-80	65-80	60-75	50-65	25-35	10-15
	13-32	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
	32-60	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
1255:												
Newlands--------	0-6	Stony loam	SM, SC-SM, ML, CL-ML	A-4	1-5	5-10	80-90	70-80	60-75	40-70	15-30	NP-10
	6-41	Clay loam, gravelly clay loam, sandy clay loam	CL, SC	A-6	0	0-5	75-95	60-90	50-80	40-70	25-40	10-20
	41-45	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	30-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
1256:												
Newlands--------	0-6	Stony loam	SM, SC-SM, ML, CL-ML	A-4	1-5	5-10	80-90	70-80	60-75	40-70	15-30	NP-10
	6-41	Clay loam, gravelly clay loam, sandy clay loam	CL, SC	A-6	0	0-5	75-95	60-90	50-80	40-70	25-40	10-20
	41-45	Unweathered bedrock			0	0	0	0	0	0	---	NP
Menbo----------	0-2	Very gravelly loam	GM	A-2, A-1	0	0-10	40-55	35-50	25-45	20-35	20-30	NP-5
	2-7	Gravelly loam, gravelly sandy loam	SM, GM	A-2, A-4, A-1	0	0-10	60-80	55-75	35-65	20-45	30-40	NP-5
	7-34	Very gravelly clay loam, very cobbly clay, very gravelly clay	GC, CL, CH, SC	A-2, A-7	1-5	15-35	45-70	35-65	30-60	20-55	40-55	15-30
	34-36	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	
1257:												
Newlands	0-6	Stony loam	SM, SC-SM, ML, CL-ML	A-4	1-5	5-10	80-90	70-80	60-75	40-70	15-30	NP-10
	6-41	Clay loam, gravelly clay loam, sandy clay loam	CL, SC	A-6	0	0-5	75-95	60-90	50-80	40-70	25-40	10-20
	41-45	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood	0-17	Very gravelly loam	GM-GC	A-2	0	5-10	50-60	35-50	30-45	25-35	25-30	5-10
	17-40	Very gravelly loam	GC, GM-GC	A-2	0	5-25	50-60	35-50	30-40	20-35	25-35	5-15
	40-50	Very cobbly loam, very gravelly loam	GC, GM-GC	A-2	0-5	15-40	55-65	50-60	35-45	25-35	25-35	5-15
	50-54	Unweathered bedrock			0	0	0	0	0	0	---	NP
1258:												
Newlands	0-6	Stony loam	SM, SC-SM, ML, CL-ML	A-4	1-5	5-10	80-90	70-80	60-75	40-70	15-30	NP-10
	6-41	Clay loam, gravelly clay loam, sandy clay loam	CL, SC	A-6	0	0-5	75-95	60-90	50-80	40-70	25-40	10-20
	41-45	Unweathered bedrock			0	0	0	0	0	0	---	NP
Badgercamp	0-5	Bouldery loam	ML, SM	A-4	2-5	0-5	75-95	70-90	40-70	35-65	---	NP
	5-15	Extremely gravelly loam, very gravelly loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	2-4	5-10	15-50	10-45	5-35	5-30	20-30	NP-10
	15-19	Weathered bedrock			0	0	0	0	0	0	---	NP
Hackwood	0-13	Gravelly loam	CL	A-6	0	5-10	75-80	65-80	60-75	50-65	25-35	10-15
	13-32	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
	32-60	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
1265:												
Fitzwater	0-10	Extremely stony loam	GC, SC, SC-SM, GM-GC	A-2, A-4	25-55	25-45	50-90	40-80	35-70	25-50	25-30	5-10
	10-19	Extremely cobbly clay loam, extremely cobbly loam	GM-GC, GC, SC, SC-SM	A-2, A-4, A-6	5-15	45-65	50-70	40-60	35-60	25-50	25-35	5-15
	19-60	Extremely cobbly loam, extremely stony loam	GM-GC, GC, SC, SC-SM	A-2, A-1	15-55	45-65	35-65	25-50	20-45	15-35	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	
1265 (con.):												
Westbutte-------	0-3	Stony loam	SM, ML, CL-ML, SC-SM	A-4	1-5	15-25	75-95	70-90	60-80	40-65	25-35	5-10
	3-22	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	22-28	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	28-32	Unweathered bedrock			0	0	0	0	0	0	---	NP
1270:												
Hartig----------	0-10	Gravelly loam	GM, SM, ML	A-4	0	0-10	55-85	50-80	40-65	35-60	15-25	NP-5
	10-21	Very gravelly loam, very gravelly sandy loam	GM, GM-GC, SM, SC-SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-30	NP-10
	21-42	Very gravelly loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-25	NP-5
	42-46	Unweathered bedrock			0	0	0	0	0	0	---	NP
1271:												
Hartig----------	0-10	Very stony sandy loam	GM, SM	A-4	5-25	10-30	70-85	65-80	55-70	40-50	15-25	NP-5
	10-21	Very gravelly loam, very gravelly sandy loam	GM, GM-GC, SM, SC-SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-30	NP-10
	21-42	Very gravelly loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-25	NP-5
	42-46	Unweathered bedrock			0	0	0	0	0	0	---	NP
Newlands--------	0-6	Stony loam	SM, SC-SM, ML, CL-ML	A-4	1-5	5-10	80-90	70-80	60-75	40-70	15-30	NP-10
	6-41	Clay loam, gravelly clay loam, sandy clay loam	CL, SC	A-6	0	0-5	75-95	60-90	50-80	40-70	25-40	10-20
	41-45	Unweathered bedrock			0	0	0	0	0	0	---	NP
1272:												
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	
1272 (con.):												
Hartig----------	0-10	Very gravelly sandy loam	GM	A-1, A-2	0	5-25	40-55	35-50	25-40	15-30	15-25	NP-5
	10-21	Very gravelly loam, very gravelly sandy loam	GM, GM-GC, SM, SC-SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-30	NP-10
	21-42	Very gravelly loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-25	NP-5
	42-52	Unweathered bedrock			0	0	0	0	0	0	---	NP
1273:												
Hartig----------	0-10	Very gravelly sandy loam	GM	A-1, A-2	0	5-25	40-55	35-50	25-40	15-30	15-25	NP-5
	10-21	Very gravelly loam, very gravelly sandy loam	GM, GM-GC, SM, SC-SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-30	NP-10
	21-42	Very gravelly loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-25	NP-5
	42-52	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-17	Very gravelly loam	GM-GC	A-2	0	5-10	50-60	35-50	30-45	25-35	25-30	5-10
	17-40	Very gravelly loam	GC, GM-GC	A-2	0	5-25	50-60	35-50	30-40	20-35	25-35	5-15
	40-50	Very cobbly loam, very gravelly loam	GC, GM-GC	A-2	0-5	15-40	55-65	50-60	35-45	25-35	25-35	5-15
	50-54	Unweathered bedrock			0	0	0	0	0	0	---	NP
1275:												
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1276:												
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	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	
1276 (con.):												
Reywat----------	0-6	Stony loam	GM, ML, GM-GC, CL-ML	A-4	1-5	5-15	65-85	60-85	45-75	40-60	25-35	5-10
	6-18	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Westbutte-------	0-3	Stony loam	SM, ML, CL-ML, SC-SM	A-4	15-30	0-15	75-95	70-90	60-80	40-65	25-35	5-10
	3-22	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	22-28	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	28-32	Unweathered bedrock			0	0	0	0	0	0	---	NP
1277:												
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
Ninemile--------	0-7	Very gravelly loam	GM-GC	A-2, A-4	0	0-15	40-65	35-55	30-50	25-45	20-30	5-10
	7-19	Clay, gravelly clay	CL, CH, SC	A-7	0	0-5	95-100	65-100	55-95	40-80	45-65	20-35
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1278:												
Boltz-----------	0-11	Gravelly sandy loam	SM	A-2	0	0-2	65-80	60-75	50-65	20-35	30-35	NP-5
	11-34	Gravelly sandy loam	SM	A-2	0	0	65-80	60-75	50-65	20-35	30-35	NP-5
	34-60	Weathered bedrock			0	0	0	0	0	0	---	NP
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	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	
1279:												
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
Nutzan----------	0-10	Gravelly sandy loam	GM, SM	A-2	0	0-5	55-85	50-75	30-40	25-35	---	NP
	10-17	Gravelly sandy loam	GM, SM	A-2	0	0-5	60-85	50-75	30-40	25-35	20-30	NP-5
	17-28	Very gravelly sandy loam	GM	A-1	0	0-5	30-55	25-50	20-40	10-25	20-30	NP-5
	28-36	Extremely gravelly coarse sandy loam, extremely gravelly sandy loam	GP-GM	A-1	0	0-5	15-35	10-25	10-20	5-10	20-30	NP-5
	36-46	Weathered bedrock			0	0	0	0	0	0	---	NP
Westbutte-------	0-4	Very gravelly loam	GM	A-1, A-2	0-1	0-5	40-60	30-50	25-40	20-35	20-25	NP-5
	4-8	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	8-27	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
1285:												
Zymans----------	0-8	Cobbly loam	GC, CL, GM-GC, CL-ML	A-6, A-4	0	15-25	65-85	60-80	50-75	35-65	25-35	5-15
	8-27	Clay, gravelly clay	CH	A-7	0	0-5	75-100	70-95	60-85	50-80	50-65	25-35
	27-48	Silty clay loam, clay loam, clay	CH, MH	A-7	0	0-5	80-100	75-100	70-90	60-85	50-65	20-35
	48-52	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	
1285 (con.):												
Indian Creek----	0-5	Very cobbly loam	SC, SC-SM	A-2, A-6, A-4	0-5	30-55	70-90	60-85	55-75	30-50	25-35	5-15
	5-18	Gravelly clay, clay, sandy clay	CH, CL	A-7	0	0-5	80-100	60-90	55-80	50-80	45-60	25-40
	18-25	Indurated			0	0	0	0	0	0	---	NP
	25-60	Stratified extremely gravelly loamy coarse sand to gravelly sandy clay loam	GP-GM, GM-GC, GM	A-2, A-1	0-5	5-30	35-55	30-55	15-25	5-15	15-30	NP-10
1286:												
Zymans----------	0-8	Cobbly loam	GC, CL, GM-GC, CL-ML	A-6, A-4	0	15-25	65-85	60-80	50-75	35-65	25-35	5-15
	8-27	Clay, gravelly clay	CH	A-7	0	0-5	75-100	70-95	60-85	50-80	50-65	25-35
	27-48	Silty clay loam, clay loam, clay	CH, MH	A-7	0	0-5	80-100	75-100	70-90	60-85	50-65	20-35
	48-52	Weathered bedrock			0	0	0	0	0	0	---	NP
Cotant----------	0-2	Very gravelly loam	GC	A-2	0	0-5	50-60	35-50	30-45	25-35	30-35	10-15
	2-19	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	19-23	Weathered bedrock			0	0	0	0	0	0	---	NP
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1290:												
Hapgood---------	0-17	Very gravelly loam	GM-GC	A-2	0	5-10	50-60	35-50	30-45	25-35	25-30	5-10
	17-40	Very gravelly loam	GC, GM-GC	A-2	0	5-25	50-60	35-50	30-40	20-35	25-35	5-15
	40-50	Very cobbly loam, very gravelly loam	GC, GM-GC	A-2	0-5	15-40	55-65	50-60	35-45	25-35	25-35	5-15
	50-54	Unweathered bedrock			0	0	0	0	0	0	---	NP
Badgercamp------	0-5	Bouldery loam	ML, SM	A-4	2-5	0-5	75-95	70-90	40-70	35-65	---	NP
	5-15	Extremely gravelly loam, very gravelly loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	2-4	5-10	15-50	10-45	5-35	5-30	20-30	NP-10
	15-19	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	
1290 (con.):												
Hackwood	0-13	Gravelly loam	CL	A-6	0	5-10	75-80	65-80	60-75	50-65	25-35	10-15
	13-32	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
	32-60	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
1295:												
Devoy	0-10	Cobbly loam	SC-SM, CL-ML, SM, ML	A-4	0	25-45	80-95	70-90	60-80	45-65	25-35	5-10
	10-17	Very cobbly clay loam	GC, SC, CL	A-6, A-7	0	25-55	65-80	55-65	50-65	40-55	35-45	15-20
	17-30	Very cobbly clay	CL, CH	A-7	0	25-55	65-80	55-65	50-65	50-60	45-60	20-35
	30-34	Unweathered bedrock			0	0	0	0	0	0	---	NP
Blizzard	0-2	Very cobbly silty clay loam	CL, ML, GC, GM	A-6, A-7	0-5	25-55	60-80	45-70	40-70	40-65	35-45	10-20
	2-5	Silty clay, clay	CH	A-7	0	0-15	90-100	85-100	80-100	75-95	50-65	25-40
	5-19	Cobbly clay	CH	A-7	0	15-30	85-100	75-95	70-90	65-85	50-65	25-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1296:												
Blizzard	0-2	Very cobbly silty clay loam	CL, ML, GC, GM	A-6, A-7	0-5	25-55	60-80	45-70	40-70	40-65	35-45	10-20
	2-5	Silty clay, clay	CH	A-7	0	0-15	90-100	85-100	80-100	75-95	50-65	25-40
	5-19	Cobbly clay	CH	A-7	0	15-30	85-100	75-95	70-90	65-85	50-65	25-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1305:												
Updike	0-4	Silt loam	ML	A-4	0	0	100	100	95-100	70-85	20-30	NP-5
	4-36	Clay, silty clay, silty clay loam	CH	A-7	0	0	100	100	95-100	85-95	50-65	30-40
	36-60	Stratified sandy clay loam to clay	CL, CH	A-6, A-7	0	0	95-100	95-100	80-100	50-65	35-55	20-35
Mazuma	0-6	Fine sandy loam	SM	A-2, A-4	0	0	95-100	85-100	70-85	30-50	25-30	NP-5
	6-62	Stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	75-100	70-90	35-50	20-25	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	
1306:												
Updike----------	0-4	Silt loam	ML	A-4	0	0	100	100	95-100	70-85	20-30	NP-5
	4-36	Clay, silty clay, silty clay loam	CH	A-7	0	0	100	100	95-100	85-95	50-65	30-40
	36-60	Stratified sandy clay loam to clay	CL, CH	A-6, A-7	0	0	95-100	95-100	80-100	50-65	35-55	20-35
Longdis---------	0-5	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-25
	5-26	Silty clay, clay	CH	A-7	0	0	100	100	95-100	85-95	50-65	25-35
	26-45	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	45-61	Stratified silty clay loam to clay	CL, CH	A-7	0	0	100	100	95-100	85-95	45-55	20-30
1310:												
Longdis---------	0-5	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-25
	5-26	Silty clay, clay	CH	A-7	0	0	100	100	95-100	85-95	50-65	25-35
	26-45	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	45-61	Stratified silty clay loam to clay	CL, CH	A-7	0	0	100	100	95-100	85-95	45-55	20-30
Updike----------	0-4	Silt loam	ML	A-4	0	0	100	100	95-100	70-85	20-30	NP-5
	4-36	Clay, silty clay, silty clay loam	CH	A-7	0	0	100	100	95-100	85-95	50-65	30-40
	36-60	Stratified sandy clay loam to clay	CL, CH	A-6, A-7	0	0	95-100	95-100	80-100	50-65	35-55	20-35
1311:												
Longdis---------	0-5	Silt loam	CL-ML	A-4	0	0	100	100	80-100	65-80	20-30	5-10
	5-26	Silty clay, clay	CH	A-7	0	0	100	100	95-100	85-95	50-65	25-35
	26-45	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	45-61	Stratified silty clay loam to clay	CL, CH	A-7	0	0	100	100	95-100	85-95	45-55	20-30
Macyflet---------	0-9	Silt loam	CL-ML, CL	A-4, A-6	0	0	100	100	95-100	90-100	25-35	5-15
	9-47	Clay	CH	A-7	0	0	100	100	80-100	75-100	65-75	35-45
	47-60	Loamy sand, loamy fine sand	SM	A-2	0	0	100	100	75-90	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	
1311 (con.):												
Aeric Epiaquents	0-4	Silt loam	ML	A-4	0	0	100	100	95-100	70-85	20-35	NP-10
	4-42	Silty clay loam, silty clay	CL, CH, MH	A-6, A-7	0	0	95-100	95-100	90-100	80-100	35-70	15-30
	42-60	Stratified silt loam to silty clay loam	ML	A-4, A-6, A-7	0	0	100	100	90-100	60-95	20-50	NP-20
1312:												
Longdis----------	0-5	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-25
	5-26	Silty clay, clay	CH	A-7	0	0	100	100	95-100	85-95	50-65	25-35
	26-45	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	45-61	Stratified silty clay loam to clay	CL, CH	A-7	0	0	100	100	95-100	85-95	45-55	20-30
Dugway----------	0-5	Fine sandy loam	SM	A-2, A-4	0	0	100	100	70-90	25-40	15-25	NP-5
	5-18	Silty clay loam, clay, silty clay	CL, CH	A-7	0	0	100	100	95-100	90-95	40-55	20-30
	18-35	Loam, silt loam, silty clay loam	ML	A-4, A-6	0	0	100	100	95-100	75-95	30-40	5-15
	35-52	Cemented			0	0	0	0	0	0	---	NP
	52-61	Stratified silt loam to silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	25-45	10-20
1313:												
Longdis----------	0-5	Silt loam	CL-ML	A-4	0	0	100	100	80-100	65-80	20-30	5-10
	5-26	Silty clay, clay	CH	A-7	0	0	100	100	95-100	85-95	50-65	25-35
	26-45	Silty clay loam, silty clay, clay	CL, CH	A-7	0	0	100	100	90-100	75-95	45-55	20-30
	45-61	Stratified silty clay loam to clay	CL, CH	A-7	0	0	100	100	95-100	85-95	45-55	20-30
1320:												
Dugway----------	0-5	Fine sandy loam	SM	A-2, A-4	0	0	100	100	70-90	25-40	15-25	NP-5
	5-18	Silty clay loam, clay, silty clay	CL, CH	A-7	0	0	100	100	95-100	90-95	40-55	20-30
	18-35	Loam, silt loam, silty clay loam	ML	A-4, A-6	0	0	100	100	95-100	75-95	30-40	5-15
	35-52	Cemented			0	0	0	0	0	0	---	NP
	52-61	Stratified silt loam to silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	25-45	10-20

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1321:												
Dugway----------	0-5	Fine sandy loam	SM	A-2, A-4	0	0	100	100	70-90	25-40	15-25	NP-5
	5-18	Silty clay loam, clay, silty clay	CL, CH	A-7	0	0	100	100	95-100	90-95	40-55	20-30
	18-35	Loam, silt loam, silty clay loam	ML	A-4, A-6	0	0	100	100	95-100	75-95	30-40	5-15
	35-52	Cemented			0	0	0	0	0	0	---	NP
	52-61	Stratified silt loam to silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-95	25-45	10-20
Updike----------	0-4	Silt loam	ML	A-4	0	0	100	100	95-100	70-85	20-30	NP-5
	4-36	Clay, silty clay, silty clay loam	CH	A-7	0	0	100	100	95-100	85-95	50-65	30-40
	36-60	Stratified sandy clay loam to clay	CL, CH	A-6, A-7	0	0	95-100	95-100	80-100	50-65	35-55	20-35
1325:												
Reywat----------	0-6	Very stony loam	GM, ML, GM-GC, CL-ML	A-4	5-25	10-30	55-85	50-80	40-70	35-55	25-35	5-10
	6-18	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Devada----------	0-6	Very cobbly loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	0-5	30-65	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hart Camp-------	0-3	Stony loam	ML	A-4	1-5	5-10	85-95	60-90	60-80	50-65	25-30	NP-5
	3-16	Gravelly loam, gravelly sandy clay loam, gravelly clay loam	SC	A-2, A-6	0	0-10	70-80	50-75	45-65	30-50	30-40	10-20
	16-20	Weathered bedrock			0	0	0	0	0	0	---	NP
1326:												
Reywat----------	0-6	Very stony loam	GM, ML, GM-GC, CL-ML	A-4	5-25	10-30	55-85	50-80	40-70	35-55	25-35	5-10
	6-18	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	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	
1327:												
Reywat----------	0-6	Stony loam	GM, ML, GM-GC, CL-ML	A-4	1-5	5-25	65-85	60-85	45-75	40-60	25-35	5-10
	6-18	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Westbutte-------	0-3	Stony loam	SM, ML, CL-ML, SC-SM	A-4	1-5	15-25	75-95	70-90	60-80	40-65	25-35	5-10
	3-22	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	22-28	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	28-32	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-17	Very gravelly loam	GM-GC	A-2	0	5-10	50-60	35-50	30-45	25-35	25-30	5-10
	17-40	Very gravelly loam	GC, GM-GC	A-2	0	5-25	50-60	35-50	30-40	20-35	25-35	5-15
	40-50	Very cobbly loam, very gravelly loam	GC, GM-GC	A-2	0-5	15-40	55-65	50-60	35-45	25-35	25-35	5-15
	50-54	Unweathered bedrock			0	0	0	0	0	0	---	NP
1328:												
Reywat----------	0-6	Stony loam	GM, ML, GM-GC, CL-ML	A-4	1-5	5-25	65-85	60-85	45-75	40-60	25-35	5-10
	6-18	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	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	
1328 (con.):												
Fernpoint-------	0-7	Very gravelly sandy loam	GM	A-1	0	0-5	40-60	35-50	20-30	10-20	20-25	NP-5
	7-17	Gravelly sandy clay loam	GM-GC, SC-SM	A-4	0	0	60-80	55-75	45-60	35-45	25-30	5-10
	17-23	Gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-75	35-70	25-60	10-30	20-25	NP-5
	23-60	Stratified extremely cobbly coarse sand to extremely gravelly sand	GP	A-1	5-15	15-50	30-40	20-35	5-20	0-5	---	NP
1329:												
Reywat----------	0-6	Very stony loam	GM, ML, GM-GC, CL-ML	A-4	5-25	10-30	55-85	50-80	40-70	35-55	25-35	5-10
	6-18	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-6, A-7	0-5	5-20	40-60	35-55	30-45	25-40	35-50	15-25
	18-22	Unweathered bedrock			0	0	0	0	0	0	---	NP
Devada----------	0-6	Very stony loam	GC, GM-GC, SC, SC-SM	A-2, A-4, A-6	5-25	15-30	55-75	50-70	40-50	30-45	25-35	5-15
	6-17	Gravelly clay, clay	CH, GC	A-7	0	0-5	65-100	55-100	50-90	35-70	50-65	25-35
	17-21	Unweathered bedrock			0	0	0	0	0	0	---	NP
1335:												
Rock Outcrop.												
Westbutte-------	0-3	Stony loam	SM, ML, CL-ML, SC-SM	A-4	1-5	15-25	75-95	70-90	60-80	40-65	25-35	5-10
	3-22	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	22-28	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	28-32	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	
1336:												
Westbutte-------	0-4	Very gravelly loam	GM	A-1, A-2	0-1	0-5	40-60	30-50	25-40	20-35	20-25	NP-5
	4-8	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	8-27	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	27-37	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ashtre----------	0-2	Gravelly loam	GM, SM, ML	A-4	0	0-5	55-80	50-75	45-65	35-55	25-30	NP-5
	2-11	Loam	ML	A-4	0	0-1	85-95	75-95	60-80	50-70	30-40	5-10
	11-26	Clay loam	CL, ML	A-7	0	0-5	85-95	70-95	55-75	50-70	40-50	15-20
	26-60	Weathered bedrock			0	0	0	0	0	0	---	NP
Tusune----------	0-2	Stony loam	GM, SM	A-1, A-2, A-4	1-5	1-5	55-85	45-70	35-50	20-45	---	NP
	2-10	Gravelly loam	SM, GM	A-2, A-4	0	0-5	60-85	50-75	35-50	30-45	25-30	NP-5
	10-38	Very gravelly clay loam, very gravelly loam	GM, GC	A-2	0	0-5	40-55	35-50	25-40	20-35	35-40	10-15
	38-46	Weathered bedrock			0	0	0	0	0	0	---	NP
1345:												
Layview---------	0-4	Very gravelly loam	GM-GC	A-2	0-5	5-15	40-55	35-50	25-40	20-30	25-30	5-10
	4-14	Very gravelly loam, very gravelly clay loam	GC	A-2, A-6	0-5	5-15	35-60	30-55	25-45	20-40	30-40	15-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-26	Very gravelly loam	GM-GC	A-2	0	5-10	50-60	35-50	30-45	25-35	25-30	5-10
	26-36	Very gravelly loam	GC, GM-GC	A-2	0	5-25	50-60	35-50	30-40	20-35	25-35	5-15
	36-50	Very cobbly loam, very gravelly loam	GC, GM-GC	A-2	0-5	15-40	55-65	50-60	35-45	25-35	25-35	5-15
	50-54	Unweathered bedrock			0	0	0	0	0	0	---	NP
1346:												
Layview---------	0-4	Very gravelly loam	GM-GC	A-2	0-5	5-15	40-55	35-50	25-40	20-30	25-30	5-10
	4-14	Very gravelly loam, very gravelly clay loam	GC	A-2, A-6	0-5	5-15	35-60	30-55	25-45	20-40	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	
1346 (con.):												
Westbutte-------	0-3	Stony loam	SM, ML, CL-ML, SC-SM	A-4	1-5	15-25	75-95	70-90	60-80	40-65	25-35	5-10
	3-22	Very cobbly loam, very stony loam	GM, SM, GM-GC, SC-SM	A-2, A-4	15-45	15-45	50-75	45-70	40-60	30-50	25-35	5-10
	22-28	Extremely cobbly clay loam, extremely cobbly loam, very cobbly clay loam	GC, SC, GM-GC, SC-SM	A-2, A-4, A-6	5-25	30-55	50-75	45-70	40-60	30-50	25-40	5-15
	28-32	Unweathered bedrock			0	0	0	0	0	0	---	NP
Hapgood---------	0-17	Very gravelly loam	GM-GC	A-2	0	5-10	50-60	35-50	30-45	25-35	25-30	5-10
	17-40	Very gravelly loam	GC, GM-GC	A-2	0	5-25	50-60	35-50	30-40	20-35	25-35	5-15
	40-50	Very cobbly loam, very gravelly loam	GC, GM-GC	A-2	0-5	15-40	55-65	50-60	35-45	25-35	25-35	5-15
	50-54	Unweathered bedrock			0	0	0	0	0	0	---	NP
1355:												
Badgercamp------	0-5	Bouldery loam	ML, SM	A-4	2-5	0-5	75-95	70-90	40-70	35-65	---	NP
	5-15	Extremely gravelly loam, very gravelly loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	2-4	5-10	15-50	10-45	5-35	5-30	20-30	NP-10
	15-19	Weathered bedrock			0	0	0	0	0	0	---	NP
Hackwood--------	0-13	Gravelly loam	CL	A-6	0	5-10	75-80	65-80	60-75	50-65	25-35	10-15
	13-32	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
	32-60	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
Easte-----------	0-10	Very gravelly sandy loam	GP-GM, GM	A-1	0-1	15-25	40-50	30-45	15-30	10-20	20-30	NP-5
	10-42	Extremely gravelly loam, very gravelly loam	GP-GM, GM	A-1, A-2	0-1	10-25	25-45	15-40	10-25	5-15	25-35	NP-10
	42-46	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	
1356:												
Badgercamp------	0-5	Bouldery loam	ML, SM	A-4	2-5	0-5	75-95	70-90	40-70	35-65	---	NP
	5-15	Extremely gravelly loam, very gravelly loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	2-4	5-10	15-50	10-45	5-35	5-30	20-30	NP-10
	15-19	Weathered bedrock			0	0	0	0	0	0	---	NP
Hackwood--------	0-13	Gravelly loam	CL	A-6	0	5-10	75-80	65-80	60-75	50-65	25-35	10-15
	13-32	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
	32-60	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
Kaste------------	0-10	Very gravelly sandy loam	GP-GM, GM	A-1	0-1	15-25	40-50	30-45	15-30	10-20	20-30	NP-5
	10-42	Extremely gravelly loam, very gravelly loam	GP-GM, GM	A-1, A-2	0-1	10-25	25-45	15-40	10-25	5-15	25-35	NP-10
	42-46	Weathered bedrock			0	0	0	0	0	0	---	NP
1358:												
Badgercamp------	0-5	Bouldery loam	ML, SM	A-4	2-5	0-5	75-95	70-90	40-70	35-65	---	NP
	5-15	Extremely gravelly loam, very gravelly loam	GP-GM, GM, GP-GC, GM-GC	A-1, A-2	2-4	5-10	15-50	10-45	5-35	5-30	20-30	NP-10
	15-19	Weathered bedrock			0	0	0	0	0	0	---	NP
Hackwood--------	0-13	Gravelly loam	CL	A-6	0	5-10	75-80	65-80	60-75	50-65	25-35	10-15
	13-32	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
	32-60	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
1360:												
Welch------------	0-5	Clay loam	CL	A-6	0	0	100	90-100	85-100	70-90	30-40	10-20
	5-60	Stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20

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	
1361:												
Wetvit----------	0-16	Fine sandy loam	SM	A-4	0	0	95-100	85-100	75-90	40-50	30-35	NP-5
	16-44	Stratified sandy loam to clay loam	ML	A-4	0	0	95-100	85-100	80-90	50-60	30-40	5-10
	44-60	Stratified gravelly loamy sand to clay loam	ML	A-4	0	0	90-100	80-100	75-85	50-60	30-40	5-10
Wetvit----------	0-16	Fine sandy loam	SM	A-4	0	0	95-100	85-100	75-90	40-50	30-35	NP-5
	16-44	Stratified sandy loam to clay loam	ML	A-4	0	0	95-100	85-100	80-90	50-60	30-40	5-10
	44-60	Stratified gravelly loamy sand to clay loam	ML	A-4	0	0	90-100	80-100	75-85	50-60	30-40	5-10
1365:												
Rubble Land-----	0-60	Fragmental material	GP	A-1	30-65	30-65	0-10	0-5	0-5	0	0-14	NP
Dosie----------	0-6	Very stony loam	GM-GC	A-2	5-10	5-10	55-65	40-55	35-45	25-35	20-30	5-10
	6-42	Very gravelly clay loam, very gravelly clay	GM, GC	A-2	0-1	15-30	45-65	35-60	30-40	20-30	40-55	20-25
	42-46	Unweathered bedrock			0	0	0	0	0	0	---	NP
1366:												
Dosie----------	0-6	Very stony loam	GM-GC	A-2	5-10	5-10	55-65	40-55	35-45	25-35	20-30	5-10
	6-42	Very gravelly clay loam, very gravelly clay	GM, GC	A-2	0-1	15-30	45-65	35-60	30-40	20-30	40-55	20-25
	42-60	Unweathered bedrock			0	0	0	0	0	0	---	NP
1367:												
Dosie----------	0-6	Very stony loam	GM-GC	A-2	5-10	5-10	55-65	40-55	35-45	25-35	20-30	5-10
	6-42	Very gravelly clay loam, very gravelly clay	GM, GC	A-2	0-1	15-30	45-65	35-60	30-40	20-30	40-55	20-25
	42-46	Unweathered bedrock			0	0	0	0	0	0	---	NP
Fiddler---------	0-7	Very stony loam	CL-ML, ML, CL	A-4	15-25	25-55	95-100	90-100	80-90	55-75	25-35	5-10
	7-28	Very stony clay loam, very stony clay, very cobbly clay loam	CL, CH	A-7	25-55	40-50	75-90	70-85	65-75	50-65	40-60	20-35
	28-32	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

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	
1375:												
Cotant----------	0-2	Very gravelly loam	GC	A-2	0	0-5	50-60	35-50	30-45	25-35	30-35	10-15
	2-19	Clay	CH, CL	A-7	0	0	90-100	75-100	60-100	50-95	45-65	25-40
	19-23	Weathered bedrock			0	0	0	0	0	0	---	NP
Madeline--------	0-2	Very cobbly loam	GC, SC, CL	A-6	0-5	40-60	65-85	60-80	50-75	35-55	30-35	10-15
	2-6	Sandy clay loam, clay loam, sandy clay	SC, CL	A-2, A-6, A-7	0	0-10	85-95	80-90	65-80	30-60	35-45	15-20
	6-19	Sandy clay, gravelly clay, stony sandy clay	SC, CL, CH, GC	A-2, A-7	0-5	5-15	60-95	55-90	45-75	30-55	45-65	25-40
	19-23	Unweathered bedrock			0	0	0	0	0	0	---	NP
1380:												
Weimer----------	0-4	Clay	CH	A-7	0	0	100	100	90-100	75-95	60-75	35-50
	4-48	Clay	CH	A-7	0	0	100	100	90-100	75-95	60-75	35-50
	48-60	Clay, silty clay	CH	A-7	0	0	100	100	90-100	75-95	60-75	35-50
Boulder Lake----	0-2	Silty clay	CH	A-7	0	0	100	100	90-100	80-95	60-70	45-55
	2-60	Clay, silty clay	CH	A-7	0	0	100	100	90-100	80-95	60-70	45-55
1385:												
Fernpoint-------	0-7	Very gravelly sandy loam	GM	A-1	0	0-5	40-60	35-50	20-30	10-20	20-25	NP-5
	7-17	Gravelly sandy clay loam	GM-GC, SC-SM	A-4	0	0	60-80	55-75	45-60	35-45	25-30	5-10
	17-23	Gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-75	35-70	25-60	10-30	20-25	NP-5
	23-60	Stratified extremely cobbly coarse sand to extremely gravelly sand	GP	A-1	5-15	15-50	30-40	20-35	5-20	0-5	---	NP
1395:												
Orr----------	0-9	Sandy loam	SM	A-2, A-4	0-1	0-10	80-100	70-100	50-70	20-40	---	NP
	9-44	Gravelly sandy loam, gravelly sandy clay loam, loam	SC-SM, SC	A-2, A-4, A-6	0	0-5	75-85	70-85	60-80	30-50	25-35	5-15
	44-60	Gravelly sandy loam, sandy clay loam	SM, SC-SM	A-2, A-1	0	0-5	70-85	60-80	40-65	20-35	15-30	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	
1395 (con.):												
Fernpoint-------	0-7	Very gravelly sandy loam	GM	A-1	0	0-5	40-60	35-50	20-30	10-20	20-25	NP-5
	7-17	Gravelly sandy clay loam	GM-GC, SC-SM	A-4	0	0	60-80	55-75	45-60	35-45	25-30	5-10
	17-23	Gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-75	35-70	25-60	10-30	20-25	NP-5
	23-60	Stratified extremely cobbly coarse sand to extremely gravelly sand	GP	A-1	5-15	15-50	30-40	20-35	5-20	0-5	---	NP
1400:												
Bombadil--------	0-3	Very stony loam	SM, ML, SC-SM, CL-ML	A-4	5-15	15-25	70-90	65-85	50-80	40-75	20-30	NP-10
	3-6	Loam, gravelly loam	CL-ML, CL	A-4, A-6	0-5	0-10	75-100	70-90	65-85	50-70	25-35	5-15
	6-14	Loam, clay loam, gravelly clay loam	CL	A-6	0-5	0-10	75-100	70-90	65-85	55-75	30-40	10-20
	14-18	Unweathered bedrock			0	0	0	0	0	0	---	NP
Ceejay----------	0-6	Stony loam	SM, SC-SM, ML, CL-ML	A-4	1-5	5-15	70-90	60-80	50-65	35-55	25-35	5-10
	6-15	Gravelly clay loam, gravelly clay, cobbly clay loam	SC, GC	A-7	0-5	10-25	65-90	60-85	50-70	35-50	40-50	15-25
	15-19	Unweathered bedrock			0	0	0	0	0	0	---	NP
1410:												
Fulstone--------	0-4	Very gravelly sandy loam	GM	A-1, A-2	0	0-5	40-60	35-50	25-40	15-30	15-20	NP-5
	4-16	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	16-26	Indurated			0	0	0	0	0	0	---	NP
	26-60	Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly sand	GP-GM, GM, GP	A-1	0	30-45	25-55	20-50	10-35	0-20	15-25	NP-5
Saraph----------	0-4	Very gravelly sandy loam	GM	A-1, A-2	0	0-2	40-60	35-50	25-40	15-30	15-20	NP
	4-9	Sandy loam, sandy clay loam	ML, SM	A-4, A-5	0	0	95-100	75-100	55-70	35-60	30-45	NP-5
	9-16	Sandy clay loam, clay loam	ML, SM	A-4, A-5	0	0	95-100	75-100	60-75	45-70	35-50	5-10
	16-30	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	
1410 (con.):												
Tuffo----------	0-1	Very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	35-50	25-40	15-30	15-20	NP-5
	1-8	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
	8-30	Weathered bedrock			0	0	0	0	0	0	---	NP
1412:												
Fulstone--------	0-4	Very gravelly sandy loam	GM	A-1, A-2	0	0-5	30-60	35-50	25-40	15-30	15-20	NP-5
	4-16	Clay, gravelly clay	CH, MH	A-7	0	0-5	70-100	65-100	60-100	50-85	50-65	20-35
	16-26	Indurated			0	0	0	0	0	0	---	NP
	26-60	Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly sand	GP-GM, GM, GP	A-1	0	30-45	25-55	20-50	10-35	0-20	15-25	NP-5
Nellspring------	0-3	Very gravelly fine sandy loam	GM	A-1, A-2	0	0-5	40-60	30-50	25-45	20-30	25-35	NP-10
	3-18	Clay	CH	A-7	0	0	85-100	75-100	70-80	55-75	55-65	30-40
	18-35	Clay, clay loam	CH, CL	A-7	0	0	85-100	75-100	60-70	50-65	40-55	20-30
	35-60	Cemented			0	0	0	0	0	0	---	NP
Buffaran--------	0-2	Gravelly loam	SC, CL	A-6	0-1	5-15	75-90	70-80	50-75	40-60	25-35	10-15
	2-16	Gravelly clay loam, gravelly clay, clay	CL, CH	A-7	0	0-5	75-90	70-85	65-80	50-65	40-55	20-30
	16-27	Indurated			0	0	0	0	0	0	---	NP
	27-60	Cemented			0	0	0	0	0	0	---	NP
1420:												
Hangrock--------	0-4	Very gravelly loam	GM-GC	A-2	0	0-5	40-60	30-50	25-40	10-20	20-25	5-10
	4-17	Gravelly clay loam, gravelly loam	SC, GC	A-2, A-6	0	0-5	60-80	50-75	45-70	30-45	30-40	10-15
	17-60	Cemented			0	0	0	0	0	0	---	NP
1430:												
Grassycan-------	0-4	Very stony fine sandy loam	SM, GM	A-1, A-2	5-25	5-10	45-70	35-70	30-60	15-25	20-30	NP-5
	4-12	Clay, clay loam	CH, CL	A-7	0	0-5	85-100	75-100	75-85	55-65	40-55	20-35
	12-13	Cemented			0	0	0	0	0	0	---	NP
	13-16	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	
1430 (con.):												
Grassycan-------	0-4	Extremely stony fine sandy loam	GM	A-1	25-40	10-15	40-60	30-50	25-45	10-20	20-30	NP-5
	4-12	Clay, clay loam	CH, CL	A-7	0	0-5	85-100	75-100	75-85	55-65	40-55	20-35
	12-13	Cemented			0	0	0	0	0	0	---	NP
	13-16	Unweathered bedrock			0	0	0	0	0	0	---	NP
1431:												
Esmod-----------	0-6	Very gravelly fine sandy loam	GM	A-2, A-1	0	0-5	40-60	30-50	25-45	20-30	25-35	NP-10
	6-15	Gravelly clay, clay	CH, CL	A-7	0	0-5	80-100	70-100	60-70	50-65	40-55	20-30
	15-60	Cemented			0	0	0	0	0	0	---	NP
Powlow----------	0-6	Very gravelly loam	GM	A-2, A-1	0	0-5	40-60	30-50	25-45	20-30	25-35	NP-10
	6-15	Gravelly clay, clay, gravelly clay loam	CH, CL	A-7	0	0-5	80-100	70-100	60-70	50-65	40-55	20-30
	15-60	Cemented			0	0	0	0	0	0	---	NP
1440:												
Tusune----------	0-2	Stony loam	GM, SM	A-1, A-2, A-4	1-5	1-5	55-85	45-70	35-50	20-45	---	NP
	2-10	Gravelly loam	SM, GM	A-2, A-4	0	0-5	60-85	50-75	35-50	30-45	25-30	NP-5
	10-38	Very gravelly clay loam, very gravelly loam	GM, GC	A-2	0	0-5	40-55	35-50	25-40	20-35	35-40	10-15
	38-46	Weathered bedrock			0	0	0	0	0	0	---	NP
Hartig----------	0-10	Very gravelly sandy loam	GM	A-1, A-2	0	5-25	40-55	35-50	25-40	15-30	15-25	NP-5
	10-21	Very gravelly loam, very gravelly sandy loam	GM, GM-GC, SM, SC-SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-30	NP-10
	21-42	Very gravelly loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-10	35-75	25-50	15-45	10-35	20-25	NP-5
	42-52	Unweathered bedrock			0	0	0	0	0	0	---	NP
1450:												
Emagert---------	0-14	Loam	ML	A-4	0	0	95-100	85-100	80-90	50-60	30-40	5-10
	14-38	Stratified sandy loam to silty clay loam	ML	A-4	0	0	95-100	85-100	80-90	50-60	30-40	5-10
	38-60	Stratified gravelly loamy sand to silty clay loam	ML	A-4	0	0	95-100	85-100	75-85	50-60	30-40	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	
1450 (con.):												
Wetvit----------	0-16	Fine sandy loam	SM	A-4	0	0	95-100	85-100	75-90	40-50	30-35	NP-5
	16-44	Stratified sandy loam to clay loam	ML	A-4	0	0	95-100	85-100	80-90	50-60	30-40	5-10
	44-60	Stratified gravelly loamy sand to clay loam	ML	A-4	0	0	90-100	80-100	75-85	50-60	30-40	5-10
1460:												
Weerweed--------	0-16	Loam	ML	A-4	0	0	95-100	85-100	80-90	50-60	30-40	5-10
	16-60	Stratified gravelly loamy sand to silty clay loam	ML	A-4	0	0	95-100	85-100	80-90	50-60	30-40	5-10
1470:												
Ninemile--------	0-7	Very cobbly loam	CL-ML	A-4	1-5	10-65	70-90	70-85	60-75	50-60	25-30	5-10
	7-19	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
9901:												
Playas----------	0-6	Silty clay	MH	A-7	0	0	100	100	100	90-100	50-80	20-40
	6-60	Silty clay loam, clay, silty clay	CL, CH, MH	A-7	0	0	100	100	100	90-100	45-75	20-40
9902:												
Rock Outcrop.												
Rubble Land-----	0-60	Fragmental material	GP	A-1	30-65	30-65	0-10	0-5	0-5	0	0-14	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					
1010:												
Macyflet--------	0-9	27-35	1.25-1.45	0.20-0.60	0.16-0.18	Moderate	1.0-2.0	0.43	0.43	3	7	38
	9-47	60-70	1.05-1.30	0.00-0.06	0.14-0.15	High	0.5-1.0	0.28	0.28			
	47-60	0-10	1.60-1.75	0.60-2.00	0.10-0.15	Low	0.0-0.5	0.20	0.20			
Boulder Lake----	0-2	40-60	1.20-1.30	0.00-0.06	0.14-0.15	High	1.0-2.0	0.20	0.20	5	4	86
	2-60	40-60	1.20-1.40	0.00-0.06	0.14-0.15	High	0.5-1.0	0.20	0.20			
1011:												
Macyflet--------	0-9	15-27	1.30-1.50	0.20-0.60	0.16-0.18	Moderate	1.0-2.0	0.49	0.49	3	5	56
	9-47	60-70	1.05-1.30	0.00-0.06	0.14-0.15	High	0.5-1.0	0.28	0.28			
	47-60	0-10	1.60-1.75	0.60-2.00	0.10-0.15	Low	0.0-0.5	0.20	0.20			
1012:												
Macyflet--------	0-9	15-27	1.30-1.50	0.20-0.60	0.16-0.18	Moderate	1.0-2.0	0.49	0.49	3	5	56
	9-47	60-70	1.05-1.30	0.00-0.06	0.14-0.15	High	0.5-1.0	0.28	0.28			
	47-60	0-10	1.60-1.75	0.60-2.00	0.10-0.15	Low	0.0-0.5	0.20	0.20			
Indian Creek----	0-5	15-25	1.25-1.45	2.00-6.00	0.08-0.12	Low	1.0-2.0	0.15	0.43	2	7	38
	5-18	40-55	1.25-1.45	0.00-0.06	0.14-0.16	High	0.5-1.0	0.24	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	5-20	1.40-1.60	0.20-6.00	0.00-0.03	Low	0.0-0.5	0.10	0.20			
1015:												
Powlow----------	0-6	10-18	1.15-1.25	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.17	0.32	2	7	38
	6-15	35-50	1.20-1.30	0.06-0.20	0.17-0.19	High	0.0-2.0	0.20	0.24			
	15-60	---	---	0.00-0.02	---		---	---	---			
1020:												
Bearbutte-------	0-9	7-15	1.10-1.20	0.60-2.00	0.14-0.16	Low	3.0-5.0	0.24	0.28	4	3	86
	9-24	10-18	1.10-1.20	0.60-2.00	0.07-0.11	Low	3.0-5.0	0.10	0.37			
	24-40	3-15	1.20-1.40	0.60-2.00	0.04-0.06	Low	2.0-4.0	0.02	0.32			
	40-53	3-15	1.20-1.40	0.60-2.00	0.07-0.09	Low	1.0-2.0	0.10	0.32			
	53-57	---	---	0.00-0.06	---		---	---	---			
Welch-----------	0-5	15-20	1.10-1.35	0.60-2.00	0.16-0.18	Low	2.0-4.0	0.32	0.32	5	5	56
	5-60	27-35	1.20-1.55	0.20-0.60	0.16-0.21	Moderate	0.5-3.0	0.28	0.32			
1025:												
Mesman----------	0-4	5-10	1.10-1.30	2.00-6.00	0.07-0.13	Low	1.0-2.0	0.37	0.37	5	3	86
	4-13	18-35	1.10-1.30	0.20-0.60	0.00-0.09	Moderate	0.0-0.5	0.32	0.32			
	13-60	10-25	1.10-1.30	0.06-0.20	0.00-0.09	Low	0.0-0.5	0.49	0.49			
1030:												
Zorravista------	0-4	0-5	1.45-1.60	>20.00	0.05-0.07	Low	0.5-1.0	0.17	0.17	5	1	250
	4-60	0-5	1.50-1.65	>20.00	0.05-0.07	Low	0.0-0.5	0.17	0.17			
1035:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Madeline--------	0-2	20-27	1.20-1.35	0.60-2.00	0.10-0.12	Moderate	2.0-3.0	0.17	0.32	1	7	38
	2-6	25-40	1.25-1.45	0.20-0.60	0.14-0.16	Moderate	1.0-2.0	0.17	0.37			
	6-19	40-60	1.20-1.35	0.06-0.20	0.14-0.16	High	1.0-2.0	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					
1035 (con.):												
Crocan	0-3	12-18	1.10-1.20	0.60-2.00	0.16-0.18	Low	5.0-10	0.10	0.17	1	8	---
	3-5	33-40	1.15-1.25	0.20-0.60	0.19-0.21	Moderate	1.0-3.0	0.32	0.37			
	5-14	55-65	1.30-1.40	0.06-0.02	0.12-0.14	High	1.0-2.0	0.20	0.24			
	14-18	---	---	0.00-0.01	---		---	---	---			
1036:												
Tinpan	0-2	20-27	1.20-1.25	0.60-2.00	0.04-0.08	Low	2.0-3.0	0.05	0.17	2	8	---
	2-5	27-35	1.20-1.25	0.20-0.60	0.18-0.20	Moderate	1.0-3.0	0.37	0.43			
	5-36	60-70	1.10-1.30	0.00-0.06	0.12-0.16	High	0.5-2.0	0.24	0.24			
	36-46	---	---	0.00-0.01	---		---	---	---			
Ninemile	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
1040:												
Langston	0-3	5-10	1.40-1.55	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.20	0.32	2	4	86
	3-11	20-35	1.35-1.50	0.20-0.60	0.12-0.14	Moderate	0.5-1.0	0.17	0.32			
	11-60	0-5	1.40-1.60	>20.00	0.02-0.04	Low	0.0-0.5	0.10	0.15			
1041:												
Langston	0-3	5-10	1.40-1.55	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.20	0.32	2	4	86
	3-11	20-35	1.35-1.50	0.20-0.60	0.12-0.14	Moderate	0.5-1.0	0.17	0.32			
	11-60	0-5	1.40-1.60	>20.00	0.02-0.04	Low	0.0-0.5	0.10	0.15			
Old Camp	0-2	8-20	1.35-1.50	2.00-6.00	0.08-0.10	Low	1.0-2.0	0.17	0.43	1	7	38
	2-15	27-35	1.30-1.50	0.20-0.60	0.08-0.11	Low	0.5-1.0	0.15	0.43			
	15-19	---	---	0.00-0.01	---		---	---	---			
Paypoint	0-5	3-10	1.30-1.40	0.60-2.00	0.11-0.15	Low	1.0-2.0	0.24	0.32	2	4	86
	5-17	18-25	1.10-1.40	0.20-0.60	0.15-0.17	Moderate	1.0-2.0	0.32	0.37			
	17-60	0-2	1.35-1.45	6.00-20.00	0.04-0.06	Low	0.5-1.0	0.10	0.20			
1045:												
Paypoint	0-5	3-10	1.30-1.40	0.60-2.00	0.11-0.15	Low	1.0-2.0	0.24	0.32	2	4	86
	5-17	18-25	1.10-1.40	0.20-0.60	0.15-0.17	Moderate	1.0-2.0	0.32	0.37			
	17-60	0-2	1.35-1.45	6.00-20.00	0.04-0.06	Low	0.5-1.0	0.10	0.20			
Langston	0-3	5-10	1.40-1.55	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.20	0.32	2	4	86
	3-11	20-35	1.35-1.50	0.20-0.60	0.12-0.14	Moderate	0.5-1.0	0.17	0.32			
	11-60	0-5	1.40-1.60	>20.00	0.02-0.04	Low	0.0-0.5	0.10	0.15			
1050:												
Skullwak	0-5	18-27	1.45-1.60	0.60-2.00	0.19-0.21	Moderate	0.0-0.5	0.55	0.55	5	4L	86
	5-60	35-45	1.25-1.45	0.00-0.06	0.19-0.21	High	0.0-0.5	0.43	0.43			
1055:												
Devada	0-6	18-25	1.30-1.50	0.60-2.00	0.06-0.10	Low	1.0-3.0	0.17	0.55	1	7	38
	6-17	40-60	1.25-1.45	0.06-0.20	0.10-0.16	High	0.5-2.0	0.15	0.43			
	17-21	---	---	0.00-0.01	---		---	---	---			
Hapgood	0-17	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-4.0	0.10	0.32	3	7	38
	17-40	15-25	1.15-1.35	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.10	0.37			
	40-50	15-25	1.35-1.55	0.60-2.00	0.08-0.10	Low	0.0-0.5	0.10	0.32			
	50-54	---	---	0.00-0.01	---		---	---	---			
Hart Camp	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	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					
1060:												
Bombadil	0-3	10-15	1.35-1.50	0.60-2.00	0.11-0.14	Low	1.0-2.0	0.32	0.43	1	7	38
	3-6	18-27	1.25-1.45	0.20-0.60	0.15-0.17	Moderate	1.0-2.0	0.32	0.49			
	6-14	25-35	1.25-1.45	0.20-0.60	0.16-0.18	Moderate	0.5-1.0	0.28	0.43			
	14-18	---	---	0.00-0.01	---		---	---	---			
Chime	0-7	18-25	1.15-1.30	0.60-2.00	0.11-0.16	Moderate	1.0-2.0	0.24	0.43	3	7	38
	7-16	27-35	1.40-1.60	0.20-0.60	0.16-0.18	Moderate	0.5-1.0	0.24	0.32			
	16-25	20-35	1.40-1.60	0.20-0.60	0.13-0.16	Moderate	0.0-0.5	0.24	0.32			
	25-29	---	---	0.00-0.01	---		---	---	---			
1061:												
Old Camp	0-2	16-22	1.25-1.45	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.24	0.43	1	6	48
	2-15	27-35	1.30-1.50	0.20-0.60	0.08-0.11	Low	0.5-1.0	0.15	0.43			
	15-19	---	---	0.00-0.01	---		---	---	---			
1062:												
Old Camp	0-2	10-20	1.25-1.45	2.00-6.00	0.11-0.13	Low	1.0-2.0	0.17	0.43	1	7	38
	2-15	27-35	1.30-1.50	0.20-0.60	0.08-0.11	Low	0.5-1.0	0.10	0.37			
	15-19	---	---	0.00-0.01	---		---	---	---			
Corral	0-7	15-25	1.35-1.50	0.60-2.00	0.10-0.13	Low	1.0-2.0	0.24	0.37	2	6	48
	7-16	20-35	1.35-1.50	0.20-0.60	0.13-0.19	Moderate	0.0-0.5	0.32	0.43			
	16-20	---	---	0.00-0.01	---		---	---	---			
1063:												
Old Camp	0-2	10-20	1.25-1.45	2.00-6.00	0.11-0.13	Low	1.0-2.0	0.17	0.43	1	7	38
	2-15	27-35	1.30-1.50	0.20-0.60	0.08-0.11	Low	0.5-1.0	0.10	0.37			
	15-19	---	---	0.00-0.01	---		---	---	---			
1065:												
Old Camp	0-2	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	---
	2-15	27-35	1.30-1.50	0.20-0.60	0.08-0.11	Low	0.5-1.0	0.10	0.37			
	15-19	---	---	0.00-0.01	---		---	---	---			
Reywat	0-6	8-18	1.35-1.55	0.60-2.00	0.08-0.12	Low	1.0-3.0	0.15	0.32	1	8	---
	6-18	24-35	1.35-1.55	0.20-0.60	0.10-0.14	Moderate	0.0-1.0	0.15	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
Rubble Land	0-60	---	1.70-2.35	>20.00	0.00-0.10	Low	0.0-0.1	---	---	---	8	---
1070:												
Oreneva	0-2	18-27	1.20-1.30	0.60-2.00	0.08-0.11	Low	1.0-2.0	0.10	0.28	2	7	38
	2-10	18-30	1.30-1.40	0.20-0.60	0.15-0.19	Low	0.5-2.0	0.28	0.28			
	10-30	18-30	1.30-1.40	0.20-2.00	0.08-0.13	Low	0.5-1.0	0.10	0.28			
	30-34	---	---	---	---		---	---	---			
1075:												
Surprise	0-2	3-12	1.40-1.60	2.00-6.00	0.06-0.10	Low	1.0-3.0	0.10	0.20	5	3	86
	2-54	10-18	1.40-1.60	2.00-6.00	0.09-0.12	Low	0.5-1.0	0.20	0.24			
	54-65	7-12	1.45-1.65	2.00-6.00	0.06-0.12	Low	0.0-0.5	0.10	0.24			
1080:												
Rock Outcrop.												
Bucklake	0-8	20-25	1.45-1.55	0.60-2.00	0.08-0.10	Moderate	1.0-2.0	0.15	0.37	2	7	38
	8-12	27-35	1.40-1.55	0.20-0.60	0.11-0.14	Moderate	0.5-1.0	0.20	0.28			
	12-24	35-50	1.35-1.50	0.06-0.20	0.10-0.12	High	0.5-1.0	0.20	0.28			
	24-28	---	---	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					
1080 (con.):												
Corral----------	0-7	15-25	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.17	0.37	2	7	38
	7-16	20-35	1.35-1.50	0.20-0.60	0.06-0.09	Moderate	0.0-0.5	0.32	0.37			
	16-20	---	---	0.00-0.01	---		---	---	---			
1081:												
Bucklake--------	0-8	20-25	1.45-1.55	0.60-2.00	0.08-0.10	Moderate	1.0-2.0	0.15	0.37	2	7	38
	8-12	27-35	1.40-1.55	0.20-0.60	0.11-0.14	Moderate	0.5-1.0	0.20	0.28			
	12-24	35-50	1.35-1.50	0.06-0.20	0.10-0.12	High	0.5-1.0	0.20	0.28			
	24-28	---	---	0.00-0.01	---		---	---	---			
Fiddler---------	0-7	18-27	1.35-1.50	0.60-2.00	0.11-0.14	Low	1.0-3.0	0.20	0.37	2	7	38
	7-28	35-50	1.30-1.50	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.10	0.37			
	28-32	---	---	0.00-0.01	---		---	---	---			
1083:												
Bucklake--------	0-8	20-25	1.45-1.55	0.60-2.00	0.08-0.10	Moderate	1.0-2.0	0.15	0.37	2	7	38
	8-12	27-35	1.40-1.55	0.20-0.60	0.11-0.14	Moderate	0.5-1.0	0.20	0.28			
	12-24	35-50	1.35-1.50	0.06-0.20	0.10-0.12	High	0.5-1.0	0.20	0.28			
	24-28	---	---	0.00-0.01	---		---	---	---			
Rubble Land-----	0-60	---	1.70-2.35	>20.00	0.00-0.10	Low	0.0-0.1	---	---	---	8	---
1090:												
Jaybee----------	0-4	18-25	1.25-1.40	0.60-2.00	0.07-0.09	Low	1.0-2.0	0.20	0.43	1	7	38
	4-14	35-45	1.25-1.45	0.06-0.20	0.16-0.18	High	0.0-0.5	0.28	0.37			
	14-18	---	---	0.00-0.01	---		---	---	---			
Verdico---------	0-3	8-18	1.35-1.50	2.00-6.00	0.08-0.13	Low	0.8-2.0	0.28	0.32	3	5	56
	3-17	45-60	1.25-1.40	0.00-0.06	0.13-0.18	High	0.5-1.0	0.28	0.32			
	17-22	45-60	1.25-1.40	0.00-0.06	0.13-0.18	High	0.0-0.5	0.24	0.37			
	22-26	---	---	0.00-0.01	---		---	---	---			
1095:												
Corral----------	0-7	15-25	1.35-1.50	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.17	0.37	2	7	38
	7-16	20-35	1.35-1.50	0.20-0.60	0.06-0.09	Moderate	0.0-0.5	0.32	0.37			
	16-20	---	---	0.00-0.01	---		---	---	---			
Mahala----------	0-7	20-25	1.20-1.40	0.60-2.00	0.09-0.12	Low	1.0-2.0	0.20	0.64	3	7	38
	7-23	45-60	1.20-1.35	0.00-0.06	0.14-0.16	High	0.0-0.5	0.20	0.37			
	23-27	---	---	0.00-0.01	---		---	---	---			
1105:												
Freznik---------	0-3	20-27	1.20-1.30	0.60-2.00	0.08-0.11	Low	1.0-2.0	0.15	0.32	2	7	38
	3-15	40-60	1.25-1.45	0.00-0.06	0.15-0.18	High	0.5-2.0	0.32	0.37			
	15-23	30-45	1.25-1.45	0.06-0.20	0.16-0.19	Moderate	0.0-0.5	0.37	0.43			
	23-27	---	---	0.00-0.01	---		---	---	---			
1110:												
Indian Creek----	0-5	15-25	1.25-1.45	2.00-6.00	0.08-0.12	Low	1.0-2.0	0.15	0.43	2	7	38
	5-18	40-55	1.25-1.45	0.00-0.06	0.14-0.16	High	0.5-1.0	0.24	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	5-20	1.40-1.60	0.20-6.00	0.00-0.03	Low	0.0-0.5	0.10	0.20			
Buffaran--------	0-2	20-27	1.10-1.25	0.20-0.60	0.10-0.13	Moderate	2.0-4.0	0.28	0.49	1	7	38
	2-16	35-50	1.15-1.30	0.06-0.20	0.12-0.15	High	0.0-1.0	0.24	0.32			
	16-27	---	---	0.00-0.01	---		---	---	---			
	27-60	---	---	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					
1115:												
Lofftus	0-2	10-20	0.80-1.00	0.60-20.00	0.03-0.10	Low	1.0-2.0	0.55	0.55	2	4L	86
	2-30	8-18	0.80-1.00	0.60-2.00	0.03-0.10	Low	0.5-1.0	0.55	0.55			
	30-50	---	---	0.00-0.06	---		---	---	---			
	50-60	2-10	1.20-1.40	0.20-0.60	---	Low	0.0-0.5	0.55	0.55			
Mesman	0-4	5-10	1.10-1.30	2.00-6.00	0.07-0.13	Low	1.0-2.0	0.37	0.37	5	3	86
	4-13	18-35	1.10-1.30	0.20-0.60	0.00-0.09	Moderate	0.0-0.5	0.32	0.32			
	13-60	10-25	1.10-1.30	0.06-0.20	0.00-0.09	Low	0.0-0.5	0.49	0.49			
1120:												
McConnel	0-5	5-15	1.35-1.50	2.00-6.00	0.11-0.17	Low	0.0-1.0	0.20	0.32	2	5	56
	5-15	5-15	1.35-1.50	2.00-6.00	0.08-0.10	Low	---	0.20	0.32			
	15-60	0-5	1.45-1.60	>20.00	0.03-0.05	Low	---	0.05	0.28			
1121:												
McConnel	0-5	7-15	1.35-1.50	2.00-6.00	0.12-0.15	Low	1.0-2.0	0.32	0.64	2	4	86
	5-15	5-15	1.40-1.60	2.00-6.00	0.12-0.15	Low	0.8-2.0	0.32	0.32			
	15-60	0-5	1.45-1.60	>20.00	0.03-0.05	Low	0.0-0.5	0.02	0.10			
1125:												
Halvert	0-2	20-27	1.15-1.25	0.60-2.00	0.15-0.17	Low	1.0-2.0	0.20	0.37	2	7	38
	2-5	27-35	1.15-1.25	0.20-0.60	0.18-0.20	Moderate	1.0-2.0	0.28	0.43			
	5-27	60-70	1.10-1.30	0.00-0.06	0.11-0.13	High	0.5-2.0	0.24	0.37			
	27-32	---	---	0.01-0.02	---		---	---	---			
	32-40	---	---	0.00-0.01	---		---	---	---			
Jaybee	0-4	18-25	1.25-1.40	0.60-2.00	0.07-0.09	Low	1.0-2.0	0.20	0.43	1	7	38
	4-14	35-45	1.25-1.45	0.06-0.20	0.16-0.18	High	0.0-0.5	0.28	0.37			
	14-18	---	---	0.00-0.01	---		---	---	---			
Tunnison	0-2	55-60	1.20-1.40	0.06-0.20	0.08-0.10	High	0.5-1.0	0.20	0.37	2	5	56
	2-27	60-70	1.10-1.30	0.06-0.20	0.10-0.12	High	0.0-0.5	0.20	0.20			
	27-30	---	---	0.00-2.00	---		---	---	---			
	30-34	---	---	0.00-0.01	---		---	---	---			
1130:												
Rock Outcrop.												
Soughe	0-4	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
	4-17	25-35	1.30-1.50	0.20-0.60	0.08-0.11	Moderate	0.5-1.0	0.15	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
1131:												
Rock Outcrop.												
Soughe	0-4	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
	4-17	25-35	1.30-1.50	0.20-0.60	0.08-0.11	Moderate	0.5-1.0	0.15	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
1135:												
Mcwatt	0-10	8-15	1.15-1.25	2.00-6.00	0.06-0.08	Low	1.0-2.0	0.05	0.32	3	8	---
	10-20	8-15	1.15-1.35	2.00-6.00	0.06-0.08	Low	0.0-1.0	0.05	0.37			
	20-44	0-5	1.30-1.40	6.00-20.00	0.02-0.04	Low	---	0.02	0.15			
	44-53	---	---	0.00-0.01	---		---	---	---			
Old Camp	0-2	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	---
	2-15	27-35	1.30-1.50	0.20-0.60	0.08-0.11	Low	0.5-1.0	0.10	0.37			
	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					
1140:												
Valmy-----------	0-2	5-15	1.40-1.60	2.00-6.00	0.13-0.17	Low	0.0-0.5	0.43	0.49	5	3	86
	2-60	5-15	1.40-1.60	2.00-6.00	0.08-0.14	Low	0.0-0.5	0.28	0.43			
1141:												
Valmy-----------	0-2	5-15	1.35-1.55	2.00-6.00	0.13-0.15	Low	0.5-1.0	0.32	0.37	4	3	86
	2-53	5-15	1.40-1.55	2.00-6.00	0.09-0.13	Low	0.0-0.5	0.28	0.37			
	53-60	1-5	1.30-1.50	6.00-20.00	0.04-0.06	Low	0.0-0.5	0.05	0.15			
Langston--------	0-3	5-10	1.40-1.55	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.20	0.32	2	4	86
	3-11	20-35	1.35-1.50	0.20-0.60	0.12-0.14	Moderate	0.5-1.0	0.17	0.32			
	11-60	0-5	1.40-1.60	>20.00	0.02-0.04	Low	0.0-0.5	0.10	0.15			
Paypoint--------	0-5	3-10	1.30-1.40	0.60-2.00	0.11-0.15	Low	1.0-2.0	0.24	0.32	2	4	86
	5-17	18-25	1.10-1.40	0.20-0.60	0.15-0.17	Moderate	1.0-2.0	0.32	0.37			
	17-60	0-2	1.35-1.45	6.00-20.00	0.04-0.06	Low	0.5-1.0	0.10	0.20			
1145:												
Wendane---------	0-10	15-25	1.35-1.50	0.60-2.00	0.15-0.21	Low	1.0-2.0	0.55	0.55	5	4L	86
	10-60	27-35	1.30-1.50	0.20-0.60	0.19-0.21	Moderate	0.0-0.5	0.43	0.43			
1150:												
Saraph----------	0-4	5-15	1.40-1.55	2.00-6.00	0.07-0.09	Low	1.0-2.0	0.15	0.32	2	5	56
	4-9	15-25	1.05-1.20	0.20-0.60	0.12-0.16	Moderate	0.0-0.5	0.32	0.37			
	9-16	20-35	1.10-1.25	0.06-0.20	0.15-0.18	Moderate	0.0-0.5	0.28	0.32			
	16-30	---	---	0.00-0.01	---		---	---	---			
Hangrock--------	0-4	12-20	1.10-1.20	0.60-2.00	0.11-0.13	Low	1.0-2.0	0.10	0.32	2	7	38
	4-17	25-35	1.15-1.25	0.20-0.60	0.16-0.18	Moderate	0.5-1.0	0.17	0.28			
	17-60	---	---	0.00-0.02	---		---	---	---			
Tuffo-----------	0-1	5-15	1.40-1.55	2.00-6.00	0.07-0.09	Low	1.0-3.0	0.15	0.32	1	5	56
	1-8	5-15	1.35-1.55	2.00-6.00	0.13-0.16	Low	0.0-1.0	0.24	0.37			
	8-30	---	---	0.00-0.01	---		---	---	---			
1151:												
Saraph----------	0-4	0-10	1.10-1.30	2.00-6.00	0.06-0.08	Low	0.5-1.0	0.20	0.24	2	2	134
	4-9	15-25	1.05-1.20	0.20-0.60	0.12-0.16	Moderate	0.0-0.5	0.32	0.37			
	9-16	20-35	1.10-1.25	0.06-0.20	0.15-0.18	Moderate	0.0-0.5	0.28	0.32			
	16-30	---	---	0.00-0.01	---		---	---	---			
Tuffo-----------	0-5	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
	5-8	5-15	1.35-1.55	2.00-6.00	0.13-0.16	Low	0.5-1.0	0.24	0.37			
	8-30	---	---	0.00-0.01	---		---	---	---			
Yellowhills-----	0-16	5-12	0.85-1.05	2.00-6.00	0.20-0.25	Low	2.0-4.0	0.37	0.37	5	3	86
	16-34	8-15	0.90-1.10	2.00-6.00	0.20-0.25	Low	0.0-1.0	0.37	0.37			
	34-60	8-15	0.90-1.10	2.00-6.00	0.20-0.25	Low	0.0-1.0	0.37	0.37			
1155:												
Madeline--------	0-2	20-27	1.20-1.35	0.60-2.00	0.11-0.13	Moderate	2.0-3.0	0.20	0.43	1	7	38
	2-6	25-40	1.25-1.45	0.20-0.60	0.14-0.16	Moderate	1.0-2.0	0.17	0.37			
	6-19	40-60	1.20-1.35	0.06-0.20	0.14-0.16	High	1.0-2.0	0.15	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
1160:												
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					
1160 (con.):												
Wylo	0-4	18-27	1.20-1.30	0.20-0.60	0.09-0.11	Low	1.0-2.0	0.15	0.37	1	7	38
	4-15	35-50	1.10-1.30	0.06-0.20	0.13-0.15	High	1.0-2.0	0.15	0.32			
	15-19	---	---	0.00-0.01	---		---	---	---			
Bucklake	0-8	20-25	1.45-1.55	0.60-2.00	0.08-0.10	Moderate	1.0-2.0	0.15	0.37	2	8	---
	8-12	27-35	1.40-1.55	0.20-0.60	0.11-0.14	Moderate	0.5-1.0	0.20	0.28			
	12-24	35-50	1.35-1.50	0.06-0.20	0.10-0.12	High	0.5-1.0	0.20	0.28			
	24-28	---	---	0.00-0.01	---		---	---	---			
1162:												
Devada	0-6	15-27	1.10-1.30	0.60-2.00	0.04-0.07	Low	1.0-3.0	0.05	0.37	1	8	---
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.8-2.0	0.17	0.32			
	17-21	---	---	0.00-0.01	---		---	---	---			
Nitpac	0-8	15-25	1.15-1.25	0.20-0.60	0.15-0.17	Low	1.0-2.0	0.10	0.37	3	7	38
	8-21	45-60	1.15-1.25	0.00-0.06	0.15-0.17	High	0.5-1.0	0.28	0.28			
	21-26	35-45	1.15-1.25	0.00-0.06	0.14-0.16	High	0.5-1.0	0.28	0.28			
	26-34	---	---	0.06-0.20	---		---	---	---			
	34-40	---	---	0.01-0.02	---		---	---	---			
1163:												
Devada	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.15	0.37	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.8-2.0	0.17	0.32			
	17-21	---	---	0.00-0.01	---		---	---	---			
Deseed	0-3	15-25	1.20-1.30	0.60-2.00	0.15-0.18	Low	1.0-2.0	0.37	0.55	2	5	56
	3-9	30-35	1.30-1.40	0.20-0.60	0.16-0.19	Moderate	1.0-2.0	0.28	0.43			
	9-25	35-50	1.30-1.40	0.06-0.20	0.14-0.17	High	0.5-1.0	0.24	0.43			
	25-28	20-27	1.30-1.45	0.60-2.00	0.11-0.14	Low	0.0-0.5	0.20	0.43			
	28-32	---	---	0.00-0.01	---		---	---	---			
1164:												
Devada	0-6	18-25	1.30-1.50	0.60-2.00	0.06-0.10	Low	1.0-3.0	0.17	0.55	1	7	38
	6-17	40-60	1.25-1.45	0.06-0.20	0.10-0.16	High	0.5-2.0	0.15	0.43			
	17-21	---	---	0.00-0.01	---		---	---	---			
Ashcamp	0-3	8-15	1.10-1.15	2.00-6.00	0.14-0.16	Low	1.0-2.0	0.20	0.28	2	3	86
	3-7	12-18	1.10-1.15	2.00-6.00	0.13-0.16	Low	1.0-2.0	0.24	0.32			
	7-23	---	---	0.06-2.00	---		---	---	---			
1165:												
Devada	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.15	0.37	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.8-2.0	0.17	0.32			
	17-21	---	---	0.00-0.01	---		---	---	---			
Nitpac	0-8	15-25	1.15-1.25	0.20-0.60	0.15-0.17	Low	1.0-2.0	0.10	0.37	3	7	38
	8-21	45-60	1.15-1.25	0.00-0.06	0.15-0.17	High	0.5-1.0	0.28	0.28			
	21-26	35-45	1.15-1.25	0.00-0.06	0.14-0.16	High	0.5-1.0	0.28	0.28			
	26-34	---	---	0.06-0.20	---		---	---	---			
	34-40	---	---	0.01-0.02	---		---	---	---			
Bidrim	0-3	12-18	1.10-1.20	0.60-2.00	0.16-0.18	Low	3.0-8.0	0.10	0.17	1	8	---
	3-8	33-40	1.15-1.25	0.20-0.60	0.19-0.21	Moderate	1.0-3.0	0.32	0.37			
	8-13	55-65	1.30-1.40	0.06-0.20	0.12-0.14	High	0.0-1.0	0.20	0.24			
	13-17	---	---	0.00-0.01	---		---	---	---			
1166:												
Devada	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.15	0.37	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.8-2.0	0.17	0.32			
	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					
1166 (con.):												
Bieber----------	0-6	10-20	1.40-1.50	0.60-2.00	0.06-0.12	Low	1.0-2.0	0.15	0.37	1	7	38
	6-10	27-35	1.40-1.50	0.20-0.60	0.14-0.20	Moderate	1.0-2.0	0.24	0.43			
	10-16	35-45	1.35-1.45	0.00-0.06	0.11-0.14	High	0.0-0.5	0.20	0.32			
	16-31	---	---	0.00-0.06	---		---	---	---			
	31-60	5-15	1.50-1.60	0.06-0.20	0.04-0.08	Low	0.0-0.5	0.05	0.24			
1167:												
Devada----------	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.24	0.43	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.0-2.0	0.17	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Reywat----------	0-6	8-18	1.35-1.55	0.60-2.00	0.09-0.13	Low	1.0-3.0	0.15	0.32	1	7	38
	6-18	24-35	1.35-1.55	0.20-0.60	0.10-0.14	Moderate	0.0-1.0	0.15	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
1168:												
Devada----------	0-6	15-27	1.10-1.30	0.60-2.00	0.04-0.07	Low	1.0-3.0	0.05	0.37	1	8	---
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.8-2.0	0.17	0.32			
	17-21	---	---	0.00-0.01	---		---	---	---			
1170:												
Devada----------	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.24	0.43	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.0-2.0	0.17	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Bucklake--------	0-8	20-25	1.45-1.55	0.60-2.00	0.08-0.10	Moderate	1.0-2.0	0.15	0.37	2	7	38
	8-12	27-35	1.40-1.55	0.20-0.60	0.11-0.14	Moderate	0.5-1.0	0.20	0.28			
	12-24	35-50	1.35-1.50	0.06-0.20	0.10-0.12	High	0.5-1.0	0.20	0.28			
	24-28	---	---	0.00-0.01	---		---	---	---			
1171:												
Devada----------	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.24	0.43	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.0-2.0	0.17	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
Indian Creek----	0-5	15-25	1.25-1.45	2.00-6.00	0.08-0.12	Low	1.0-2.0	0.15	0.43	2	7	38
	5-18	40-55	1.25-1.45	0.00-0.06	0.14-0.16	High	0.5-1.0	0.24	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	5-20	1.40-1.60	0.20-6.00	0.00-0.03	Low	0.0-0.5	0.10	0.20			
1172:												
Devada----------	0-6	18-25	1.30-1.50	0.60-2.00	0.06-0.10	Low	1.0-3.0	0.17	0.55	1	7	38
	6-17	40-60	1.25-1.45	0.06-0.20	0.10-0.16	High	0.5-2.0	0.15	0.43			
	17-21	---	---	0.00-0.01	---		---	---	---			
Madeline--------	0-2	20-27	1.20-1.35	0.60-2.00	0.09-0.11	Moderate	2.0-3.0	0.15	0.43	1	7	38
	2-6	25-40	1.25-1.45	0.20-0.60	0.14-0.16	Moderate	1.0-2.0	0.17	0.37			
	6-19	40-60	1.20-1.35	0.06-0.20	0.14-0.16	High	1.0-2.0	0.15	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
1173:												
Devada----------	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.15	0.37	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.8-2.0	0.17	0.32			
	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					
1173 (con.):												
Nitpac----------	0-8	15-25	1.15-1.25	0.20-0.60	0.15-0.17	Low	1.0-2.0	0.10	0.37	3	7	38
	8-21	45-60	1.15-1.25	0.00-0.06	0.15-0.17	High	0.5-1.0	0.28	0.28			
	21-26	35-45	1.15-1.25	0.00-0.06	0.14-0.16	High	0.5-1.0	0.28	0.28			
	26-34	---	---	0.06-0.20	---		---	---	---			
	34-40	---	---	0.01-0.02	---		---	---	---			
Uhaldi----------	0-4	10-15	1.35-1.55	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.32	0.43	3	6	48
	4-22	27-35	1.35-1.55	0.20-0.60	0.16-0.17	Moderate	0.5-2.0	0.17	0.32			
	22-46	---	---	0.00-0.01	---		---	---	---			
1174:												
Devada----------	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.15	0.37	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.8-2.0	0.17	0.32			
	17-21	---	---	0.00-0.01	---		---	---	---			
Uhaldi----------	0-4	10-15	1.35-1.55	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.32	0.43	3	6	48
	4-22	27-35	1.35-1.55	0.20-0.60	0.16-0.17	Moderate	0.5-2.0	0.17	0.32			
	22-46	---	---	0.00-0.01	---		---	---	---			
1175:												
Ferver----------	0-2	18-25	1.15-1.25	0.20-0.60	0.15-0.17	Low	1.0-2.0	0.15	0.49	3	7	38
	2-5	18-27	1.15-1.25	0.20-0.60	0.19-0.21	Low	1.0-2.0	0.49	0.49			
	5-28	60-70	1.15-1.30	0.02-0.06	0.11-0.13	Very high	0.0-1.0	0.20	0.20			
	28-35	35-40	1.20-1.30	0.06-0.20	0.14-0.16	High	0.0-1.0	0.28	0.28			
	35-46	---	---	0.01-0.02	---		---	---	---			
	46-53	---	---	0.01-0.02	---		---	---	---			
Tunnison--------	0-2	55-60	1.20-1.40	0.06-0.20	0.08-0.10	High	0.5-1.0	0.20	0.37	2	5	56
	2-27	60-70	1.10-1.30	0.06-0.20	0.10-0.12	High	0.0-0.5	0.20	0.20			
	27-30	---	---	0.00-2.00	---		---	---	---			
	30-34	---	---	0.00-0.01	---		---	---	---			
1180:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Karlo-----------	0-3	55-70	1.05-1.25	0.06-0.20	0.10-0.12	High	1.0-2.0	0.10	0.43	2	6	48
	3-30	60-70	1.15-1.35	0.06-0.20	0.12-0.14	High	0.0-0.5	0.20	0.20			
	30-34	---	---	0.00-0.01	---		---	---	---			
1181:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Madeline--------	0-2	20-27	1.20-1.35	0.60-2.00	0.09-0.11	Moderate	2.0-3.0	0.15	0.43	1	7	38
	2-6	25-40	1.25-1.45	0.20-0.60	0.14-0.16	Moderate	1.0-2.0	0.17	0.37			
	6-19	40-60	1.20-1.35	0.06-0.20	0.14-0.16	High	1.0-2.0	0.15	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
Tinpan----------	0-2	20-27	1.20-1.25	0.60-2.00	0.04-0.08	Low	2.0-3.0	0.05	0.37	2	8	---
	2-5	27-35	1.20-1.25	0.20-0.60	0.16-0.20	Moderate	1.0-3.0	0.37	0.43			
	5-36	60-70	1.10-1.30	0.00-0.06	0.12-0.16	High	0.5-2.0	0.24	0.24			
	36-46	---	---	0.00-0.01	---		---	---	---			
1182:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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					
1182 (con.):												
Westbutte-------	0-3	18-27	1.20-1.40	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.20	0.28	2	7	38
	3-22	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	22-28	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	28-32	---	---	0.00-0.01	---		---	---	---			
1183:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Westbutte-------	0-3	18-27	1.20-1.40	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.20	0.28	2	7	38
	3-22	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	22-28	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	28-32	---	---	0.00-0.01	---		---	---	---			
1184:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Tinpan----------	0-2	20-27	1.20-1.25	0.60-2.00	0.04-0.08	Low	2.0-3.0	0.05	0.37	2	8	---
	2-5	27-35	1.20-1.25	0.20-0.60	0.18-0.20	Moderate	1.0-3.0	0.37	0.43			
	5-36	60-70	1.10-1.30	0.00-0.06	0.12-0.16	High	0.5-2.0	0.24	0.24			
	36-46	---	---	0.00-0.01	---		---	---	---			
1185:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
1186:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Tinpan----------	0-2	20-27	1.20-1.25	0.60-2.00	0.04-0.08	Low	2.0-3.0	0.05	0.37	2	8	---
	2-5	27-35	1.20-1.25	0.20-0.60	0.18-0.20	Moderate	1.0-3.0	0.37	0.43			
	5-36	60-70	1.10-1.30	0.00-0.06	0.12-0.16	High	0.5-2.0	0.24	0.24			
	36-46	---	---	0.00-0.01	---		---	---	---			
Crocan----------	0-3	12-18	1.10-1.20	0.60-2.00	0.16-0.18	Low	5.0-10	0.10	0.17	1	8	---
	3-5	33-40	1.15-1.25	0.20-0.60	0.19-0.21	Moderate	1.0-3.0	0.32	0.37			
	5-14	55-65	1.30-1.40	0.06-0.02	0.12-0.14	High	1.0-2.0	0.20	0.24			
	14-18	---	---	0.00-0.01	---		---	---	---			
1187:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Tinpan----------	0-2	20-27	1.20-1.25	0.60-2.00	0.04-0.08	Low	2.0-3.0	0.05	0.37	2	8	---
	2-5	27-35	1.20-1.25	0.20-0.60	0.18-0.20	Moderate	1.0-3.0	0.37	0.43			
	5-36	60-70	1.10-1.30	0.00-0.06	0.12-0.16	High	0.5-2.0	0.24	0.24			
	36-46	---	---	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					
1187 (con.):												
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
1188:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Newlands--------	0-6	10-25	1.30-1.40	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.24	0.37	3	6	48
	6-41	27-35	1.30-1.40	0.20-0.60	0.15-0.18	Moderate	0.5-1.0	0.28	0.43			
	41-45	---	---	0.00-0.01	---		---	---	---			
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
1189:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
Badgercamp------	0-5	8-12	1.30-1.50	0.60-2.00	0.14-0.16	Low	2.0-4.0	0.24	0.43	2	6	48
	5-15	12-18	1.45-1.65	0.60-2.00	0.05-0.10	Low	1.0-2.0	0.05	0.43			
	15-19	---	---	0.00-0.06	---		---	---	---			
Crocan----------	0-3	12-18	1.10-1.20	0.60-2.00	0.16-0.18	Low	5.0-10	0.10	0.17	1	8	---
	3-5	33-40	1.15-1.25	0.20-0.60	0.19-0.21	Moderate	1.0-3.0	0.32	0.37			
	5-14	55-65	1.30-1.40	0.06-0.02	0.12-0.14	High	1.0-2.0	0.20	0.24			
	14-18	---	---	0.00-0.01	---		---	---	---			
1190:												
Perver----------	0-2	15-20	1.15-1.25	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.17	0.32	3	7	38
	2-5	18-27	1.15-1.25	0.20-0.60	0.19-0.21	Low	1.0-2.0	0.49	0.49			
	5-28	60-70	1.15-1.30	0.02-0.06	0.11-0.13	Very high	0.0-1.0	0.20	0.20			
	28-35	35-40	1.20-1.30	0.06-0.20	0.14-0.16	High	0.0-1.0	0.28	0.28			
	35-46	---	---	0.01-0.02	---		---	---	---			
	46-53	---	---	0.01-0.02	---		---	---	---			
Nitpac----------	0-8	15-25	1.15-1.25	0.20-0.60	0.15-0.17	Low	1.0-2.0	0.10	0.37	3	7	38
	8-21	45-60	1.15-1.25	0.00-0.06	0.15-0.17	High	0.5-1.0	0.28	0.28			
	21-26	35-45	1.15-1.25	0.00-0.06	0.14-0.16	High	0.5-1.0	0.28	0.28			
	26-34	---	---	0.06-0.20	---		---	---	---			
	34-40	---	---	0.01-0.02	---		---	---	---			
1195:												
Bitner----------	0-7	8-15	1.10-1.15	2.00-6.00	0.14-0.16	Low	1.0-3.0	0.17	0.28	3	4	86
	7-13	12-18	1.10-1.15	2.00-6.00	0.13-0.16	Low	1.0-2.0	0.20	0.32			
	13-27	12-18	1.10-1.20	2.00-6.00	0.13-0.16	Low	0.5-1.0	0.20	0.32			
	27-35	---	---	0.01-0.20	---		---	---	---			
Ashcamp---------	0-3	8-15	1.10-1.15	2.00-6.00	0.14-0.16	Low	1.0-2.0	0.20	0.28	2	3	86
	3-7	12-18	1.10-1.15	2.00-6.00	0.13-0.16	Low	1.0-2.0	0.24	0.32			
	7-23	---	---	0.06-2.00	---		---	---	---			
1205:												
Davey-----------	0-6	5-10	1.45-1.65	6.00-20.00	0.09-0.12	Low	0.5-2.0	0.24	0.24	5	2	134
	6-16	10-15	1.40-1.60	2.00-6.00	0.13-0.17	Low	0.5-2.0	0.28	0.28			
	16-60	2-8	1.50-1.65	6.00-20.00	0.05-0.10	Low	0.0-0.5	0.17	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					
1206:												
Davey----------	0-6	5-10	1.45-1.65	6.00-20.00	0.09-0.12	Low	0.5-2.0	0.24	0.24	5	2	134
	6-16	10-15	1.40-1.60	2.00-6.00	0.13-0.17	Low	0.5-2.0	0.28	0.28			
	16-60	2-8	1.50-1.65	6.00-20.00	0.05-0.10	Low	0.0-0.5	0.17	0.20			
Corral----------	0-5	5-10	1.45-1.65	2.00-6.00	0.08-0.10	Low	1.0-2.0	0.20	0.20	2	2	134
	5-16	20-35	1.35-1.50	0.20-0.60	0.13-0.15	Moderate	0.5-1.0	---	---			
	16-20	---	---	0.00-0.01	---		---	---	---			
1210:												
Mazuma----------	0-6	8-12	1.40-1.55	2.00-6.00	0.12-0.14	Low	0.0-0.5	0.28	0.32	5	3	86
	6-62	5-15	1.45-1.65	2.00-6.00	0.10-0.14	Low	0.0-0.5	0.24	0.37			
Bighat----------	0-2	8-18	1.50-1.65	0.60-2.00	0.07-0.10	Low	0.0-0.5	0.20	0.37	2	5	56
	2-9	8-18	1.45-1.65	0.60-2.00	0.08-0.12	Low	0.0-0.5	0.20	0.37			
	9-16	25-35	1.45-1.65	0.20-0.60	0.10-0.13	Moderate	0.0-0.5	0.20	0.28			
	16-31	0-2	1.55-1.75	6.00-20.00	0.01-0.02	Low	0.0-0.5	0.02	0.10			
	31-60	0-2	1.55-1.75	6.00-20.00	0.01-0.02	Low	0.0-0.5	0.02	0.10			
1215:												
Raglan----------	0-3	10-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.49	0.49	5	3	86
	3-14	10-25	1.30-1.50	0.60-2.00	0.19-0.21	Moderate	0.0-0.5	0.55	0.55			
	14-60	18-25	1.40-1.60	0.20-0.60	0.19-0.21	Moderate	0.0-0.5	0.49	0.49			
Isolde----------	0-7	0-5	1.40-1.60	>20.00	0.06-0.09	Low	0.0-0.5	0.17	0.17	5	1	250
	7-60	0-5	1.50-1.70	>20.00	0.06-0.09	Low	0.0-0.5	0.17	0.17			
1220:												
Schamp----------	0-5	15-20	1.30-1.40	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.37	5	7	38
	5-8	27-30	1.30-1.40	0.20-0.60	0.16-0.18	Moderate	1.0-2.0	0.37	0.43			
	8-32	35-60	1.20-1.30	0.20-0.60	0.14-0.16	High	0.0-0.5	0.28	0.37			
	32-43	15-25	1.30-1.45	0.20-0.60	0.13-0.17	Moderate	0.0-1.0	0.24	0.37			
	43-60	10-25	1.50-1.60	2.00-6.00	0.04-0.06	Low	0.0-0.5	0.15	0.37			
1221:												
Schamp----------	0-5	15-20	1.30-1.40	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.37	5	7	38
	5-8	27-30	1.30-1.40	0.20-0.60	0.16-0.18	Moderate	1.0-2.0	0.37	0.43			
	8-32	35-60	1.20-1.30	0.20-0.60	0.14-0.16	High	0.0-0.5	0.28	0.37			
	32-43	15-25	1.30-1.45	0.20-0.60	0.13-0.17	Moderate	0.0-1.0	0.24	0.37			
	43-60	10-25	1.50-1.60	2.00-6.00	0.04-0.06	Low	0.0-0.5	0.15	0.37			
1223:												
Schamp----------	0-5	15-27	1.30-1.40	0.60-2.00	0.13-0.16	Low	1.0-2.0	0.37	0.37	4	5	56
	5-8	27-30	1.30-1.40	0.20-0.60	0.16-0.18	Moderate	0.5-1.0	0.32	0.43			
	8-32	35-60	1.20-1.30	0.06-0.20	0.14-0.16	High	0.0-0.5	0.28	0.37			
	32-43	15-25	1.30-1.45	0.20-0.60	0.13-0.17	Moderate	0.0-0.5	0.24	0.37			
	43-60	10-25	1.50-1.60	2.00-6.00	0.04	Low	0.0-0.5	0.15	0.32			
1230:												
Raglan----------	0-3	10-20	1.30-1.50	0.60-2.00	0.15-0.17	Low	0.5-1.0	0.49	0.49	5	3	86
	3-14	10-25	1.30-1.50	0.60-2.00	0.19-0.21	Moderate	0.0-0.5	0.55	0.55			
	14-60	18-25	1.40-1.60	0.20-0.60	0.19-0.21	Moderate	0.0-0.5	0.49	0.49			
Mazuma----------	0-6	8-12	1.40-1.55	2.00-6.00	0.12-0.14	Low	0.0-0.5	0.28	0.32	5	3	86
	6-62	5-15	1.45-1.65	2.00-6.00	0.10-0.14	Low	0.0-0.5	0.24	0.37			
1235:												
Chime----------	0-7	18-25	1.15-1.30	0.60-2.00	0.11-0.16	Moderate	1.0-2.0	0.24	0.43	3	7	38
	7-16	27-35	1.40-1.60	0.20-0.60	0.16-0.18	Moderate	0.5-1.0	0.24	0.32			
	16-25	20-35	1.40-1.60	0.20-0.60	0.13-0.16	Moderate	0.0-0.5	0.24	0.32			
	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					
1240:												
Toney	0-4	10-25	1.30-1.50	0.20-0.60	0.05-0.07	Low	1.0-2.0	0.10	0.64	3	8	---
	4-23	40-60	1.20-1.40	0.00-0.06	0.12-0.14	High	0.0-0.5	0.24	0.24			
	23-30	---	---	0.00-0.01	---		---	---	---			
Millerlux	0-4	15-27	1.10-1.25	0.60-2.00	0.07-0.09	Low	1.0-3.0	0.10	0.37	1	7	38
	4-12	40-60	1.25-1.45	0.00-0.06	0.14-0.16	High	0.5-1.0	0.20	0.24			
	12-15	35-50	1.25-1.40	0.06-0.20	0.14-0.16	High	0.5-1.0	0.24	0.37			
	15-19	---	---	0.00-0.01	---		---	---	---			
Hart Camp	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
1245:												
Saraph	0-4	5-15	1.40-1.55	2.00-6.00	0.07-0.09	Low	1.0-2.0	0.15	0.32	2	5	56
	4-9	15-25	1.05-1.20	0.20-0.60	0.12-0.16	Moderate	0.0-0.5	0.32	0.37			
	9-16	20-35	1.10-1.25	0.06-0.20	0.15-0.18	Moderate	0.0-0.5	0.28	0.32			
	16-30	---	---	0.00-0.01	---		---	---	---			
Uhaldi	0-4	10-15	1.35-1.55	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.32	0.43	3	6	48
	4-22	27-35	1.35-1.55	0.20-0.60	0.16-0.17	Moderate	0.5-2.0	0.17	0.32			
	22-46	---	---	0.00-0.01	---		---	---	---			
Frentera	0-9	5-10	1.05-1.25	2.00-6.00	0.14-0.18	Low	2.0-4.0	0.20	0.32	2	4	86
	9-22	5-15	1.15-1.35	2.00-6.00	0.14-0.18	Low	0.0-3.0	0.28	0.37			
	22-26	---	---	0.00-0.06	---		---	---	---			
1250:												
Ashone	0-2	5-10	1.10-1.15	2.00-6.00	0.14-0.16	Low	1.0-3.0	0.10	0.24	3	5	56
	2-8	10-15	1.10-1.20	0.60-2.00	0.15-0.17	Low	1.0-3.0	0.15	0.24			
	8-22	22-30	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.5-2.0	0.15	0.24			
	22-60	---	---	0.00-0.02	---		---	---	---			
Ashdos	0-2	5-10	1.15-1.35	2.00-6.00	0.13-0.15	Low	1.0-3.0	0.10	0.28	3	5	56
	2-12	10-15	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-3.0	0.17	0.28			
	12-24	18-25	1.10-1.30	0.20-0.60	0.15-0.17	Moderate	0.5-2.0	0.17	0.32			
	24-60	---	---	0.00-0.01	---		---	---	---			
Bearbutte	0-9	7-15	1.10-1.20	0.60-2.00	0.14-0.16	Low	3.0-5.0	0.24	0.28	4	3	86
	9-24	10-18	1.10-1.20	0.60-2.00	0.07-0.11	Low	3.0-5.0	0.10	0.37			
	24-30	3-15	1.20-1.40	0.60-2.00	0.04-0.06	Low	2.0-4.0	0.02	0.32			
	30-53	3-15	1.20-1.40	0.60-2.00	0.07-0.09	Low	1.0-2.0	0.10	0.32			
	53-57	---	---	0.00-0.06	---		---	---	---			
1251:												
Ashone	0-2	5-10	1.10-1.15	2.00-6.00	0.14-0.16	Low	1.0-3.0	0.10	0.24	3	5	56
	2-8	10-15	1.10-1.20	0.60-2.00	0.15-0.17	Low	1.0-3.0	0.15	0.24			
	8-22	22-30	1.20-1.30	0.20-0.60	0.19-0.21	Moderate	0.5-2.0	0.15	0.24			
	22-60	---	---	0.00-0.02	---		---	---	---			
Ashdos	0-2	5-10	1.15-1.35	2.00-6.00	0.13-0.15	Low	1.0-3.0	0.10	0.28	3	5	56
	2-12	10-15	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-3.0	0.17	0.28			
	12-24	18-25	1.10-1.30	0.20-0.60	0.15-0.17	Moderate	0.5-2.0	0.17	0.32			
	24-60	---	---	0.00-0.01	---		---	---	---			
Ashtre	0-2	10-15	1.10-1.15	0.60-2.00	0.18-0.20	Low	2.0-3.0	0.15	0.32	3	5	56
	2-11	15-25	1.10-1.15	0.60-2.00	0.19-0.21	Low	1.0-3.0	0.24	0.32			
	11-26	27-35	1.20-1.30	0.20-0.60	0.21-0.22	Moderate	0.0-2.0	0.24	0.32			
	26-60	---	---	0.01-0.06	---		---	---	---			

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					
1253:												
Ashdon----------	0-2	5-10	1.15-1.35	2.00-6.00	0.13-0.15	Low	1.0-3.0	0.10	0.28	3	5	56
	2-12	10-15	1.15-1.35	0.60-2.00	0.14-0.16	Low	1.0-3.0	0.17	0.28			
	12-24	18-25	1.10-1.30	0.20-0.60	0.15-0.17	Moderate	0.5-2.0	0.17	0.32			
	24-60	---	---	0.00-0.01	---		---	---	---			
Ashtre----------	0-2	10-15	1.10-1.15	0.60-2.00	0.18-0.20	Low	2.0-3.0	0.15	0.32	3	7	38
	2-11	15-25	1.10-1.15	0.60-2.00	0.19-0.21	Low	1.0-3.0	0.24	0.32			
	11-26	27-35	1.20-1.30	0.20-0.60	0.21-0.22	Moderate	0.0-2.0	0.24	0.32			
	26-60	---	---	0.01-0.06	---		---	---	---			
Hackwood--------	0-13	17-27	1.10-1.25	0.60-2.00	0.12-0.15	Moderate	2.0-4.0	0.10	0.55	5	7	38
	13-32	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	32-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
1255:												
Newlands--------	0-6	10-25	1.30-1.40	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.24	0.37	3	6	48
	6-41	27-35	1.30-1.40	0.20-0.60	0.15-0.18	Moderate	0.5-1.0	0.28	0.43			
	41-45	---	---	0.00-0.01	---		---	---	---			
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
1256:												
Newlands--------	0-6	10-25	1.30-1.40	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.24	0.37	3	6	48
	6-41	27-35	1.30-1.40	0.20-0.60	0.15-0.18	Moderate	0.5-1.0	0.28	0.43			
	41-45	---	---	0.00-0.01	---		---	---	---			
Menbo-----------	0-2	10-18	1.20-1.40	0.60-2.00	0.07-0.12	Low	2.0-4.0	0.10	0.37	2	7	38
	2-7	15-25	1.35-1.55	0.60-2.00	0.10-0.14	Low	2.0-4.0	0.15	0.37			
	7-34	35-50	1.35-1.55	0.06-0.20	0.06-0.10	High	1.0-2.0	0.10	0.37			
	34-36	---	---	0.00-0.01	---		---	---	---			
1257:												
Newlands--------	0-6	10-25	1.30-1.40	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.24	0.37	3	6	48
	6-41	27-35	1.30-1.40	0.20-0.60	0.15-0.18	Moderate	0.5-1.0	0.28	0.43			
	41-45	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-17	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-4.0	0.10	0.32	3	7	38
	17-40	15-25	1.15-1.35	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.10	0.37			
	40-50	15-25	1.35-1.55	0.60-2.00	0.08-0.10	Low	0.0-0.5	0.10	0.32			
	50-54	---	---	0.00-0.01	---		---	---	---			
1258:												
Newlands--------	0-6	10-25	1.30-1.40	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.24	0.37	3	6	48
	6-41	27-35	1.30-1.40	0.20-0.60	0.15-0.18	Moderate	0.5-1.0	0.28	0.43			
	41-45	---	---	0.00-0.01	---		---	---	---			
Badgercamp------	0-5	8-12	1.30-1.50	0.60-2.00	0.14-0.16	Low	2.0-4.0	0.24	0.43	2	6	48
	5-15	12-18	1.45-1.65	0.60-2.00	0.05-0.10	Low	1.0-2.0	0.05	0.43			
	15-19	---	---	0.00-0.06	---		---	---	---			
Hackwood--------	0-13	17-27	1.10-1.25	0.60-2.00	0.12-0.15	Moderate	2.0-4.0	0.10	0.55	5	7	38
	13-32	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	32-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
1265:												
Fitzwater--------	0-10	18-25	1.20-1.40	2.00-6.00	0.02-0.06	Low	1.0-3.0	0.10	0.24	5	8	---
	10-19	18-30	1.25-1.45	2.00-6.00	0.02-0.06	Low	0.5-1.0	0.10	0.32			
	19-60	18-25	1.25-1.45	2.00-6.00	0.02-0.06	Low	0.0-0.5	0.10	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					
1265 (con.):												
Westbutte-------	0-3	18-27	1.20-1.40	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.20	0.28	2	7	38
	3-22	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	22-28	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	28-32	---	---	0.00-0.01	---		---	---	---			
1270:												
Hartig----------	0-10	7-18	1.35-1.55	0.60-2.00	0.12-0.15	Low	1.0-2.0	0.24	0.43	3	6	48
	10-21	12-20	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	21-42	10-18	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	42-46	---	---	0.00-0.01	---		---	---	---			
1271:												
Hartig----------	0-10	7-18	1.35-1.55	0.60-2.00	0.07-0.09	Low	1.0-2.0	0.10	0.37	3	5	56
	10-21	12-20	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	21-42	10-18	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	42-46	---	---	0.00-0.01	---		---	---	---			
Newlands--------	0-6	10-25	1.30-1.40	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.24	0.37	3	6	48
	6-41	27-35	1.30-1.40	0.20-0.60	0.15-0.18	Moderate	0.5-1.0	0.28	0.43			
	41-45	---	---	0.00-0.01	---		---	---	---			
1272:												
Rock Outcrop.												
Hartig----------	0-10	7-18	1.35-1.55	0.60-2.00	0.04-0.08	Low	1.0-2.0	0.10	0.37	3	5	56
	10-21	12-20	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	21-42	10-18	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	42-52	---	---	0.00-0.01	---		---	---	---			
1273:												
Hartig----------	0-10	7-18	1.35-1.55	0.60-2.00	0.04-0.08	Low	1.0-2.0	0.10	0.37	3	5	56
	10-21	12-20	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	21-42	10-18	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	42-52	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-17	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-4.0	0.10	0.32	3	7	38
	17-40	15-25	1.15-1.35	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.10	0.37			
	40-50	15-25	1.35-1.55	0.60-2.00	0.08-0.10	Low	0.0-0.5	0.10	0.32			
	50-54	---	---	0.00-0.01	---		---	---	---			
1275:												
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
1276:												
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
Reywat----------	0-6	10-18	1.30-1.50	0.60-2.00	0.12-0.17	Low	1.0-3.0	0.28	0.32	1	6	48
	6-18	24-35	1.35-1.55	0.20-0.60	0.10-0.14	Moderate	0.0-1.0	0.15	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
Westbutte-------	0-3	18-27	1.20-1.40	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.20	0.28	2	7	38
	3-22	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	22-28	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	28-32	---	---	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					
1277:												
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
Ninemile--------	0-7	10-20	1.15-1.35	0.60-2.00	0.07-0.12	Low	1.0-3.0	0.15	0.43	1	7	38
	7-19	40-60	1.20-1.40	0.00-0.06	0.14-0.16	High	1.0-2.0	0.20	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1278:												
Boltz-----------	0-11	10-18	1.10-1.15	2.00-6.00	0.14-0.16	Low	1.0-2.0	0.17	0.28	3	4	86
	11-34	10-18	1.10-1.15	2.00-6.00	0.13-0.16	Low	0.5-2.0	0.20	0.32			
	34-60	---	---	0.01-0.20	---		---	---	---			
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
1279:												
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
Nutzan----------	0-10	10-15	1.10-1.15	2.00-6.00	0.15-0.18	Low	1.0-3.0	0.24	0.32	3	4	86
	10-17	10-18	1.10-1.15	2.00-6.00	0.16-0.19	Low	1.0-2.0	0.24	0.32			
	17-28	10-18	1.10-1.15	2.00-6.00	0.16-0.19	Low	0.5-1.0	0.10	0.32			
	28-36	10-18	1.10-1.15	2.00-6.00	0.13-0.16	Low	0.0-0.5	0.05	0.24			
	36-46	---	---	0.01-0.02	---		---	---	---			
Westbutte-------	0-4	10-18	1.20-1.40	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.20	0.37	2	7	38
	4-8	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	8-27	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	27-37	---	---	0.00-0.01	---		---	---	---			
1285:												
Zymans----------	0-8	15-25	1.30-1.50	0.60-2.00	0.10-0.15	Moderate	1.0-3.0	0.20	0.43	4	6	48
	8-27	45-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	27-48	35-60	1.25-1.45	0.06-0.20	0.14-0.21	High	0.3-1.0	0.24	0.43			
	48-52	---	---	0.00-0.01	---		---	---	---			
Indian Creek----	0-5	15-25	1.25-1.45	2.00-6.00	0.08-0.12	Low	1.0-2.0	0.15	0.43	2	7	38
	5-18	40-55	1.25-1.45	0.00-0.06	0.14-0.16	High	0.5-1.0	0.24	0.37			
	18-25	---	---	0.00-0.01	---		---	---	---			
	25-60	5-20	1.40-1.60	0.20-6.00	0.00-0.03	Low	0.0-0.5	0.10	0.20			
1286:												
Zymans----------	0-8	15-25	1.30-1.50	0.60-2.00	0.10-0.15	Moderate	1.0-3.0	0.20	0.43	4	6	48
	8-27	45-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	27-48	35-60	1.25-1.45	0.06-0.20	0.14-0.21	High	0.3-1.0	0.24	0.43			
	48-52	---	---	0.00-0.01	---		---	---	---			
Cotant----------	0-2	20-27	1.10-1.30	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	2	7	38
	2-19	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	19-23	---	---	0.00-0.01	---		---	---	---			
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	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					
1290:												
Hapgood---------	0-17	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-4.0	0.10	0.32	3	7	38
	17-40	15-25	1.15-1.35	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.10	0.37			
	40-50	15-25	1.35-1.55	0.60-2.00	0.08-0.10	Low	0.0-0.5	0.10	0.32			
	50-54	---	---	0.00-0.01	---		---	---	---			
Badgercamp------	0-5	8-12	1.30-1.50	0.60-2.00	0.14-0.16	Low	2.0-4.0	0.24	0.43	2	6	48
	5-15	12-18	1.45-1.65	0.60-2.00	0.05-0.10	Low	1.0-2.0	0.05	0.43			
	15-19	---	---	0.00-0.06	---		---	---	---			
Hackwood--------	0-13	17-27	1.10-1.25	0.60-2.00	0.12-0.15	Moderate	2.0-4.0	0.10	0.55	5	7	38
	13-32	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	32-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
1295:												
Devoy-----------	0-10	20-27	1.20-1.40	0.60-2.00	0.11-0.14	Low	1.0-4.0	0.20	0.37	2	7	38
	10-17	30-40	1.20-1.40	0.20-0.60	0.08-0.11	Moderate	1.0-2.0	0.15	0.37			
	17-30	40-60	1.30-1.40	0.06-0.20	0.07-0.10	High	0.0-0.5	0.15	0.37			
	30-34	---	---	0.00-0.01	---		---	---	---			
Blizzard--------	0-2	30-40	1.20-1.30	0.20-0.60	0.08-0.11	Moderate	3.0-5.0	0.15	0.37	1	8	---
	2-5	45-60	1.30-1.40	0.06-0.20	0.13-0.16	High	1.0-3.0	0.24	0.28			
	5-19	45-60	1.30-1.40	0.06-0.20	0.11-0.14	High	1.0-2.0	0.20	0.32			
	19-23	---	---	0.00-0.01	---		---	---	---			
1296:												
Blizzard--------	0-2	30-40	1.20-1.30	0.20-0.60	0.08-0.11	Moderate	3.0-5.0	0.15	0.37	1	8	---
	2-5	45-60	1.30-1.40	0.06-0.20	0.13-0.16	High	1.0-3.0	0.24	0.28			
	5-19	45-60	1.30-1.40	0.06-0.20	0.11-0.14	High	1.0-2.0	0.20	0.32			
	19-23	---	---	0.00-0.01	---		---	---	---			
1305:												
Updike----------	0-4	10-20	1.35-1.55	0.06-0.20	0.19-0.21	Low	0.5-1.0	0.43	0.43	2	4L	86
	4-36	35-50	1.30-1.45	0.01-0.06	0.15-0.17	High	0.0-0.5	0.49	0.49			
	36-60	30-45	1.35-1.55	0.06-0.20	0.14-0.17	High	0.0-0.5	0.24	0.24			
Mazuma----------	0-6	8-12	1.40-1.55	2.00-6.00	0.12-0.14	Low	0.0-0.5	0.28	0.32	5	3	86
	6-62	5-15	1.45-1.65	2.00-6.00	0.10-0.14	Low	0.0-0.5	0.24	0.37			
1306:												
Updike----------	0-4	10-20	1.35-1.55	0.06-0.20	0.19-0.21	Low	0.5-1.0	0.43	0.43	2	4L	86
	4-36	35-50	1.30-1.45	0.01-0.06	0.15-0.17	High	0.0-0.5	0.49	0.49			
	36-60	30-45	1.35-1.55	0.06-0.20	0.14-0.17	High	0.0-0.5	0.24	0.24			
Longdis---------	0-5	27-35	1.25-1.40	0.20-0.60	0.17-0.18	Moderate	1.0-2.0	0.43	0.43	2	7	38
	5-26	40-50	1.20-1.35	0.06-0.20	0.15-0.17	High	0.5-1.0	0.37	0.37			
	26-45	35-45	1.30-1.50	0.06-0.20	0.17-0.18	High	0.0-0.5	0.49	0.49			
	45-61	35-45	1.30-1.45	0.06-0.20	0.15-0.17	High	0.0-0.5	0.37	0.37			
1310:												
Longdis---------	0-5	27-35	1.25-1.40	0.20-0.60	0.17-0.18	Moderate	1.0-2.0	0.43	0.43	2	7	38
	5-26	40-50	1.20-1.35	0.06-0.20	0.15-0.17	High	0.5-1.0	0.37	0.37			
	26-45	35-45	1.30-1.50	0.06-0.20	0.17-0.18	High	0.0-0.5	0.49	0.49			
	45-61	35-45	1.30-1.45	0.06-0.20	0.15-0.17	High	0.0-0.5	0.37	0.37			
Updike----------	0-4	10-20	1.35-1.55	0.06-0.20	0.19-0.21	Low	0.5-1.0	0.43	0.43	2	4L	86
	4-36	35-50	1.30-1.45	0.01-0.06	0.15-0.17	High	0.0-0.5	0.49	0.49			
	36-60	30-45	1.35-1.55	0.06-0.20	0.14-0.17	High	0.0-0.5	0.24	0.24			

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					
1311:												
Longdis---------	0-5	10-20	1.20-1.25	0.20-0.60	0.16-0.18	Moderate	1.0-2.0	0.64	0.64	2	5	56
	5-26	40-50	1.20-1.35	0.06-0.20	0.15-0.17	High	0.5-1.0	0.37	0.37			
	26-45	35-45	1.30-1.50	0.06-0.20	0.17-0.18	High	0.0-0.5	0.49	0.49			
	45-61	35-45	1.30-1.45	0.06-0.20	0.15-0.17	High	0.0-0.5	0.37	0.37			
Macyflet--------	0-9	15-27	1.30-1.50	0.20-0.60	0.16-0.18	Moderate	1.0-2.0	0.49	0.49	3	5	56
	9-47	60-70	1.05-1.30	0.00-0.06	0.14-0.15	High	0.5-1.0	0.28	0.28			
	47-60	0-10	1.60-1.75	0.60-2.00	0.10-0.15	Low	0.0-0.5	0.20	0.20			
Aeric Epiaquents	0-4	10-25	1.20-1.40	0.06-0.20	0.19-0.21	Low	0.0-1.0	0.43	0.43	5	8	---
	4-42	30-60	1.50-1.70	0.00-0.06	0.15-0.21	Moderate	0.0-1.0	0.37	0.37			
	42-60	10-40	1.45-1.65	0.06-0.20	0.17-0.20	High	0.0-1.0	0.43	0.43			
1312:												
Longdis---------	0-5	27-35	1.25-1.40	0.20-0.60	0.17-0.18	Moderate	1.0-2.0	0.43	0.43	2	7	38
	5-26	40-50	1.20-1.35	0.06-0.20	0.15-0.17	High	0.5-1.0	0.37	0.37			
	26-45	35-45	1.30-1.50	0.06-0.20	0.17-0.18	High	0.0-0.5	0.49	0.49			
	45-61	35-45	1.30-1.45	0.06-0.20	0.15-0.17	High	0.0-0.5	0.37	0.37			
Dugway----------	0-5	5-15	1.35-1.55	2.00-6.00	0.10-0.12	Low	0.8-2.0	0.24	0.24	2	3	86
	5-18	35-50	1.25-1.45	0.06-0.20	0.16-0.18	High	0.5-1.0	0.24	0.24			
	18-35	20-30	1.30-1.50	0.20-0.60	0.18-0.20	Moderate	0.0-0.5	0.55	0.55			
	35-52	---	---	0.01-0.02	---		---	---	---			
	52-61	25-35	1.35-1.55	0.20-0.60	0.19-0.21	Moderate	0.0-0.5	0.55	0.55			
1313:												
Longdis---------	0-5	10-20	1.20-1.25	0.20-0.60	0.16-0.18	Moderate	1.0-2.0	0.64	0.64	2	5	56
	5-26	40-50	1.20-1.35	0.06-0.20	0.15-0.17	High	0.5-1.0	0.37	0.37			
	26-45	35-45	1.30-1.50	0.06-0.20	0.17-0.18	High	0.0-0.5	0.49	0.49			
	45-61	35-45	1.30-1.45	0.06-0.20	0.15-0.17	High	0.0-0.5	0.37	0.37			
1320:												
Dugway----------	0-5	5-15	1.35-1.55	2.00-6.00	0.10-0.12	Low	0.8-2.0	0.24	0.24	2	3	86
	5-18	35-50	1.25-1.45	0.06-0.20	0.16-0.18	High	0.5-1.0	0.24	0.24			
	18-35	20-30	1.30-1.50	0.20-0.60	0.18-0.20	Moderate	0.0-0.5	0.55	0.55			
	35-52	---	---	0.01-0.02	---		---	---	---			
	52-61	25-35	1.35-1.55	0.20-0.60	0.19-0.21	Moderate	0.0-0.5	0.55	0.55			
1321:												
Dugway----------	0-5	5-15	1.35-1.55	2.00-6.00	0.10-0.12	Low	0.8-2.0	0.24	0.24	2	3	86
	5-18	35-50	1.25-1.45	0.06-0.20	0.16-0.18	High	0.5-1.0	0.24	0.24			
	18-35	20-30	1.30-1.50	0.20-0.60	0.18-0.20	Moderate	0.0-0.5	0.55	0.55			
	35-52	---	---	0.01-0.02	---		---	---	---			
	52-61	25-35	1.35-1.55	0.20-0.60	0.19-0.21	Moderate	0.0-0.5	0.55	0.55			
Updike----------	0-4	10-20	1.35-1.55	0.06-0.20	0.19-0.21	Low	0.5-1.0	0.43	0.43	2	4L	86
	4-36	35-50	1.30-1.45	0.01-0.06	0.15-0.17	High	0.0-0.5	0.49	0.49			
	36-60	30-45	1.35-1.55	0.06-0.20	0.14-0.17	High	0.0-0.5	0.24	0.24			
1325:												
Reywat----------	0-6	8-18	1.35-1.55	0.60-2.00	0.09-0.13	Low	1.0-3.0	0.15	0.32	1	7	38
	6-18	24-35	1.35-1.55	0.20-0.60	0.10-0.14	Moderate	0.0-1.0	0.15	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
Devada----------	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.15	0.37	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.8-2.0	0.17	0.32			
	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					
1325 (con.):												
Hart Camp-------	0-3	10-17	1.30-1.45	0.60-2.00	0.13-0.15	Low	2.0-4.0	0.20	0.32	2	6	48
	3-16	20-35	1.35-1.50	0.20-0.60	0.17-0.19	Moderate	1.0-2.0	0.24	0.49			
	16-20	---	---	0.00-0.02	---		---	---	---			
1326:												
Reywat----------	0-6	8-18	1.35-1.55	0.60-2.00	0.09-0.13	Low	1.0-3.0	0.15	0.32	1	7	38
	6-18	24-35	1.35-1.55	0.20-0.60	0.10-0.14	Moderate	0.0-1.0	0.15	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
1327:												
Reywat----------	0-6	10-18	1.30-1.50	0.60-2.00	0.12-0.17	Low	1.0-3.0	0.28	0.32	1	6	48
	6-18	24-35	1.35-1.55	0.20-0.60	0.10-0.14	Moderate	0.0-1.0	0.15	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
Westbutte-------	0-3	18-27	1.20-1.40	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.20	0.28	2	7	38
	3-22	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	22-28	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	28-32	---	---	0.00-0.01	---		---	---	---			
Hapgood---------	0-17	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-4.0	0.10	0.32	3	7	38
	17-40	15-25	1.15-1.35	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.10	0.37			
	40-50	15-25	1.35-1.55	0.60-2.00	0.08-0.10	Low	0.0-0.5	0.10	0.32			
	50-54	---	---	0.00-0.01	---		---	---	---			
1328:												
Reywat----------	0-6	10-18	1.30-1.50	0.60-2.00	0.12-0.17	Low	1.0-3.0	0.28	0.32	1	6	48
	6-18	24-35	1.35-1.55	0.20-0.60	0.10-0.14	Moderate	0.0-1.0	0.15	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
Fernpoint-------	0-7	10-18	1.30-1.45	0.60-2.00	0.06-0.08	Low	1.0-3.0	0.17	0.32	3	5	56
	7-17	18-27	1.30-1.45	0.20-0.60	0.12-0.15	Moderate	1.0-2.0	0.15	0.24			
	17-23	10-18	1.40-1.60	0.60-2.00	0.06-0.10	Low	0.0-2.0	0.17	0.32			
	23-60	0-5	1.45-1.65	6.00-20.00	0.03-0.05	Low	0.0-0.5	0.02	0.15			
1329:												
Reywat----------	0-6	8-18	1.35-1.55	0.60-2.00	0.09-0.13	Low	1.0-3.0	0.15	0.32	1	7	38
	6-18	24-35	1.35-1.55	0.20-0.60	0.10-0.14	Moderate	0.0-1.0	0.15	0.32			
	18-22	---	---	0.00-0.01	---		---	---	---			
Devada----------	0-6	15-27	1.10-1.30	0.60-2.00	0.07-0.09	Moderate	1.0-3.0	0.24	0.43	1	7	38
	6-17	40-60	1.20-1.40	0.06-0.20	0.14-0.16	High	0.0-2.0	0.17	0.37			
	17-21	---	---	0.00-0.01	---		---	---	---			
1335:												
Rock Outcrop.												
Westbutte-------	0-3	18-27	1.20-1.40	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.20	0.28	2	7	38
	3-22	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	22-28	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	28-32	---	---	0.00-0.01	---		---	---	---			
1336:												
Westbutte-------	0-4	10-18	1.20-1.40	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.20	0.37	2	7	38
	4-8	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	8-27	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	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					
1336 (con.):												
Ashtre----------	0-2	10-15	1.10-1.15	0.60-2.00	0.18-0.20	Low	2.0-3.0	0.17	0.32	3	6	48
	2-11	15-25	1.10-1.15	0.60-2.00	0.19-0.21	Low	1.0-3.0	0.24	0.32			
	11-26	27-35	1.20-1.30	0.20-0.60	0.21-0.22	Moderate	0.0-2.0	0.24	0.32			
	26-60	---	---	0.01-0.06	---		---	---	---			
Tusune----------	0-2	10-15	1.10-1.15	0.60-2.00	0.17-0.19	Low	2.0-3.0	0.32	0.37	3	6	48
	2-10	15-20	1.10-1.15	0.60-2.00	0.17-0.19	Low	1.0-2.0	0.32	0.37			
	10-38	25-30	1.10-1.15	0.60-2.00	0.19-0.21	Moderate	0.5-2.0	0.20	0.37			
	38-46	---	---	0.01-0.06	---		---	---	---			
1345:												
Layview----------	0-4	14-20	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-5.0	0.10	0.32	1	7	38
	4-14	22-35	1.30-1.50	0.20-0.60	0.08-0.10	Low	1.0-2.0	0.10	0.32			
	14-18	---	---	0.00-0.01	---		---	---	---			
Hapgood----------	0-26	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-4.0	0.10	0.32	3	7	38
	26-36	15-25	1.15-1.35	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.10	0.37			
	36-50	15-25	1.35-1.55	0.60-2.00	0.08-0.10	Low	0.0-0.5	0.10	0.32			
	50-54	---	---	0.00-0.01	---		---	---	---			
1346:												
Layview----------	0-4	14-20	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-5.0	0.10	0.32	1	7	38
	4-14	22-35	1.30-1.50	0.20-0.60	0.08-0.10	Low	1.0-2.0	0.10	0.32			
	14-18	---	---	0.00-0.01	---		---	---	---			
Westbutte--------	0-3	18-27	1.20-1.40	0.60-2.00	0.11-0.13	Low	2.0-4.0	0.20	0.28	3	7	38
	3-22	18-27	1.25-1.45	0.60-2.00	0.07-0.10	Low	1.0-3.0	0.15	0.32			
	22-28	18-30	1.30-1.60	0.60-2.00	0.07-0.10	Moderate	1.0-2.0	0.10	0.37			
	28-32	---	---	0.00-0.01	---		---	---	---			
Hapgood----------	0-17	15-25	1.05-1.20	0.60-2.00	0.08-0.10	Low	2.0-4.0	0.10	0.32	3	7	38
	17-40	15-25	1.15-1.35	0.60-2.00	0.08-0.10	Low	1.0-2.0	0.10	0.37			
	40-50	15-25	1.35-1.55	0.60-2.00	0.08-0.10	Low	0.0-0.5	0.10	0.32			
	50-54	---	---	0.00-0.01	---		---	---	---			
1355:												
Badgercamp------	0-5	8-12	1.30-1.50	0.60-2.00	0.14-0.16	Low	2.0-4.0	0.24	0.43	2	6	48
	5-15	12-18	1.45-1.65	0.60-2.00	0.05-0.10	Low	1.0-2.0	0.05	0.43			
	15-19	---	---	0.00-0.06	---		---	---	---			
Hackwood--------	0-13	17-27	1.10-1.25	0.60-2.00	0.12-0.15	Moderate	2.0-4.0	0.10	0.55	5	7	38
	13-32	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	32-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
Easte------------	0-10	10-18	1.35-1.50	2.00-6.00	0.06-0.09	Low	3.0-4.0	0.10	0.24	4	5	56
	10-42	10-18	1.35-1.45	2.00-6.00	0.05-0.07	Low	1.0-2.0	0.10	0.37			
	42-46	---	---	0.00-0.01	---		---	---	---			
1356:												
Badgercamp------	0-5	8-12	1.30-1.50	0.60-2.00	0.14-0.16	Low	2.0-4.0	0.24	0.43	2	6	48
	5-15	12-18	1.45-1.65	0.60-2.00	0.05-0.10	Low	1.0-2.0	0.05	0.43			
	15-19	---	---	0.00-0.06	---		---	---	---			
Hackwood--------	0-13	17-27	1.10-1.25	0.60-2.00	0.12-0.15	Moderate	2.0-4.0	0.10	0.55	5	7	38
	13-32	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	32-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
Easte------------	0-10	10-18	1.35-1.50	2.00-6.00	0.06-0.09	Low	3.0-4.0	0.10	0.24	4	5	56
	10-42	10-18	1.35-1.45	2.00-6.00	0.05-0.07	Low	1.0-2.0	0.10	0.37			
	42-46	---	---	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					
1358:												
Badgercamp------	0-5	8-12	1.30-1.50	0.60-2.00	0.14-0.16	Low	2.0-4.0	0.24	0.43	2	6	48
	5-15	12-18	1.45-1.65	0.60-2.00	0.05-0.10	Low	1.0-2.0	0.05	0.43			
	15-19	---	---	0.00-0.06	---		---	---	---			
Hackwood--------	0-13	17-27	1.10-1.25	0.60-2.00	0.12-0.15	Moderate	2.0-4.0	0.10	0.55	5	7	38
	13-32	15-27	1.25-1.35	0.60-2.00	0.10-0.17	Moderate	1.0-2.0	0.28	0.49			
	32-60	25-35	1.35-1.45	0.60-2.00	0.08-0.14	Moderate	0.5-1.0	0.15	0.43			
1360:												
Welch-----------	0-5	27-35	1.30-1.50	0.20-0.60	0.19-0.21	Moderate	2.0-4.0	0.32	0.32	5	6	48
	5-60	27-35	1.30-1.50	0.20-0.60	0.16-0.21	Moderate	0.5-4.0	0.28	0.32			
1361:												
Wetvit----------	0-16	15-20	1.10-1.15	0.60-2.00	0.15-0.17	Low	2.0-4.0	0.28	0.28	5	3	86
	16-44	18-27	1.10-1.20	0.20-0.60	0.20-0.22	Moderate	1.0-2.0	0.32	0.32			
	44-60	15-25	1.20-1.30	0.20-0.60	0.18-0.20	Moderate	0.5-2.0	0.32	0.32			
Wetvit----------	0-16	15-20	1.10-1.15	0.60-2.00	0.15-0.17	Low	2.0-4.0	0.28	0.28	5	3	86
	16-44	18-27	1.10-1.20	0.20-0.60	0.20-0.22	Moderate	1.0-2.0	0.32	0.32			
	44-60	15-25	1.20-1.30	0.20-0.60	0.18-0.20	Moderate	0.5-2.0	0.32	0.32			
1365:												
Rubble Land-----	0-60	---	1.70-2.35	>20.00	0.00-0.10	Low	0.0-0.1	---	---	---	8	---
Dosie-----------	0-6	15-25	1.20-1.30	0.60-2.00	0.09-0.11	Low	1.0-3.0	0.15	0.49	3	7	38
	6-42	35-50	1.10-1.30	0.06-0.20	0.10-0.12	Moderate	1.0-2.0	0.10	0.32			
	42-46	---	---	0.00-0.01	---		---	---	---			
1366:												
Dosie-----------	0-6	15-25	1.20-1.30	0.60-2.00	0.09-0.11	Low	1.0-3.0	0.15	0.49	3	7	38
	6-42	35-50	1.10-1.30	0.06-0.20	0.10-0.12	Moderate	1.0-2.0	0.10	0.32			
	42-60	---	---	0.00-0.01	---		---	---	---			
1367:												
Dosie-----------	0-6	15-25	1.20-1.30	0.60-2.00	0.09-0.11	Low	1.0-3.0	0.15	0.49	3	7	38
	6-42	35-50	1.10-1.30	0.06-0.20	0.10-0.12	Moderate	1.0-2.0	0.10	0.32			
	42-46	---	---	0.00-0.01	---		---	---	---			
Fiddler---------	0-7	18-27	1.35-1.50	0.60-2.00	0.11-0.14	Low	1.0-3.0	0.20	0.37	2	7	38
	7-28	35-50	1.30-1.50	0.06-0.20	0.07-0.10	Moderate	0.5-1.0	0.10	0.37			
	28-32	---	---	0.00-0.01	---		---	---	---			
Rubble Land-----	0-60	---	1.70-2.35	>20.00	0.00-0.10	Low	0.0-0.1	---	---	---	8	---
1375:												
Cotant----------	0-2	20-27	1.10-1.30	0.60-2.00	0.12-0.14	Low	1.0-2.0	0.15	0.43	2	7	38
	2-19	40-60	1.25-1.45	0.06-0.20	0.14-0.16	High	0.5-2.0	0.24	0.28			
	19-23	---	---	0.00-0.01	---		---	---	---			
Madeline--------	0-2	20-27	1.20-1.35	0.60-2.00	0.09-0.11	Moderate	2.0-3.0	0.15	0.43	1	7	38
	2-6	25-40	1.25-1.45	0.20-0.60	0.14-0.16	Moderate	1.0-2.0	0.17	0.37			
	6-19	40-60	1.20-1.35	0.06-0.20	0.14-0.16	High	1.0-2.0	0.15	0.37			
	19-23	---	---	0.00-0.01	---		---	---	---			
1380:												
Weimer----------	0-4	50-75	1.05-1.25	0.00-0.06	0.14-0.16	Very high	3.0-6.0	0.24	0.24	5	4	86
	4-48	60-75	1.25-1.45	0.00-0.06	0.14-0.16	Very high	2.0-4.0	0.24	0.24			
	48-60	50-75	1.25-1.45	0.00-0.06	0.14-0.16	Very high	1.0-3.0	0.24	0.24			

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					
1380 (con.):												
Boulder Lake----	0-2	40-60	1.20-1.30	0.00-0.06	0.14-0.15	High	1.0-2.0	0.20	0.20	5	4	86
	2-60	40-60	1.20-1.40	0.00-0.06	0.14-0.15	High	0.5-1.0	0.20	0.20			
1385:												
Fernpoint-------	0-7	10-18	1.30-1.45	0.60-2.00	0.06-0.08	Low	1.0-3.0	0.17	0.32	3	5	56
	7-17	18-27	1.30-1.45	0.20-0.60	0.12-0.15	Moderate	1.0-2.0	0.15	0.24			
	17-23	10-18	1.40-1.60	0.60-2.00	0.06-0.10	Low	0.0-2.0	0.17	0.32			
	23-60	0-5	1.45-1.65	6.00-20.00	0.03-0.05	Low	0.0-0.5	0.02	0.15			
1395:												
Orr----------	0-9	12-18	1.35-1.50	0.60-2.00	0.08-0.13	Low	1.0-3.0	0.15	0.32	5	3	86
	9-44	18-25	1.40-1.60	0.20-0.60	0.15-0.17	Moderate	0.5-2.0	0.20	0.43			
	44-60	5-22	1.50-1.70	0.60-2.00	0.13-0.15	Low	0.0-0.5	0.15	0.37			
Fernpoint-------	0-7	10-18	1.30-1.45	0.60-2.00	0.06-0.08	Low	1.0-3.0	0.17	0.32	3	5	56
	7-17	18-27	1.30-1.45	0.20-0.60	0.12-0.15	Moderate	1.0-2.0	0.15	0.24			
	17-23	10-18	1.40-1.60	0.60-2.00	0.06-0.10	Low	0.0-2.0	0.17	0.32			
	23-60	0-5	1.45-1.65	6.00-20.00	0.03-0.05	Low	0.0-0.5	0.02	0.15			
1400:												
Bombadil--------	0-3	10-15	1.35-1.50	0.60-2.00	0.11-0.14	Low	1.0-2.0	0.32	0.43	1	7	38
	3-6	18-27	1.25-1.45	0.20-0.60	0.15-0.17	Moderate	1.0-2.0	0.32	0.49			
	6-14	25-35	1.25-1.45	0.20-0.60	0.16-0.18	Moderate	0.5-1.0	0.28	0.43			
	14-18	---	---	0.00-0.01	---		---	---	---			
Ceejay----------	0-6	15-25	1.20-1.35	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.17	0.32	1	6	48
	6-15	35-45	1.15-1.30	0.06-0.20	0.13-0.15	High	0.0-0.5	0.15	0.28			
	15-19	---	---	0.00-0.01	---		---	---	---			
1410:												
Fulstone--------	0-4	5-15	1.35-1.50	2.00-6.00	0.07-0.09	Low	1.0-2.0	0.15	0.32	1	5	56
	4-16	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.0-1.0	0.17	0.37			
	16-26	---	---	0.00-0.02	---		---	---	---			
	26-60	5-15	1.45-1.65	2.00-6.00	0.03-0.06	Low	0.0-0.5	0.05	0.37			
Saraph----------	0-4	5-15	1.40-1.55	2.00-6.00	0.07-0.09	Low	1.0-2.0	0.15	0.32	2	5	56
	4-9	15-25	1.05-1.20	0.20-0.60	0.12-0.16	Moderate	0.0-0.5	0.32	0.37			
	9-16	20-35	1.10-1.25	0.06-0.20	0.15-0.18	Moderate	0.0-0.5	0.28	0.32			
	16-30	---	---	0.00-0.01	---		---	---	---			
Tuffo-----------	0-1	5-15	1.40-1.55	2.00-6.00	0.07-0.09	Low	1.0-3.0	0.15	0.32	1	5	56
	1-8	5-15	1.35-1.55	2.00-6.00	0.13-0.16	Low	0.0-1.0	0.24	0.37			
	8-30	---	---	0.00-0.01	---		---	---	---			
1412:												
Fulstone--------	0-4	5-15	1.35-1.50	2.00-6.00	0.07-0.09	Low	1.0-2.0	0.15	0.32	1	5	56
	4-16	45-60	1.20-1.35	0.06-0.20	0.12-0.16	High	0.0-1.0	0.17	0.37			
	16-26	---	---	0.00-0.02	---		---	---	---			
	26-60	5-15	1.45-1.65	2.00-6.00	0.03-0.06	Low	0.0-0.5	0.05	0.37			
Nellspring------	0-3	12-20	1.15-1.25	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.17	0.32	2	5	56
	3-18	50-60	1.15-1.25	0.00-0.06	0.14-0.16	High	0.0-1.0	0.24	0.24			
	18-35	35-50	1.20-1.30	0.02-0.06	0.17-0.19	High	0.0-1.0	0.28	0.28			
	35-60	---	---	0.00-0.02	---		---	---	---			
Buffaran--------	0-2	20-27	1.10-1.25	0.20-0.60	0.12-0.15	Moderate	2.0-4.0	0.32	0.55	1	7	38
	2-16	35-50	1.15-1.30	0.06-0.20	0.12-0.15	High	0.0-1.0	0.24	0.32			
	16-27	---	---	0.00-0.01	---		---	---	---			
	27-60	---	---	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					
1420:												
Hangrock--------	0-4	12-20	1.10-1.20	0.60-2.00	0.11-0.13	Low	1.0-2.0	0.10	0.32	2	7	38
	4-17	25-35	1.15-1.25	0.20-0.60	0.16-0.18	Moderate	0.5-1.0	0.17	0.28			
	17-60	---	---	0.00-0.02	---		---	---	---			
1430:												
Grassycan-------	0-4	12-18	1.15-1.25	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.15	0.32	1	5	56
	4-12	35-50	1.20-1.30	0.02-0.06	0.14-0.16	High	0.0-1.0	0.24	0.24			
	12-13	---	---	0.00-0.02	---		---	---	---			
	13-16	---	---	0.00-0.01	---		---	---	---			
Grassycan-------	0-4	12-18	1.15-1.25	0.60-2.00	0.09-0.11	Low	1.0-2.0	0.10	0.32	1	8	---
	4-12	35-50	1.20-1.30	0.02-0.06	0.14-0.16	High	0.0-1.0	0.24	0.24			
	12-13	---	---	0.00-0.02	---		---	---	---			
	13-16	---	---	0.00-0.01	---		---	---	---			
1431:												
Esmod-----------	0-6	10-18	1.15-1.25	0.60-2.00	0.10-0.12	Low	1.0-2.0	0.17	0.32	1	5	56
	6-15	40-50	1.20-1.30	0.02-0.06	0.17-0.19	High	0.0-1.0	0.24	0.24			
	15-60	---	---	0.00-0.02	---		---	---	---			
Powlow----------	0-6	10-18	1.15-1.25	0.60-2.00	0.10-0.12	Low	1.0-3.0	0.17	0.32	2	7	38
	6-15	35-50	1.20-1.30	0.06-0.20	0.17-0.19	High	0.0-2.0	0.20	0.24			
	15-60	---	---	0.00-0.02	---		---	---	---			
1440:												
Tusune----------	0-2	10-15	1.10-1.15	0.60-2.00	0.17-0.19	Low	2.0-3.0	0.32	0.37	3	6	48
	2-10	15-20	1.10-1.15	0.60-2.00	0.17-0.19	Low	1.0-2.0	0.32	0.37			
	10-38	25-30	1.10-1.15	0.60-2.00	0.19-0.21	Moderate	0.5-2.0	0.20	0.37			
	38-46	---	---	0.01-0.06	---		---	---	---			
Hartig----------	0-10	7-18	1.35-1.55	0.60-2.00	0.04-0.08	Low	1.0-2.0	0.10	0.37	3	5	56
	10-21	12-20	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	21-42	10-18	1.40-1.60	0.60-2.00	0.04-0.09	Low	0.5-1.0	0.15	0.37			
	42-52	---	---	0.00-0.01	---		---	---	---			
1450:												
Emagert---------	0-14	15-25	1.10-1.15	0.60-2.00	0.20-0.22	Moderate	2.0-4.0	0.28	0.32	5	5	56
	14-38	18-27	1.10-1.20	0.20-0.60	0.20-0.22	Moderate	1.0-2.0	0.28	0.32			
	38-60	15-25	1.20-1.30	0.20-0.60	0.18-0.20	Moderate	0.0-2.0	0.28	0.32			
Wetvit----------	0-16	15-20	1.10-1.15	0.60-2.00	0.15-0.17	Low	2.0-4.0	0.28	0.28	5	3	86
	16-44	18-27	1.10-1.20	0.20-0.60	0.20-0.22	Moderate	1.0-2.0	0.32	0.32			
	44-60	15-25	1.20-1.30	0.20-0.60	0.18-0.20	Moderate	0.5-2.0	0.32	0.32			
1460:												
Weerweed--------	0-16	15-25	1.10-1.15	0.60-2.00	0.20-0.22	Moderate	2.0-4.0	0.32	0.32	5	5	56
	16-60	18-27	1.20-1.30	0.20-0.60	0.18-0.20	Moderate	0.5-2.0	0.32	0.32			
1470:												
Ninemile--------	0-7	15-25	1.35-1.50	0.60-2.00	0.08-0.11	Low	2.0-4.0	0.15	0.55	1	7	38
	7-19	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	---		---	---	---			
9901:												
Playas----------	0-6	40-70	1.50-1.70	0.00-0.06	0.02-0.04	High	0.0-0.1	0.37	0.37	---	4	86
	6-60	35-70	1.60-1.80	0.00-0.06	0.02-0.04	High	0.0-0.1	0.37	0.37			
9902:												
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					
9902 (con.): Rubble Land-----	0-60	---	1.70-2.35	>20.00	0.00-0.10	Low	0.0-0.1	---	---	---	8	---

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	
1010:								
Macyflet--------	0-9	27-35	30.0-40.0	6.1-7.8	---	---	0-2	---
	9-47	60-70	60.0-70.0	6.1-7.8	---	---	0-2	---
	47-60	0-10	5.0-20.0	7.4-9.0	---	---	0-4	0-3
Boulder Lake----	0-2	40-60	35.0-65.0	6.1-7.8	---	---	---	---
	2-60	40-60	30.0-60.0	6.6-8.4	---	---	0-2	---
1011:								
Macyflet--------	0-9	15-27	20.0-30.0	6.1-7.8	---	---	0-2	---
	9-47	60-70	60.0-70.0	6.1-7.8	---	---	0-2	---
	47-60	0-10	5.0-20.0	7.4-9.0	---	---	0-4	0-3
1012:								
Macyflet--------	0-9	15-27	20.0-30.0	6.1-7.8	---	---	0-2	---
	9-47	60-70	60.0-70.0	6.1-7.8	---	---	0-2	---
	47-60	0-10	5.0-20.0	7.4-9.0	---	---	0-4	0-3
Indian Creek----	0-5	15-25	10.0-25.0	6.1-7.3	---	---	0-2	0-1
	5-18	40-55	25.0-45.0	6.1-7.8	0-1	---	0-2	0-1
	18-25	---	---	---	---	---	---	---
	25-60	5-20	5.0-20.0	6.6-9.0	0-5	---	0-4	0-1
1015:								
Powlow----------	0-6	10-18	25.0-35.0	6.6-7.8	---	---	---	---
	6-15	35-50	35.0-45.0	6.6-7.8	---	---	---	---
	15-60	---	---	---	---	---	---	---
1020:								
Bearbutte-------	0-9	7-15	17.0-22.0	6.6-7.3	---	---	---	---
	9-24	10-18	20.0-25.0	6.6-7.3	---	---	---	---
	24-40	3-15	5.0-20.0	6.6-7.3	---	---	---	---
	40-53	3-15	5.0-20.0	6.6-7.3	---	---	---	---
	53-57	---	---	---	---	---	---	---
Welch-----------	0-5	15-20	25.0-30.0	6.1-7.3	---	---	---	---
	5-60	27-35	25.0-35.0	6.1-7.8	---	---	---	---
1025:								
Mesman----------	0-4	5-10	0.0-10.0	7.9-9.0	0-1	---	2-8	5-30
	4-13	18-35	10.0-20.0	7.9-8.4	0-1	---	16-32	25-70
	13-60	10-25	5.0-15.0	7.9-8.4	1-5	---	16-32	20-70
1030:								
Zorravista------	0-4	0-5	1.0-3.0	7.9-8.4	1-5	---	0-4	0-5
	4-60	0-5	1.0-3.0	7.4-9.0	0-5	---	0-4	0-5
1035:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Madeline--------	0-2	20-27	16.0-22.0	6.1-7.8	---	---	---	---
	2-6	25-40	17.0-28.0	6.1-7.8	---	---	---	---
	6-19	40-60	24.0-40.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Crocan----------	0-3	12-18	20.0-30.0	6.6-7.3	---	---	---	---
	3-5	33-40	30.0-35.0	6.6-7.3	---	---	---	---
	5-14	55-65	45.0-55.0	6.6-7.3	---	---	---	---
	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	
1036:								
Tinpan----------	0-2	20-27	20.0-30.0	6.6-7.3	---	---	0-2	---
	2-5	27-35	20.0-30.0	6.6-7.3	---	---	0-2	---
	5-36	60-70	50.0-70.0	6.6-8.4	0-5	---	0-2	0-5
	36-46	---	---	---	---	---	---	---
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1040:								
Langston--------	0-3	5-10	4.0-10.0	6.6-7.8	---	---	---	---
	3-11	20-35	16.0-30.0	6.6-7.8	---	---	---	---
	11-60	0-5	1.0-3.0	7.4-8.4	0-10	---	0-2	0-2
1041:								
Langston--------	0-3	5-10	4.0-10.0	6.6-7.8	---	---	---	---
	3-11	20-35	16.0-30.0	6.6-7.8	---	---	---	---
	11-60	0-5	1.0-3.0	7.4-8.4	0-10	---	0-2	0-2
Old Camp--------	0-2	8-20	7.0-16.0	6.6-7.8	---	---	---	0-5
	2-15	27-35	17.0-23.0	6.6-9.0	0-5	---	0-2	0-5
	15-19	---	---	---	---	---	---	---
Paypoint--------	0-5	3-10	5.0-15.0	7.4-8.4	---	---	0-2	---
	5-17	18-25	15.0-25.0	7.4-8.4	1-3	---	0-2	---
	17-60	0-2	1.0-5.0	7.9-9.0	2-5	---	0-2	1-5
1045:								
Paypoint--------	0-5	3-10	5.0-15.0	7.4-8.4	---	---	0-2	---
	5-17	18-25	15.0-25.0	7.4-8.4	1-3	---	0-2	---
	17-60	0-2	1.0-5.0	7.9-9.0	2-5	---	0-2	1-5
Langston--------	0-3	5-10	4.0-10.0	6.6-7.8	---	---	---	---
	3-11	20-35	16.0-30.0	6.6-7.8	---	---	---	---
	11-60	0-5	1.0-3.0	7.4-8.4	0-10	---	0-2	0-2
1050:								
Skullwak--------	0-5	18-27	15.0-25.0	8.5-9.6	5-15	---	16-32	31-45
	5-60	35-45	30.0-40.0	7.9-9.0	1-10	---	8-16	13-30
1055:								
Devada----------	0-6	18-25	10.0-25.0	6.1-7.8	---	---	---	---
	6-17	40-60	25.0-50.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Hapgood---------	0-17	15-25	20.0-30.0	6.6-7.3	---	---	---	---
	17-40	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	40-50	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	50-54	---	---	---	---	---	---	---
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
1060:								
Bombadil--------	0-3	10-15	8.0-13.0	6.6-7.8	---	---	---	---
	3-6	18-27	13.0-20.0	6.6-7.8	---	---	---	---
	6-14	25-35	16.0-23.0	6.6-7.8	0-1	---	---	---
	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	
1060 (con.):								
Chime	0-7	18-25	13.0-19.0	7.4-7.8	---	---	---	---
	7-16	27-35	17.0-23.0	7.4-7.8	---	---	0-2	---
	16-25	20-35	12.0-22.0	7.4-8.4	---	---	0-2	---
	25-29	---	---	---	---	---	---	---
1061:								
Old Camp	0-2	16-22	12.0-17.0	6.6-7.8	---	---	---	0-5
	2-15	27-35	17.0-23.0	6.6-9.0	0-5	---	0-2	0-5
	15-19	---	---	---	---	---	---	---
1062:								
Old Camp	0-2	10-20	8.0-16.0	6.6-7.8	---	---	0-2	0-5
	2-15	27-35	17.0-23.0	6.6-9.0	0-5	---	0-2	0-5
	15-19	---	---	---	---	---	---	---
Corral	0-7	15-25	10.0-20.0	6.6-7.3	---	---	---	---
	7-16	20-35	20.0-35.0	6.6-7.8	---	---	---	---
	16-20	---	---	---	---	---	---	---
1063:								
Old Camp	0-2	10-20	8.0-16.0	6.6-7.8	---	---	0-2	0-5
	2-15	27-35	17.0-23.0	6.6-9.0	0-5	---	0-2	0-5
	15-19	---	---	---	---	---	---	---
1065:								
Old Camp	0-2	10-20	8.0-16.0	6.6-7.8	---	---	0-2	0-5
	2-15	27-35	17.0-23.0	6.6-9.0	0-5	---	0-2	0-5
	15-19	---	---	---	---	---	---	---
Reywat	0-6	8-18	5.0-20.0	6.6-7.8	---	---	---	---
	6-18	24-35	10.0-25.0	6.6-8.4	---	---	---	---
	18-22	---	---	---	---	---	---	---
Rubble Land	0-60	---	---	---	---	---	---	---
1070:								
Oreneva	0-2	18-27	10.0-15.0	6.6-7.8	---	---	---	---
	2-10	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	10-30	18-30	10.0-15.0	7.4-8.4	---	---	---	---
	30-34	---	---	---	---	---	---	---
1075:								
Surprise	0-2	3-12	5.0-15.0	6.1-7.3	---	---	---	---
	2-54	10-18	10.0-15.0	6.1-7.3	---	---	---	---
	54-65	7-12	5.0-10.0	6.1-7.3	---	---	---	---
1080:								
Rock Outcrop.								
Bucklake	0-8	20-25	10.0-20.0	6.1-7.3	---	---	---	---
	8-12	27-35	20.0-30.0	6.6-7.8	---	---	---	---
	12-24	35-50	25.0-40.0	6.6-7.8	---	---	---	---
	24-28	---	---	---	---	---	---	---
Corral	0-7	15-25	10.0-20.0	6.6-7.3	---	---	---	---
	7-16	20-35	20.0-35.0	6.6-7.8	---	---	---	---
	16-20	---	---	---	---	---	---	---

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	
1081:								
Bucklake--------	0-8	20-25	10.0-20.0	6.1-7.3	---	---	---	---
	8-12	27-35	20.0-30.0	6.6-7.8	---	---	---	---
	12-24	35-50	25.0-40.0	6.6-7.8	---	---	---	---
	24-28	---	---	---	---	---	---	---
Fiddler---------	0-7	18-27	25.0-30.0	6.1-7.3	---	---	---	---
	7-28	35-50	30.0-40.0	6.1-7.3	---	---	---	---
	28-32	---	---	---	---	---	---	---
1083:								
Bucklake--------	0-8	20-25	10.0-20.0	6.1-7.3	---	---	---	---
	8-12	27-35	20.0-30.0	6.6-7.8	---	---	---	---
	12-24	35-50	25.0-40.0	6.6-7.8	---	---	---	---
	24-28	---	---	---	---	---	---	---
Rubble Land-----	0-60	---	---	---	---	---	---	---
1090:								
Jaybee----------	0-4	18-25	12.0-24.0	6.6-7.8	---	---	0-2	1-5
	4-14	35-45	28.0-44.0	6.6-7.8	---	---	0-2	1-12
	14-18	---	---	---	---	---	---	---
Verdico---------	0-3	8-18	5.0-20.0	6.1-7.3	---	---	---	---
	3-17	45-60	35.0-50.0	6.1-7.3	---	---	---	---
	17-22	45-60	35.0-50.0	6.6-7.8	---	---	---	---
	22-26	---	---	---	---	---	---	---
1095:								
Corral----------	0-7	15-25	10.0-20.0	6.6-7.3	---	---	---	---
	7-16	20-35	20.0-35.0	6.6-7.8	---	---	---	---
	16-20	---	---	---	---	---	---	---
Mahala----------	0-7	20-25	20.0-25.0	6.6-7.3	---	---	---	---
	7-23	45-60	40.0-50.0	6.6-8.4	0-1	---	0-2	0-2
	23-27	---	---	---	---	---	---	---
1105:								
Freznik---------	0-3	20-27	20.0-25.0	7.4-8.4	---	---	---	---
	3-15	40-60	35.0-50.0	7.4-8.4	---	---	---	---
	15-23	30-45	25.0-40.0	7.4-8.4	---	---	---	---
	23-27	---	---	---	---	---	---	---
1110:								
Indian Creek----	0-5	15-25	10.0-25.0	6.1-7.3	---	---	0-2	0-1
	5-18	40-55	25.0-45.0	6.1-7.8	0-1	---	0-2	0-1
	18-25	---	---	---	---	---	---	---
	25-60	5-20	5.0-20.0	6.6-9.0	0-5	---	0-4	0-1
Buffaran---------	0-2	20-27	20.0-30.0	6.6-7.8	---	---	---	---
	2-16	35-50	30.0-40.0	6.6-8.4	---	---	0-4	0-5
	16-27	---	---	---	---	---	---	---
	27-60	---	---	---	---	---	---	---
1115:								
Lofftus---------	0-2	10-20	15.0-30.0	8.5-9.0	2-8	---	8-16	31-45
	2-30	8-18	10.0-20.0	8.5-9.0	2-8	---	8-16	31-45
	30-50	---	---	---	---	---	---	---
	50-60	2-10	---	---	5-10	---	---	---

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	
1115 (con.):								
Mezman----------	0-4	5-10	0.0-10.0	7.9-9.0	0-1	---	4-8	5-12
	4-13	18-35	10.0-20.0	7.9-8.4	0-1	---	16-32	31-70
	13-60	10-25	5.0-15.0	7.9-8.4	1-5	---	16-32	13-70
1120:								
McConnel--------	0-5	5-15	5.0-15.0	6.6-7.8	---	---	0-2	---
	5-15	5-15	5.0-15.0	6.6-7.8	---	---	0-2	---
	15-60	0-5	1.0-5.0	7.9-9.6	0-3	---	2-16	1-12
1121:								
McConnel--------	0-5	7-15	5.0-15.0	6.6-8.4	---	---	0-2	0-5
	5-15	5-15	5.0-20.0	6.6-8.4	---	---	0-2	0-5
	15-60	0-5	1.0-5.0	7.9-9.0	0-3	---	2-32	1-12
1125:								
Halvert---------	0-2	20-27	15.0-25.0	6.6-7.8	---	---	0-2	---
	2-5	27-35	20.0-30.0	6.6-7.8	---	---	0-2	---
	5-27	60-70	35.0-55.0	7.4-8.4	1-3	---	0-2	---
	27-32	---	---	---	---	---	---	---
	32-40	---	---	---	---	---	---	---
Jaybee----------	0-4	18-25	12.0-24.0	6.6-7.8	---	---	---	0-5
	4-14	35-45	28.0-44.0	6.6-7.8	---	---	---	0-12
	14-18	---	---	---	---	---	---	---
Tunnison--------	0-2	55-60	45.0-50.0	7.4-7.8	---	---	---	---
	2-27	60-70	50.0-55.0	7.4-7.8	---	---	---	---
	27-30	---	---	---	---	---	---	---
	30-34	---	---	---	---	---	---	---
1130:								
Rock Outcrop.								
Soughe----------	0-4	10-20	10.0-25.0	6.6-8.4	---	---	---	0-5
	4-17	25-35	20.0-30.0	6.6-8.4	---	---	0-2	0-5
	17-21	---	---	---	---	---	---	---
1131:								
Rock Outcrop.								
Soughe----------	0-4	10-20	10.0-25.0	6.6-8.4	---	---	---	0-5
	4-17	25-35	20.0-30.0	6.6-8.4	---	---	0-2	0-5
	17-21	---	---	---	---	---	---	---
1135:								
Mcwatt----------	0-10	8-15	5.0-15.0	6.6-7.8	---	---	---	---
	10-20	8-15	5.0-15.0	6.6-7.8	---	---	---	---
	20-44	0-5	1.0-5.0	7.4-8.4	1-3	---	0-2	---
	44-53	---	---	---	---	---	---	---
Old Camp--------	0-2	10-20	8.0-16.0	6.6-7.8	---	---	0-2	0-5
	2-15	27-35	17.0-23.0	6.6-9.0	0-5	---	0-2	0-5
	15-19	---	---	---	---	---	---	---
1140:								
Valmy-----------	0-2	5-15	5.0-15.0	7.9-9.6	---	---	4-8	1-12
	2-60	5-15	5.0-15.0	8.5-9.6	1-4	---	4-8	13-45

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	
1141:								
Valmy----------	0-2	5-15	5.0-15.0	7.9-9.6	---	---	0-8	1-12
	2-53	5-15	5.0-25.0	8.5-9.6	1-4	---	0-8	13-30
	53-60	1-5	5.0-10.0	8.5-9.6	1-4	---	0-8	13-45
Langston--------	0-3	5-10	4.0-10.0	6.6-7.8	---	---	---	---
	3-11	20-35	16.0-30.0	6.6-7.8	---	---	---	---
	11-60	0-5	1.0-3.0	7.4-8.4	0-10	---	0-2	0-2
Paypoint--------	0-5	3-10	5.0-15.0	7.4-8.4	---	---	0-2	---
	5-17	18-25	15.0-25.0	7.4-8.4	1-3	---	0-2	---
	17-60	0-2	1.0-5.0	7.9-9.0	2-5	---	0-2	1-5
1145:								
Wendane---------	0-10	15-25	15.0-25.0	8.5-9.6	5-15	---	16-32	46-99
	10-60	27-35	25.0-40.0	7.9-9.6	5-15	---	16-32	1-5
1150:								
Saraph----------	0-4	5-15	10.0-30.0	6.6-7.8	---	---	---	---
	4-9	15-25	20.0-35.0	6.6-7.8	---	---	---	---
	9-16	20-35	30.0-50.0	6.6-8.4	0-1	---	0-2	---
	16-30	---	---	---	---	---	---	---
Hangrock--------	0-4	12-20	25.0-35.0	6.6-7.3	---	---	---	---
	4-17	25-35	35.0-45.0	6.6-7.3	---	---	---	---
	17-60	---	---	---	---	---	---	---
Tuffo-----------	0-1	5-15	10.0-30.0	6.6-7.8	---	---	---	---
	1-8	5-15	5.0-20.0	6.6-7.8	---	---	---	---
	8-30	---	---	---	---	---	---	---
1151:								
Saraph----------	0-4	0-10	3.0-10.0	6.6-7.8	---	---	---	---
	4-9	15-25	10.0-20.0	6.6-7.8	---	---	---	---
	9-16	20-35	12.0-26.0	6.6-8.4	0-1	---	0-2	---
	16-30	---	---	---	---	---	---	---
Tuffo-----------	0-5	5-15	10.0-30.0	6.6-7.8	---	---	---	---
	5-8	5-15	5.0-20.0	6.6-7.8	---	---	---	---
	8-30	---	---	---	---	---	---	---
Yellowhills-----	0-16	5-12	15.0-40.0	6.6-7.8	---	---	---	---
	16-34	8-15	20.0-50.0	6.6-7.8	---	---	---	---
	34-60	8-15	20.0-50.0	6.6-7.8	---	---	---	---
1155:								
Madeline--------	0-2	20-27	16.0-22.0	6.1-7.8	---	---	---	---
	2-6	25-40	17.0-28.0	6.1-7.8	---	---	---	---
	6-19	40-60	24.0-40.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1160:								
Rock Outcrop.								
Wylo------------	0-4	18-27	15.0-30.0	6.6-7.8	---	---	0-2	---
	4-15	35-50	25.0-45.0	6.6-7.8	---	---	0-2	---
	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	
1160 (con.):								
Bucklake	0-8	20-25	10.0-20.0	6.1-7.3	---	---	---	---
	8-12	27-35	20.0-30.0	6.6-7.8	---	---	---	---
	12-24	35-50	25.0-40.0	6.6-7.8	---	---	---	---
	24-28	---	---	---	---	---	---	---
1162:								
Devada	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	32.0-48.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Nitpac	0-8	15-25	30.0-40.0	6.6-7.8	---	---	---	---
	8-21	45-60	40.0-50.0	6.6-7.8	---	---	---	---
	21-26	35-45	35.0-45.0	6.6-7.8	---	---	---	---
	26-34	---	---	---	---	---	---	---
	34-40	---	---	---	---	---	---	---
1163:								
Devada	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	32.0-48.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Deseed	0-3	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	3-9	30-35	25.0-30.0	6.6-7.8	---	---	---	---
	9-25	35-50	30.0-40.0	6.6-7.8	---	---	---	---
	25-28	20-27	15.0-25.0	7.4-8.4	---	---	0-2	---
	28-32	---	---	---	---	---	---	---
1164:								
Devada	0-6	18-25	10.0-25.0	6.1-7.8	---	---	---	---
	6-17	40-60	25.0-50.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Ashcamp	0-3	8-15	30.0-40.0	6.6-7.3	---	---	---	---
	3-7	12-18	25.0-35.0	6.6-7.3	---	---	---	---
	7-23	---	---	---	---	---	---	---
1165:								
Devada	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	32.0-48.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Nitpac	0-8	15-25	30.0-40.0	6.6-7.8	---	---	---	---
	8-21	45-60	40.0-50.0	6.6-7.8	---	---	---	---
	21-26	35-45	35.0-45.0	6.6-7.8	---	---	---	---
	26-34	---	---	---	---	---	---	---
	34-40	---	---	---	---	---	---	---
Bidrim	0-3	12-18	20.0-30.0	6.6-7.3	---	---	---	---
	3-8	33-40	30.0-35.0	6.6-7.3	---	---	---	---
	8-13	55-65	45.0-55.0	6.6-7.3	---	---	---	---
	13-17	---	---	---	---	---	---	---
1166:								
Devada	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	32.0-48.0	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	
1166 (con.):								
Bieber----------	0-6	10-20	10.0-20.0	6.1-7.3	---	---	---	---
	6-10	27-35	24.0-32.0	6.1-7.3	---	---	---	---
	10-16	35-45	30.0-38.0	6.1-8.4	---	---	0-2	---
	16-31	---	---	---	---	---	---	---
	31-60	5-15	4.0-13.0	7.4-8.4	---	---	0-2	---
1167:								
Devada----------	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	30.0-50.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Reywat----------	0-6	8-18	5.0-20.0	6.6-7.8	---	---	---	---
	6-18	24-35	10.0-25.0	6.6-8.4	---	---	---	---
	18-22	---	---	---	---	---	---	---
1168:								
Devada----------	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	32.0-48.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
1170:								
Devada----------	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	30.0-50.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Bucklake--------	0-8	20-25	10.0-20.0	6.1-7.3	---	---	---	---
	8-12	27-35	20.0-30.0	6.6-7.8	---	---	---	---
	12-24	35-50	25.0-40.0	6.6-7.8	---	---	---	---
	24-28	---	---	---	---	---	---	---
1171:								
Devada----------	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	30.0-50.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Indian Creek----	0-5	15-25	10.0-25.0	6.1-7.3	---	---	0-2	0-1
	5-18	40-55	25.0-45.0	6.1-7.8	0-1	---	0-2	0-1
	18-25	---	---	---	---	---	---	---
	25-60	5-20	5.0-20.0	6.6-9.0	0-5	---	0-4	0-1
1172:								
Devada----------	0-6	18-25	10.0-25.0	6.1-7.8	---	---	---	---
	6-17	40-60	25.0-50.0	6.6-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Madeline--------	0-2	20-27	16.0-22.0	6.1-7.8	---	---	---	---
	2-6	25-40	17.0-28.0	6.1-7.8	---	---	---	---
	6-19	40-60	24.0-40.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1173:								
Devada----------	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	32.0-48.0	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	
1173 (con.):								
Nitpac----------	0-8	15-25	30.0-40.0	6.6-7.8	---	---	---	---
	8-21	45-60	40.0-50.0	6.6-7.8	---	---	---	---
	21-26	35-45	35.0-45.0	6.6-7.8	---	---	---	---
	26-34	---	---	---	---	---	---	---
	34-40	---	---	---	---	---	---	---
Uhaldi----------	0-4	10-15	15.0-20.0	5.6-7.3	---	---	---	---
	4-22	27-35	30.0-40.0	6.6-7.8	---	---	---	---
	22-46	---	---	---	---	---	---	---
1174:								
Devada----------	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	32.0-48.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
Uhaldi----------	0-4	10-15	15.0-20.0	5.6-7.3	---	---	---	---
	4-22	27-35	30.0-40.0	6.6-7.8	---	---	---	---
	22-46	---	---	---	---	---	---	---
1175:								
Ferver----------	0-2	18-25	30.0-40.0	6.6-7.8	---	---	---	---
	2-5	18-27	30.0-40.0	6.6-7.8	---	---	---	---
	5-28	60-70	45.0-55.0	7.4-8.4	0-1	---	---	---
	28-35	35-40	35.0-45.0	7.4-8.4	0-1	---	---	---
	35-46	---	---	---	---	---	---	---
	46-53	---	---	---	---	---	---	---
Tunnison--------	0-2	55-60	45.0-50.0	7.4-7.8	---	---	---	---
	2-27	60-70	50.0-55.0	7.4-7.8	---	---	---	---
	27-30	---	---	---	---	---	---	---
	30-34	---	---	---	---	---	---	---
1180:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Karlo-----------	0-3	55-70	50.0-60.0	6.6-7.8	---	---	---	---
	3-30	60-70	45.0-55.0	7.4-8.4	0-1	---	0-2	0-2
	30-34	---	---	---	---	---	---	---
1181:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Madeline--------	0-2	20-27	16.0-22.0	6.1-7.8	---	---	---	---
	2-6	25-40	17.0-28.0	6.1-7.8	---	---	---	---
	6-19	40-60	24.0-40.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Tinpan----------	0-2	20-27	20.0-30.0	6.6-7.3	---	---	0-2	---
	2-5	27-35	20.0-30.0	6.6-7.3	---	---	0-2	---
	5-36	60-70	50.0-70.0	6.6-8.4	0-5	---	0-2	0-5
	36-46	---	---	---	---	---	---	---
1182:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	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	
1182 (con.):								
Westbutte-------	0-3	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	3-22	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	22-28	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	28-32	---	---	---	---	---	---	---
1183:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Westbutte-------	0-3	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	3-22	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	22-28	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	28-32	---	---	---	---	---	---	---
1184:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Tinpan----------	0-2	20-27	20.0-30.0	6.6-7.3	---	---	0-2	---
	2-5	27-35	20.0-30.0	6.6-7.3	---	---	0-2	---
	5-36	60-70	50.0-70.0	6.6-8.4	0-5	---	0-2	0-5
	36-46	---	---	---	---	---	---	---
1185:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
1186:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Tinpan----------	0-2	20-27	20.0-30.0	6.6-7.3	---	---	0-2	---
	2-5	27-35	20.0-30.0	6.6-7.3	---	---	0-2	---
	5-36	60-70	50.0-70.0	6.6-8.4	0-5	---	0-2	0-5
	36-46	---	---	---	---	---	---	---
Crocan----------	0-3	12-18	20.0-30.0	6.6-7.3	---	---	---	---
	3-5	33-40	30.0-35.0	6.6-7.3	---	---	---	---
	5-14	55-65	45.0-55.0	6.6-7.3	---	---	---	---
	14-18	---	---	---	---	---	---	---
1187:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Tinpan----------	0-2	20-27	20.0-30.0	6.6-7.3	---	---	0-2	---
	2-5	27-35	20.0-30.0	6.6-7.3	---	---	0-2	---
	5-36	60-70	50.0-70.0	6.6-8.4	0-5	---	0-2	0-5
	36-46	---	---	---	---	---	---	---

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	
1187 (con.):								
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
1188:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Newlands--------	0-6	10-25	10.0-20.0	6.1-7.3	---	---	---	---
	6-41	27-35	10.0-25.0	6.1-7.3	---	---	---	---
	41-45	---	---	---	---	---	---	---
Mart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
1189:								
Ninemile--------	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Badgercamp------	0-5	8-12	10.0-20.0	6.6-7.3	---	---	---	---
	5-15	12-18	10.0-20.0	6.6-7.3	---	---	---	---
	15-19	---	---	---	---	---	---	---
Crocan----------	0-3	12-18	20.0-30.0	6.6-7.3	---	---	---	---
	3-5	33-40	30.0-35.0	6.6-7.3	---	---	---	---
	5-14	55-65	45.0-55.0	6.6-7.3	---	---	---	---
	14-18	---	---	---	---	---	---	---
1190:								
Ferver----------	0-2	15-20	25.0-35.0	6.6-7.8	---	---	---	---
	2-5	18-27	30.0-40.0	6.6-7.8	---	---	---	---
	5-28	60-70	45.0-55.0	7.4-8.4	0-1	---	---	---
	28-35	35-40	35.0-45.0	7.4-8.4	0-1	---	---	---
	35-46	---	---	---	---	---	---	---
	46-53	---	---	---	---	---	---	---
Nitpac----------	0-8	15-25	30.0-40.0	6.6-7.8	---	---	---	---
	8-21	45-60	40.0-50.0	6.6-7.8	---	---	---	---
	21-26	35-45	35.0-45.0	6.6-7.8	---	---	---	---
	26-34	---	---	---	---	---	---	---
	34-40	---	---	---	---	---	---	---
1195:								
Bitner----------	0-7	8-15	30.0-40.0	6.1-7.3	---	---	---	---
	7-13	12-18	25.0-35.0	6.1-7.3	---	---	---	---
	13-27	12-18	25.0-35.0	6.6-7.8	---	---	---	---
	27-35	---	---	---	---	---	---	---
Ashcamp---------	0-3	8-15	30.0-40.0	6.6-7.3	---	---	---	---
	3-7	12-18	25.0-35.0	6.6-7.3	---	---	---	---
	7-23	---	---	---	---	---	---	---
1205:								
Davey-----------	0-6	5-10	5.0-15.0	6.6-7.8	---	---	---	---
	6-16	10-15	10.0-25.0	6.6-8.4	---	---	0-2	0-5
	16-60	2-8	2.0-10.0	7.9-9.0	0-10	0-1	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	
1206:								
Davey----------	0-6	5-10	5.0-15.0	6.6-7.8	---	---	---	---
	6-16	10-15	10.0-25.0	6.6-8.4	---	---	0-2	0-5
	16-60	2-8	2.0-10.0	7.9-9.0	0-10	0-1	0-2	0-5
Corral----------	0-5	5-10	5.0-11.0	6.6-7.3	---	---	---	---
	5-16	20-35	20.0-35.0	6.6-7.8	---	---	---	---
	16-20	---	---	---	---	---	---	---
1210:								
Mazuma----------	0-6	8-12	5.0-10.0	7.9-9.6	1-5	---	0-4	1-5
	6-62	5-15	2.0-10.0	7.9-9.6	1-10	---	4-16	13-45
Bighat----------	0-2	8-18	5.0-15.0	7.9-9.0	1-5	---	2-4	1-5
	2-9	8-18	5.0-15.0	7.9-9.0	1-5	---	2-4	1-5
	9-16	25-35	15.0-30.0	7.9-9.0	1-8	---	2-4	13-45
	16-31	0-2	1.0-5.0	7.9-9.0	5-10	---	2-4	5-20
	31-60	0-2	1.0-5.0	7.9-9.0	5-10	---	2-4	5-20
1215:								
Raglan----------	0-3	10-20	10.0-15.0	7.9-9.0	---	---	4-8	0-5
	3-14	10-25	8.0-20.0	7.9-9.0	---	---	8-16	13-30
	14-60	18-25	15.0-20.0	8.5-9.0	1-10	0-1	8-32	31-45
Isolde----------	0-7	0-5	1.0-5.0	6.6-8.4	0-1	---	---	0-5
	7-60	0-5	1.0-5.0	6.6-8.4	0-3	0-1	0-2	0-5
1220:								
Schamp----------	0-5	15-20	14.0-25.0	6.6-7.8	---	---	---	---
	5-8	27-30	24.0-35.0	6.6-7.8	---	---	---	---
	8-32	35-60	28.0-57.0	6.6-8.4	0-2	---	0-2	1-12
	32-43	15-25	10.0-20.0	8.5-9.6	---	---	4-8	---
	43-60	10-25	8.0-20.0	8.5-9.6	---	---	4-8	---
1221:								
Schamp----------	0-5	15-20	14.0-25.0	6.6-7.8	---	---	---	---
	5-8	27-30	24.0-35.0	6.6-7.8	---	---	---	---
	8-32	35-60	28.0-57.0	6.6-8.4	0-2	---	0-2	1-12
	32-43	15-25	10.0-20.0	8.5-9.6	---	---	4-8	---
	43-60	10-25	8.0-20.0	8.5-9.6	---	---	4-8	---
1223:								
Schamp----------	0-5	15-27	14.0-25.0	6.6-7.8	---	---	---	---
	5-8	27-30	25.0-35.0	6.6-7.8	---	---	---	---
	8-32	35-60	28.0-55.0	7.4-8.4	---	---	0-2	---
	32-43	15-25	10.0-20.0	8.5-9.0	---	---	4-8	---
	43-60	10-25	8.0-20.0	8.5-9.0	---	---	4-8	---
1230:								
Raglan----------	0-3	10-20	10.0-15.0	7.9-9.0	---	---	4-8	0-5
	3-14	10-25	8.0-20.0	7.9-9.0	---	---	8-16	13-30
	14-60	18-25	15.0-20.0	8.5-9.0	1-10	0-1	8-32	31-45
Mazuma----------	0-6	8-12	5.0-10.0	7.9-9.6	1-5	---	0-4	1-5
	6-62	5-15	2.0-10.0	7.9-9.6	1-10	---	4-16	13-45
1235:								
Chime----------	0-7	18-25	13.0-19.0	7.4-7.8	---	---	---	---
	7-16	27-35	17.0-23.0	7.4-7.8	---	---	0-2	---
	16-25	20-35	12.0-22.0	7.4-8.4	---	---	0-2	---
	25-29	---	---	---	---	---	---	---

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	
1240:								
Toney	0-4	10-25	10.0-20.0	6.6-7.3	---	---	---	---
	4-23	40-60	35.0-50.0	6.6-8.4	0-5	---	0-2	0-2
	23-30	---	---	---	---	---	---	---
Millerlux	0-4	15-27	11.0-22.0	6.6-8.4	---	---	---	---
	4-12	40-60	25.0-38.0	6.6-8.4	0-1	---	0-2	0-5
	12-15	35-50	22.0-32.0	7.9-9.0	5-10	---	0-2	0-5
	15-19	---	---	---	---	---	---	---
Hart Camp	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
1245:								
Saraph	0-4	5-15	10.0-30.0	6.6-7.8	---	---	---	---
	4-9	15-25	20.0-35.0	6.6-7.8	---	---	---	---
	9-16	20-35	30.0-50.0	6.6-8.4	0-1	---	0-2	---
	16-30	---	---	---	---	---	---	---
Uhaldi	0-4	10-15	15.0-20.0	5.6-7.3	---	---	---	---
	4-22	27-35	30.0-40.0	6.6-7.8	---	---	---	---
	22-46	---	---	---	---	---	---	---
Frentera	0-9	5-10	50-125	6.6-7.3	---	---	---	---
	9-22	5-15	50-125	6.6-8.4	---	---	---	---
	22-26	---	---	---	---	---	---	---
1250:								
Ashone	0-2	5-10	15.0-20.0	6.6-7.8	---	---	---	---
	2-8	10-15	15.0-20.0	6.6-7.8	---	---	---	---
	8-22	22-30	20.0-30.0	6.6-7.8	---	---	---	---
	22-60	---	---	---	---	---	---	---
Ashdos	0-2	5-10	5.0-15.0	6.6-7.8	---	---	---	---
	2-12	10-15	5.0-20.0	6.6-7.8	---	---	---	---
	12-24	18-25	10.0-25.0	6.6-7.8	---	---	---	---
	24-60	---	---	---	---	---	---	---
Bearbutte	0-9	7-15	17.0-22.0	6.6-7.3	---	---	---	---
	9-24	10-18	20.0-25.0	6.6-7.3	---	---	---	---
	24-30	3-15	5.0-20.0	6.6-7.3	---	---	---	---
	30-53	3-15	5.0-20.0	6.6-7.3	---	---	---	---
	53-57	---	---	---	---	---	---	---
1251:								
Ashone	0-2	5-10	15.0-20.0	6.6-7.8	---	---	---	---
	2-8	10-15	15.0-20.0	6.6-7.8	---	---	---	---
	8-22	22-30	20.0-30.0	6.6-7.8	---	---	---	---
	22-60	---	---	---	---	---	---	---
Ashdos	0-2	5-10	5.0-15.0	6.6-7.8	---	---	---	---
	2-12	10-15	5.0-20.0	6.6-7.8	---	---	---	---
	12-24	18-25	10.0-25.0	6.6-7.8	---	---	---	---
	24-60	---	---	---	---	---	---	---
Ashtre	0-2	10-15	25.0-40.0	6.1-7.3	---	---	---	---
	2-11	15-25	30.0-40.0	6.1-7.3	---	---	---	---
	11-26	27-35	45.0-55.0	6.1-7.3	---	---	---	---
	26-60	---	---	---	---	---	---	---

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	
1253:								
Ashdos	0-2	5-10	5.0-15.0	6.6-7.8	---	---	---	---
	2-12	10-15	5.0-20.0	6.6-7.8	---	---	---	---
	12-24	18-25	10.0-25.0	6.6-7.8	---	---	---	---
	24-60	---	---	---	---	---	---	---
Ashtre	0-2	10-15	25.0-40.0	6.1-7.3	---	---	---	---
	2-11	15-25	30.0-40.0	6.1-7.3	---	---	---	---
	11-26	27-35	45.0-55.0	6.1-7.3	---	---	---	---
	26-60	---	---	---	---	---	---	---
Hackwood	0-13	17-27	17.0-35.0	6.1-7.3	---	---	---	---
	13-32	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	32-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
1255:								
Newlands	0-6	10-25	10.0-20.0	6.1-7.3	---	---	---	---
	6-41	27-35	10.0-25.0	6.1-7.3	---	---	---	---
	41-45	---	---	---	---	---	---	---
Ninemile	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1256:								
Newlands	0-6	10-25	10.0-20.0	6.1-7.3	---	---	---	---
	6-41	27-35	10.0-25.0	6.1-7.3	---	---	---	---
	41-45	---	---	---	---	---	---	---
Menbo	0-2	10-18	10.0-20.0	6.1-7.3	---	---	---	---
	2-7	15-25	10.0-20.0	6.6-7.3	---	---	---	---
	7-34	35-50	20.0-40.0	6.6-7.3	---	---	---	---
	34-36	---	---	---	---	---	---	---
1257:								
Newlands	0-6	10-25	10.0-20.0	6.1-7.3	---	---	---	---
	6-41	27-35	10.0-25.0	6.1-7.3	---	---	---	---
	41-45	---	---	---	---	---	---	---
Hapgood	0-17	15-25	20.0-30.0	6.6-7.3	---	---	---	---
	17-40	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	40-50	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	50-54	---	---	---	---	---	---	---
1258:								
Newlands	0-6	10-25	10.0-20.0	6.1-7.3	---	---	---	---
	6-41	27-35	10.0-25.0	6.1-7.3	---	---	---	---
	41-45	---	---	---	---	---	---	---
Badgercamp	0-5	8-12	10.0-20.0	6.6-7.3	---	---	---	---
	5-15	12-18	10.0-20.0	6.6-7.3	---	---	---	---
	15-19	---	---	---	---	---	---	---
Hackwood	0-13	17-27	17.0-35.0	6.1-7.3	---	---	---	---
	13-32	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	32-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
1265:								
Fitzwater	0-10	18-25	10.0-15.0	6.6-7.3	---	---	---	---
	10-19	18-30	10.0-15.0	6.6-7.3	---	---	---	---
	19-60	18-25	10.0-15.0	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	
1265 (con.):								
Westbutte-------	0-3	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	3-22	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	22-28	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	28-32	---	---	---	---	---	---	---
1270:								
Hartig----------	0-10	7-18	7.0-17.0	6.1-7.3	---	---	---	---
	10-21	12-20	9.0-16.0	6.1-7.3	---	---	---	---
	21-42	10-18	8.0-16.0	6.6-7.3	---	---	---	---
	42-46	---	---	---	---	---	---	---
1271:								
Hartig----------	0-10	7-18	8.0-18.0	6.1-7.3	---	---	---	---
	10-21	12-20	8.0-18.0	6.1-7.3	---	---	---	---
	21-42	10-18	6.0-14.0	6.6-7.3	---	---	---	---
	42-46	---	---	---	---	---	---	---
Newlands--------	0-6	10-25	10.0-20.0	6.1-7.3	---	---	---	---
	6-41	27-35	10.0-25.0	6.1-7.3	---	---	---	---
	41-45	---	---	---	---	---	---	---
1272:								
Rock Outcrop.								
Hartig----------	0-10	7-18	7.0-17.0	6.1-7.3	---	---	---	---
	10-21	12-20	9.0-16.0	6.1-7.3	---	---	---	---
	21-42	10-18	8.0-16.0	6.6-7.3	---	---	---	---
	42-52	---	---	---	---	---	---	---
1273:								
Hartig----------	0-10	7-18	7.0-17.0	6.1-7.3	---	---	---	---
	10-21	12-20	9.0-16.0	6.1-7.3	---	---	---	---
	21-42	10-18	8.0-16.0	6.6-7.3	---	---	---	---
	42-52	---	---	---	---	---	---	---
Hapgood---------	0-17	15-25	20.0-30.0	6.6-7.3	---	---	---	---
	17-40	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	40-50	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	50-54	---	---	---	---	---	---	---
1275:								
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
1276:								
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
Reywat----------	0-6	10-18	5.0-20.0	6.6-7.8	---	---	---	---
	6-18	24-35	10.0-25.0	6.6-8.4	---	---	---	---
	18-22	---	---	---	---	---	---	---
Westbutte-------	0-3	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	3-22	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	22-28	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	28-32	---	---	---	---	---	---	---

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	
1277:								
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
Ninemile--------	0-7	10-20	15.0-25.0	6.1-8.4	---	---	---	---
	7-19	40-60	45.0-75.0	6.1-8.4	---	---	---	---
	19-23	---	---	---	---	---	---	---
1278:								
Boltz-----------	0-11	10-18	30.0-40.0	6.1-7.3	---	---	---	---
	11-34	10-18	25.0-35.0	6.1-7.3	---	---	---	---
	34-60	---	---	---	---	---	---	---
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
1279:								
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
Nutran----------	0-10	10-15	25.0-40.0	6.1-7.3	---	---	---	---
	10-17	10-18	25.0-30.0	6.1-7.3	---	---	---	---
	17-28	10-18	25.0-30.0	6.1-7.3	---	---	---	---
	28-36	10-18	20.0-30.0	6.1-7.3	---	---	---	---
	36-46	---	---	---	---	---	---	---
Westbutte-------	0-4	10-18	10.0-20.0	6.6-7.8	---	---	---	---
	4-8	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	8-27	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	27-37	---	---	---	---	---	---	---
1285:								
Zymans----------	0-8	15-25	15.0-30.0	6.6-7.8	---	---	---	---
	8-27	45-60	30.0-50.0	6.6-8.4	---	---	---	0-5
	27-48	35-60	20.0-40.0	6.6-8.4	0-5	---	---	0-12
	48-52	---	---	---	---	---	---	---
Indian Creek----	0-5	15-25	10.0-25.0	6.1-7.3	---	---	0-2	0-1
	5-18	40-55	25.0-45.0	6.1-7.8	0-1	---	0-2	0-1
	18-25	---	---	---	---	---	---	---
	25-60	5-20	5.0-20.0	6.6-9.0	0-5	---	0-4	0-1
1286:								
Zymans----------	0-8	15-25	15.0-30.0	6.6-7.8	---	---	---	---
	8-27	45-60	30.0-50.0	6.6-8.4	---	---	---	0-5
	27-48	35-60	20.0-40.0	6.6-8.4	0-5	---	---	0-12
	48-52	---	---	---	---	---	---	---
Cotant----------	0-2	20-27	20.0-25.0	6.6-7.8	---	---	---	---
	2-19	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---

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	
1290:								
Hapgood---------	0-17	15-25	20.0-30.0	6.6-7.3	---	---	---	---
	17-40	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	40-50	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	50-54	---	---	---	---	---	---	---
Badgercamp------	0-5	8-12	10.0-20.0	6.6-7.3	---	---	---	---
	5-15	12-18	10.0-20.0	6.6-7.3	---	---	---	---
	15-19	---	---	---	---	---	---	---
Hackwood--------	0-13	17-27	17.0-35.0	6.1-7.3	---	---	---	---
	13-32	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	32-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
1295:								
Devoy-----------	0-10	20-27	20.0-30.0	6.6-7.3	---	---	---	---
	10-17	30-40	25.0-35.0	6.6-7.8	---	---	---	---
	17-30	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	30-34	---	---	---	---	---	---	---
Blizzard--------	0-2	30-40	25.0-35.0	6.6-7.8	---	---	---	---
	2-5	45-60	30.0-45.0	6.6-7.8	---	---	---	---
	5-19	45-60	30.0-45.0	6.6-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1296:								
Blizzard--------	0-2	30-40	25.0-35.0	6.6-7.8	---	---	---	---
	2-5	45-60	30.0-45.0	6.6-7.8	---	---	---	---
	5-19	45-60	30.0-45.0	6.6-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1305:								
Updike----------	0-4	10-20	8.0-15.0	7.9-8.4	1-5	---	8-16	13-45
	4-36	35-50	20.0-40.0	7.9-9.0	1-5	---	8-16	13-45
	36-60	30-45	15.0-35.0	9.1-9.6	5-10	0-1	8-16	13-45
Maruma----------	0-6	8-12	5.0-10.0	7.9-9.6	1-5	---	0-4	1-5
	6-62	5-15	2.0-10.0	7.9-9.6	1-10	---	4-16	13-45
1306:								
Updike----------	0-4	10-20	8.0-15.0	7.9-8.4	1-5	---	8-16	13-45
	4-36	35-50	20.0-40.0	7.9-9.0	1-5	---	8-16	13-45
	36-60	30-45	15.0-35.0	9.1-9.6	5-10	0-1	8-16	13-45
Longdis---------	0-5	27-35	30.0-40.0	7.4-8.4	---	---	0-2	5-13
	5-26	40-50	35.0-45.0	7.9-9.0	0-2	---	2-4	13-46
	26-45	35-45	30.0-40.0	8.5-9.0	1-5	0-2	2-4	13-46
	45-61	35-45	30.0-40.0	8.5-9.0	1-3	0-1	2-8	13-46
1310:								
Longdis---------	0-5	27-35	30.0-40.0	7.4-8.4	---	---	0-2	5-12
	5-26	40-50	35.0-45.0	7.9-9.0	0-2	---	2-4	13-45
	26-45	35-45	30.0-40.0	8.5-9.0	1-5	0-2	2-4	13-45
	45-61	35-45	30.0-40.0	8.5-9.0	1-3	0-1	2-8	13-45
Updike----------	0-4	10-20	8.0-15.0	7.9-8.4	1-5	---	8-16	13-45
	4-36	35-50	20.0-40.0	7.9-9.0	1-5	---	8-16	13-45
	36-60	30-45	15.0-35.0	9.1-9.6	5-10	0-1	8-16	13-45

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	
1311:								
Longdis---------	0-5	10-20	15.0-25.0	7.4-8.4	---	---	0-2	5-13
	5-26	40-50	35.0-45.0	7.9-9.0	0-2	---	2-4	13-46
	26-45	35-45	30.0-40.0	8.5-9.0	1-5	0-2	2-4	13-46
	45-61	35-45	30.0-40.0	8.5-9.0	1-3	0-1	2-8	13-46
Macyflet--------	0-9	15-27	20.0-30.0	6.1-7.8	---	---	0-2	---
	9-47	60-70	60.0-70.0	6.1-7.8	---	---	0-2	---
	47-60	0-10	5.0-20.0	7.4-9.0	---	---	0-4	0-3
Aeric Epiaquents	0-4	10-25	10.0-20.0	7.9-9.6	0-1	---	0-4	1-5
	4-42	30-60	30.0-50.0	7.9-9.6	0-3	0-1	0-4	1-5
	42-60	10-40	15.0-30.0	7.9-9.6	0-3	0-1	0-4	1-5
1312:								
Longdis---------	0-5	27-35	30.0-40.0	7.4-8.4	---	---	0-2	5-13
	5-26	40-50	35.0-45.0	7.9-9.0	0-2	---	2-4	13-46
	26-45	35-45	30.0-40.0	8.5-9.0	1-5	0-2	2-4	13-46
	45-61	35-45	30.0-40.0	8.5-9.0	1-3	0-1	2-8	13-46
Dugway----------	0-5	5-15	5.0-15.0	7.4-8.4	---	---	0-4	0-5
	5-18	35-50	20.0-40.0	7.9-9.0	1-3	---	0-4	13-45
	18-35	20-30	15.0-30.0	7.9-9.0	1-5	---	2-4	5-12
	35-52	---	---	---	---	---	---	---
	52-61	25-35	10.0-25.0	8.5-9.0	0-3	---	0-8	13-45
1313:								
Longdis---------	0-5	10-20	15.0-25.0	7.4-8.4	---	---	0-2	5-13
	5-26	40-50	35.0-45.0	7.9-9.0	0-2	---	2-4	13-46
	26-45	35-45	30.0-40.0	8.5-9.0	1-5	0-2	2-4	13-46
	45-61	35-45	30.0-40.0	8.5-9.0	1-3	0-1	2-8	13-46
1320:								
Dugway----------	0-5	5-15	5.0-15.0	7.4-8.4	---	---	0-4	0-5
	5-18	35-50	20.0-40.0	7.9-9.0	1-3	---	0-4	13-45
	18-35	20-30	15.0-30.0	7.9-9.0	1-5	---	2-4	5-12
	35-52	---	---	---	---	---	---	---
	52-61	25-35	10.0-25.0	8.5-9.0	0-3	---	0-8	13-45
1321:								
Dugway----------	0-5	5-15	5.0-15.0	7.4-8.4	---	---	0-4	0-5
	5-18	35-50	20.0-40.0	7.9-9.0	1-3	---	0-4	13-45
	18-35	20-30	15.0-30.0	7.9-9.0	1-5	---	2-4	5-12
	35-52	---	---	---	---	---	---	---
	52-61	25-35	10.0-25.0	8.5-9.0	0-3	---	0-8	13-45
Updike----------	0-4	10-20	8.0-15.0	7.9-8.4	1-5	---	8-16	13-45
	4-36	35-50	20.0-40.0	7.9-9.0	1-5	---	8-16	13-45
	36-60	30-45	15.0-35.0	9.1-9.6	5-10	0-1	8-16	13-45
1325:								
Reywat----------	0-6	8-18	5.0-20.0	6.6-7.8	---	---	---	---
	6-18	24-35	10.0-25.0	6.6-8.4	---	---	---	---
	18-22	---	---	---	---	---	---	---
Devada----------	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	32.0-48.0	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	
1325 (con.):								
Hart Camp-------	0-3	10-17	10.0-25.0	6.1-7.3	---	---	---	---
	3-16	20-35	15.0-25.0	6.1-7.3	---	---	---	---
	16-20	---	---	---	---	---	---	---
1326:								
Reywat----------	0-6	8-18	5.0-20.0	6.6-7.8	---	---	---	---
	6-18	24-35	10.0-25.0	6.6-8.4	---	---	---	---
	18-22	---	---	---	---	---	---	---
1327:								
Reywat----------	0-6	10-18	5.0-20.0	6.6-7.8	---	---	---	---
	6-18	24-35	10.0-25.0	6.6-8.4	---	---	---	---
	18-22	---	---	---	---	---	---	---
Westbutte-------	0-3	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	3-22	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	22-28	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	28-32	---	---	---	---	---	---	---
Hapgood---------	0-17	15-25	20.0-30.0	6.6-7.3	---	---	---	---
	17-40	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	40-50	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	50-54	---	---	---	---	---	---	---
1328:								
Reywat----------	0-6	10-18	5.0-20.0	6.6-7.8	---	---	---	---
	6-18	24-35	10.0-25.0	6.6-8.4	---	---	---	---
	18-22	---	---	---	---	---	---	---
Fernpoint-------	0-7	10-18	9.0-19.0	6.6-7.3	---	---	---	---
	7-17	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	17-23	10-18	8.0-17.0	7.4-8.4	---	---	---	---
	23-60	0-5	0.0-3.0	7.4-8.4	0-1	---	0-2	---
1329:								
Reywat----------	0-6	8-18	5.0-20.0	6.6-7.8	---	---	---	---
	6-18	24-35	10.0-25.0	6.6-8.4	---	---	---	---
	18-22	---	---	---	---	---	---	---
Devada----------	0-6	15-27	20.0-30.0	6.1-7.8	---	---	---	---
	6-17	40-60	30.0-50.0	6.1-7.8	---	---	---	---
	17-21	---	---	---	---	---	---	---
1335:								
Rock Outcrop.								
Westbutte-------	0-3	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	3-22	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	22-28	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	28-32	---	---	---	---	---	---	---
1336:								
Westbutte-------	0-4	10-18	10.0-20.0	6.6-7.8	---	---	---	---
	4-8	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	8-27	18-30	10.0-15.0	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	
1336 (con.):								
Ashtre----------	0-2	10-15	25.0-40.0	6.1-7.3	---	---	---	---
	2-11	15-25	30.0-40.0	6.1-7.3	---	---	---	---
	11-26	27-35	45.0-55.0	6.1-7.3	---	---	---	---
	26-60	---	---	---	---	---	---	---
Tusune----------	0-2	10-15	25.0-40.0	6.1-7.3	---	---	---	---
	2-10	15-20	30.0-40.0	6.1-7.3	---	---	---	---
	10-38	25-30	35.0-45.0	6.1-7.3	---	---	---	---
	38-46	---	---	---	---	---	---	---
1345:								
Layview----------	0-4	14-20	10.0-20.0	6.6-7.8	---	---	---	---
	4-14	22-35	15.0-25.0	6.6-7.8	---	---	---	---
	14-18	---	---	---	---	---	---	---
Hapgood----------	0-26	15-25	20.0-30.0	6.1-7.3	---	---	---	---
	26-36	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	36-50	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	50-54	---	---	---	---	---	---	---
1346:								
Layview----------	0-4	14-20	10.0-20.0	6.6-7.8	---	---	---	---
	4-14	22-35	15.0-25.0	6.6-7.8	---	---	---	---
	14-18	---	---	---	---	---	---	---
Westbutte--------	0-3	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	3-22	18-27	10.0-20.0	6.6-7.8	---	---	---	---
	22-28	18-30	10.0-15.0	6.6-7.8	---	---	---	---
	28-32	---	---	---	---	---	---	---
Hapgood----------	0-17	15-25	20.0-30.0	6.6-7.3	---	---	---	---
	17-40	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	40-50	15-25	15.0-25.0	6.6-7.3	---	---	---	---
	50-54	---	---	---	---	---	---	---
1355:								
Badgercamp------	0-5	8-12	10.0-20.0	6.6-7.3	---	---	---	---
	5-15	12-18	10.0-20.0	6.6-7.3	---	---	---	---
	15-19	---	---	---	---	---	---	---
Hackwood---------	0-13	17-27	17.0-35.0	6.1-7.3	---	---	---	---
	13-32	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	32-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
Easte------------	0-10	10-18	25.0-45.0	5.6-6.5	---	---	---	---
	10-42	10-18	30.0-40.0	5.1-6.5	---	---	---	---
	42-46	---	---	---	---	---	---	---
1356:								
Badgercamp------	0-5	8-12	10.0-20.0	6.6-7.3	---	---	---	---
	5-15	12-18	10.0-20.0	6.6-7.3	---	---	---	---
	15-19	---	---	---	---	---	---	---
Hackwood---------	0-13	17-27	17.0-35.0	6.1-7.3	---	---	---	---
	13-32	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	32-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
Easte------------	0-10	10-18	25.0-45.0	5.6-6.5	---	---	---	---
	10-42	10-18	30.0-40.0	5.1-6.5	---	---	---	---
	42-46	---	---	---	---	---	---	---

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	
1358:								
Badgercamp------	0-5	8-12	10.0-20.0	6.6-7.3	---	---	---	---
	5-15	12-18	10.0-20.0	6.6-7.3	---	---	---	---
	15-19	---	---	---	---	---	---	---
Hackwood--------	0-13	17-27	17.0-35.0	6.1-7.3	---	---	---	---
	13-32	15-27	12.0-30.0	6.1-7.3	---	---	---	---
	32-60	25-35	20.0-35.0	6.1-7.3	---	---	---	---
1360:								
Welch-----------	0-5	27-35	30.0-35.0	6.1-7.3	---	---	---	---
	5-60	27-35	25.0-35.0	6.1-7.8	---	---	---	---
1361:								
Wetvit----------	0-16	15-20	35.0-45.0	6.1-7.8	---	---	---	---
	16-44	18-27	35.0-45.0	6.1-7.8	---	---	---	---
	44-60	15-25	35.0-45.0	6.6-7.8	---	---	---	---
Wetvit----------	0-16	15-20	35.0-45.0	6.1-7.8	0-1	---	---	---
	16-44	18-27	35.0-45.0	6.1-7.8	---	---	---	---
	44-60	15-25	35.0-45.0	6.6-7.8	---	---	---	---
1365:								
Rubble Land-----	0-60	---	---	---	---	---	---	---
Dosie-----------	0-6	15-25	10.0-25.0	6.1-7.3	---	---	---	---
	6-42	35-50	20.0-45.0	6.6-7.3	---	---	---	---
	42-46	---	---	---	---	---	---	---
1366:								
Dosie-----------	0-6	15-25	10.0-25.0	6.1-7.3	---	---	---	---
	6-42	35-50	20.0-45.0	6.6-7.3	---	---	---	---
	42-60	---	---	---	---	---	---	---
1367:								
Dosie-----------	0-6	15-25	10.0-25.0	6.1-7.3	---	---	---	---
	6-42	35-50	20.0-45.0	6.6-7.3	---	---	---	---
	42-46	---	---	---	---	---	---	---
Fiddler---------	0-7	18-27	25.0-30.0	6.1-7.3	---	---	---	---
	7-28	35-50	30.0-40.0	6.1-7.3	---	---	---	---
	28-32	---	---	---	---	---	---	---
Rubble Land-----	0-60	---	---	---	---	---	---	---
1375:								
Cotant----------	0-2	20-27	20.0-25.0	6.6-7.8	---	---	---	---
	2-19	40-60	35.0-50.0	6.6-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
Madeline--------	0-2	20-27	16.0-22.0	6.1-7.8	---	---	---	---
	2-6	25-40	17.0-28.0	6.1-7.8	---	---	---	---
	6-19	40-60	24.0-40.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
1380:								
Weimer----------	0-4	50-75	50.0-75.0	6.6-7.3	---	---	---	---
	4-48	60-75	60.0-75.0	7.4-8.4	0-1	---	---	---
	48-60	50-75	50.0-75.0	7.9-9.0	1-3	---	0-4	0-1

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	
1380 (con.):								
Boulder Lake----	0-2	40-60	35.0-65.0	6.1-7.8	---	---	---	---
	2-60	40-60	30.0-60.0	6.6-8.4	---	---	0-2	---
1385:								
Fernpoint-------	0-7	10-18	9.0-19.0	6.6-7.3	---	---	---	---
	7-17	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	17-23	10-18	8.0-17.0	7.4-8.4	---	---	---	---
	23-60	0-5	0.0-3.0	7.4-8.4	0-1	---	0-2	---
1395:								
Orr-------------	0-9	12-18	10.0-20.0	6.1-7.3	---	---	---	---
	9-44	18-25	10.0-25.0	6.1-7.8	---	---	---	---
	44-60	5-22	5.0-15.0	6.1-7.8	---	---	---	---
Fernpoint-------	0-7	10-18	9.0-19.0	6.6-7.3	---	---	---	---
	7-17	18-27	15.0-22.0	6.6-7.8	---	---	---	---
	17-23	10-18	8.0-17.0	7.4-8.4	---	---	---	---
	23-60	0-5	0.0-3.0	7.4-8.4	0-1	---	0-2	---
1400:								
Bombadil--------	0-3	10-15	8.0-13.0	6.6-7.8	---	---	---	---
	3-6	18-27	13.0-20.0	6.6-7.8	---	---	---	---
	6-14	25-35	16.0-23.0	6.6-7.8	0-1	---	---	---
	14-18	---	---	---	---	---	---	---
Ceejay----------	0-6	15-25	11.0-19.0	6.6-8.4	---	---	0-2	0-1
	6-15	35-45	21.0-28.0	6.6-8.4	0-1	---	0-4	0-5
	15-19	---	---	---	---	---	---	---
1410:								
Fulstone--------	0-4	5-15	10.0-15.0	6.1-7.3	---	---	---	---
	4-16	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	16-26	---	---	---	---	---	---	---
	26-60	5-15	5.0-10.0	7.4-8.4	1-5	---	0-2	5-12
Saraph----------	0-4	5-15	10.0-30.0	6.6-7.8	---	---	---	---
	4-9	15-25	20.0-35.0	6.6-7.8	---	---	---	---
	9-16	20-35	30.0-50.0	6.6-8.4	0-1	---	0-2	---
	16-30	---	---	---	---	---	---	---
Tuffo-----------	0-1	5-15	10.0-30.0	6.6-7.8	---	---	---	---
	1-8	5-15	5.0-20.0	6.6-7.8	---	---	---	---
	8-30	---	---	---	---	---	---	---
1412:								
Fulstone--------	0-4	5-15	10.0-15.0	6.1-7.3	---	---	---	---
	4-16	45-60	35.0-60.0	6.6-8.4	---	---	0-2	---
	16-26	---	---	---	---	---	---	---
	26-60	5-15	5.0-10.0	7.4-8.4	1-5	---	0-2	5-12
Nellspring------	0-3	12-20	25.0-35.0	6.6-7.3	---	---	---	---
	3-18	50-60	40.0-50.0	6.6-7.8	---	---	---	---
	18-35	35-50	35.0-45.0	7.4-8.4	1-3	---	0-2	---
	35-60	---	---	---	---	---	---	---
Buffaran--------	0-2	20-27	20.0-30.0	6.6-7.8	---	---	---	---
	2-16	35-50	30.0-40.0	6.6-8.4	---	---	0-4	0-5
	16-27	---	---	---	---	---	---	---
	27-60	---	---	---	---	---	---	---

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	
1420:								
Hangrock	0-4	12-20	25.0-35.0	6.6-7.3	---	---	---	---
	4-17	25-35	35.0-45.0	6.6-7.3	---	---	---	---
	17-60	---	---	---	---	---	---	---
1430:								
Grassycan	0-4	12-18	25.0-35.0	6.6-7.3	---	---	---	---
	4-12	35-50	35.0-45.0	6.6-7.3	---	---	---	---
	12-13	---	---	---	---	---	---	---
	13-16	---	---	---	---	---	---	---
Grassycan	0-4	12-18	25.0-35.0	6.6-7.3	---	---	---	---
	4-12	35-50	35.0-45.0	6.6-7.3	---	---	---	---
	12-13	---	---	---	---	---	---	---
	13-16	---	---	---	---	---	---	---
1431:								
Exmod	0-6	10-18	25.0-35.0	6.6-7.8	---	---	---	---
	6-15	40-50	35.0-45.0	6.6-7.8	---	---	---	---
	15-60	---	---	---	---	---	---	---
Powlow	0-6	10-18	25.0-35.0	6.6-7.8	---	---	---	---
	6-15	35-50	35.0-45.0	6.6-7.8	---	---	---	---
	15-60	---	---	---	---	---	---	---
1440:								
Tusune	0-2	10-15	25.0-40.0	6.1-7.3	---	---	---	---
	2-10	15-20	30.0-40.0	6.1-7.3	---	---	---	---
	10-38	25-30	35.0-45.0	6.1-7.3	---	---	---	---
	38-46	---	---	---	---	---	---	---
Hartig	0-10	7-18	7.0-17.0	6.1-7.3	---	---	---	---
	10-21	12-20	9.0-16.0	6.1-7.3	---	---	---	---
	21-42	10-18	8.0-16.0	6.6-7.3	---	---	---	---
	42-52	---	---	---	---	---	---	---
1450:								
Emagert	0-14	15-25	40.0-50.0	6.1-7.8	---	---	---	---
	14-38	18-27	35.0-45.0	6.1-7.8	---	---	---	---
	38-60	15-25	35.0-45.0	6.1-7.8	---	---	---	---
Wetvit	0-16	15-20	35.0-45.0	6.1-7.8	---	---	---	---
	16-44	18-27	35.0-45.0	6.1-7.8	---	---	---	---
	44-60	15-25	35.0-45.0	6.6-7.8	---	---	---	---
1460:								
Weerweed	0-16	15-25	40.0-50.0	6.1-7.8	---	---	---	---
	16-60	18-27	35.0-45.0	6.1-7.8	---	---	---	---
1470:								
Ninemile	0-7	15-25	20.0-28.0	6.1-7.3	---	---	---	---
	7-19	40-60	38.0-54.0	6.1-7.8	---	---	---	---
	19-23	---	---	---	---	---	---	---
9901:								
Playas	0-6	40-70	35.0-65.0	8.5-9.6	1-5	1-5	16-32	46-90
	6-60	35-70	30.0-60.0	8.5-9.6	1-10	1-10	16-32	46-90
9902:								
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	
9902 (con.): Rubble Land-----	0-60	---	---	---	---	---	---	---

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
1010:									
Macyflet	D	None	---	---	5.0-6.0	Apparent	Dec-May	---	---
Boulder Lake	D	None	---	---	-1.0-1.5	Perched	Dec-Jun	Brief	1.0
1011:									
Macyflet	D	None	---	---	5.0-6.0	Apparent	Dec-May	---	---
1012:									
Macyflet	D	None	---	---	5.0-6.0	Apparent	Dec-May	---	---
Indian Creek	D	None	---	---	>6.0	---	---	---	---
1015:									
Powlow	D	None	---	---	>6.0	---	---	---	---
1020:									
Bearbutte	B	None	---	---	>6.0	---	---	---	---
Welch	D	Rare	---	---	0.0-1.5	Apparent	Nov-Jun	---	---
1025:									
Mesman	C	None	---	---	>6.0	---	---	---	---
1030:									
Zorravista	A	None	---	---	>6.0	---	---	---	---
1035:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Madeline	D	None	---	---	>6.0	---	---	---	---
Crocan	D	None	---	---	>6.0	---	---	---	---
1036:									
Tinpan	D	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1040:									
Langston	B	None	---	---	>6.0	---	---	---	---
1041:									
Langston	B	None	---	---	>6.0	---	---	---	---
Old Camp	D	None	---	---	>6.0	---	---	---	---
Paypoint	B	None	---	---	>6.0	---	---	---	---
1045:									
Paypoint	B	None	---	---	>6.0	---	---	---	---
Langston	B	None	---	---	>6.0	---	---	---	---
1050:									
Skullwak	D	Frequent	Brief	Jan-Dec	1.5-3.0	Artesian	Jan-Dec	---	---
1055:									
Devada	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
1055 (con.):									
Hapgood---------	B	None	---	---	>6.0	---	---	---	---
Hart Camp-------	D	None	---	---	>6.0	---	---	---	---
1060:									
Bombadil--------	D	None	---	---	>6.0	---	---	---	---
Chime-----------	C	None	---	---	>6.0	---	---	---	---
1061:									
Old Camp--------	D	None	---	---	>6.0	---	---	---	---
1062:									
Old Camp--------	D	None	---	---	>6.0	---	---	---	---
Corral----------	C	None	---	---	>6.0	---	---	---	---
1063:									
Old Camp--------	D	None	---	---	>6.0	---	---	---	---
1065:									
Old Camp--------	D	None	---	---	>6.0	---	---	---	---
Reywat----------	D	None	---	---	>6.0	---	---	---	---
Rubble Land-----	A	None	---	---	>6.0	---	---	---	---
1070:									
Oreneva---------	C	None	---	---	>6.0	---	---	---	---
1075:									
Surprise--------	B	None	---	---	>6.0	---	---	---	---
1080:									
Bucklake--------	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
Corral----------	C	None	---	---	>6.0	---	---	---	---
1081:									
Bucklake--------	C	None	---	---	>6.0	---	---	---	---
Fiddler---------	C	None	---	---	>6.0	---	---	---	---
1083:									
Bucklake--------	C	None	---	---	>6.0	---	---	---	---
Rubble Land-----	A	None	---	---	>6.0	---	---	---	---
1090:									
Jaybee----------	D	None	---	---	>6.0	---	---	---	---
Verdico---------	D	None	---	---	>6.0	---	---	---	---
1095:									
Corral----------	C	None	---	---	>6.0	---	---	---	---
Mahala----------	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
1105:									
Freznik	D	None	---	---	>6.0	---	---	---	---
1110:									
Indian Creek	D	None	---	---	>6.0	---	---	---	---
Buffaran	D	None	---	---	>6.0	---	---	---	---
1115:									
Lofftus	C	None	---	---	1.0-3.0	Perched	Mar-Jun	---	---
Mesman	C	None	---	---	>6.0	---	---	---	---
1120:									
McConnel	B	Rare	---	---	>6.0	---	---	---	---
1121:									
McConnel	B	None	---	---	>6.0	---	---	---	---
1125:									
Halvert	D	None	---	---	>6.0	---	---	---	---
Jaybee	D	None	---	---	>6.0	---	---	---	---
Tunnison	D	None	---	---	>6.0	---	---	---	---
1130:									
Soughe	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
1131:									
Soughe	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
1135:									
Mcwatt	B	None	---	---	>6.0	---	---	---	---
Old Camp	D	None	---	---	>6.0	---	---	---	---
1140:									
Valmy	B	Occasional	---	Feb-Jul	>6.0	---	---	---	---
1141:									
Valmy	B	None	---	---	>6.0	---	---	---	---
Langston	B	None	---	---	>6.0	---	---	---	---
Paypoint	B	None	---	---	>6.0	---	---	---	---
1145:									
Wendane	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
1150:									
Saraph	D	None	---	---	>6.0	---	---	---	---
Hangrock	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
1151:									
Saraph----------	D	None	---	---	>6.0	---	---	---	---
Tuffo-----------	D	None	---	---	>6.0	---	---	---	---
Yellowhills-----	B	Rare	---	---	>6.0	---	---	---	---
1155:									
Madeline--------	D	None	---	---	>6.0	---	---	---	---
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
1160:									
Wylo------------	D	None	---	---	>6.0	---	---	---	---
Bucklake--------	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop----		None	---	---	>6.0	---	---	---	---
1162:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Nitpac----------	D	None	---	---	>6.0	---	---	---	---
1163:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Deseed----------	C	None	---	---	>6.0	---	---	---	---
1164:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Ashcamp---------	C	None	---	---	>6.0	---	---	---	---
1165:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Nitpac----------	D	None	---	---	>6.0	---	---	---	---
Bidrim----------	D	None	---	---	>6.0	---	---	---	---
1166:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Bieber----------	D	None	---	---	>6.0	---	---	---	---
1167:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Reywat----------	D	None	---	---	>6.0	---	---	---	---
1168:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
1170:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Bucklake--------	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
1171:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Indian Creek----	D	None	---	---	>6.0	---	---	---	---
1172:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Madeline--------	D	None	---	---	>6.0	---	---	---	---
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
1173:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Nitpac----------	D	None	---	---	>6.0	---	---	---	---
Uhaldi----------	B	None	---	---	>6.0	---	---	---	---
1174:									
Devada----------	D	None	---	---	>6.0	---	---	---	---
Uhaldi----------	B	None	---	---	>6.0	---	---	---	---
1175:									
Ferver----------	D	None	---	---	>6.0	---	---	---	---
Tunnison--------	D	None	---	---	>6.0	---	---	---	---
1180:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Karlo-----------	D	None	---	---	>6.0	---	---	---	---
1181:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Madeline--------	D	None	---	---	>6.0	---	---	---	---
Tinpan----------	D	None	---	---	>6.0	---	---	---	---
1182:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Westbutte-------	C	None	---	---	>6.0	---	---	---	---
1183:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Westbutte-------	C	None	---	---	>6.0	---	---	---	---
1184:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Tinpan----------	D	None	---	---	>6.0	---	---	---	---
1185:									
Ninemile--------	D	None	---	---	>6.0	---	---	---	---
Hart 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
1186:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Tinpan	D	None	---	---	>6.0	---	---	---	---
Crocan	D	None	---	---	>6.0	---	---	---	---
1187:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Tinpan	D	None	---	---	>6.0	---	---	---	---
Hart Camp	D	None	---	---	>6.0	---	---	---	---
1188:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Newlands	B	None	---	---	>6.0	---	---	---	---
Hart Camp	D	None	---	---	>6.0	---	---	---	---
1189:									
Ninemile	D	None	---	---	>6.0	---	---	---	---
Badgercamp	D	None	---	---	>6.0	---	---	---	---
Crocan	D	None	---	---	>6.0	---	---	---	---
1190:									
Ferver	D	None	---	---	>6.0	---	---	---	---
Nitpac	D	None	---	---	>6.0	---	---	---	---
1195:									
Bitner	C	None	---	---	>6.0	---	---	---	---
Ashcamp	C	None	---	---	>6.0	---	---	---	---
1205:									
Davey	B	None	---	---	>6.0	---	---	---	---
1206:									
Davey	B	None	---	---	>6.0	---	---	---	---
Corral	C	None	---	---	>6.0	---	---	---	---
1210:									
Maruma	B	None	---	---	>6.0	---	---	---	---
Bighat	D	None	---	---	>6.0	---	---	---	---
1215:									
Raglan	B	None	---	---	>6.0	---	---	---	---
Isolde	A	None	---	---	>6.0	---	---	---	---
1220:									
Schamp	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
1221:									
Schamp	C	None	---	---	>6.0	---	---	---	---
1223:									
Schamp	C	None	---	---	>6.0	---	---	---	---
1230:									
Raglan	B	None	---	---	>6.0	---	---	---	---
Mazuma	B	None	---	---	>6.0	---	---	---	---
1235:									
Chime	C	None	---	---	>6.0	---	---	---	---
1240:									
Toney	D	None	---	---	>6.0	---	---	---	---
Millerlux	D	None	---	---	>6.0	---	---	---	---
Hart Camp	D	None	---	---	>6.0	---	---	---	---
1245:									
Saraph	D	None	---	---	>6.0	---	---	---	---
Uhaldi	B	None	---	---	>6.0	---	---	---	---
Frentera	C	None	---	---	>6.0	---	---	---	---
1250:									
Ashone	C	None	---	---	>6.0	---	---	---	---
Ashdos	C	None	---	---	>6.0	---	---	---	---
Bearbutte	B	None	---	---	>6.0	---	---	---	---
1251:									
Ashone	C	None	---	---	>6.0	---	---	---	---
Ashdos	C	None	---	---	>6.0	---	---	---	---
Ashtre	C	None	---	---	>6.0	---	---	---	---
1253:									
Ashdos	C	None	---	---	>6.0	---	---	---	---
Ashtre	C	None	---	---	>6.0	---	---	---	---
Hackwood	B	None	---	---	>6.0	---	---	---	---
1255:									
Newlands	B	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1256:									
Newlands	B	None	---	---	>6.0	---	---	---	---
Menbo	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
1257:									
Newlands	B	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
1258:									
Newlands	B	None	---	---	>6.0	---	---	---	---
Badgercamp	D	None	---	---	>6.0	---	---	---	---
Hackwood	B	None	---	---	>6.0	---	---	---	---
1265:									
Fitrwater	B	None	---	---	>6.0	---	---	---	---
Westbutte	C	None	---	---	>6.0	---	---	---	---
1270:									
Hartig	B	None	---	---	>6.0	---	---	---	---
1271:									
Hartig	B	None	---	---	>6.0	---	---	---	---
Newlands	B	None	---	---	>6.0	---	---	---	---
1272:									
Hartig	B	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
1273:									
Hartig	B	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
1275:									
Hart Camp	D	None	---	---	>6.0	---	---	---	---
1276:									
Hart Camp	D	None	---	---	>6.0	---	---	---	---
Reywat	D	None	---	---	>6.0	---	---	---	---
Westbutte	C	None	---	---	>6.0	---	---	---	---
1277:									
Hart Camp	D	None	---	---	>6.0	---	---	---	---
Ninemile	D	None	---	---	>6.0	---	---	---	---
1278:									
Soltz	C	None	---	---	>6.0	---	---	---	---
Hart Camp	D	None	---	---	>6.0	---	---	---	---
1279:									
Hart Camp	D	None	---	---	>6.0	---	---	---	---
Nutran	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
1279 (con.):									
Westbutte	C	None	---	---	>6.0	---	---	---	---
1285:									
Zymans	C	None	---	---	>6.0	---	---	---	---
Indian Creek	D	None	---	---	>6.0	---	---	---	---
1286:									
Zymans	C	None	---	---	>6.0	---	---	---	---
Cotant	D	None	---	---	>6.0	---	---	---	---
Hart Camp	D	None	---	---	>6.0	---	---	---	---
1290:									
Hapgood	B	None	---	---	>6.0	---	---	---	---
Badgercamp	D	None	---	---	>6.0	---	---	---	---
Hackwood	B	None	---	---	>6.0	---	---	---	---
1295:									
Devoy	C	None	---	---	>6.0	---	---	---	---
Blizzard	D	None	---	---	>6.0	---	---	---	---
1296:									
Blizzard	D	None	---	---	>6.0	---	---	---	---
1305:									
Updike	D	Rare	---	---	5.0-6.0	Apparent	Mar-May	---	---
Maruma	B	None	---	---	>6.0	---	---	---	---
1306:									
Updike	D	Rare	---	---	5.0-6.0	Apparent	Mar-May	---	---
Longdis	C	None	---	---	>6.0	---	---	---	---
1310:									
Longdis	C	None	---	---	>6.0	---	---	---	---
Updike	D	Occasional	---	Dec-Apr	5.0-6.0	Apparent	Mar-May	---	---
1311:									
Longdis	C	Occasional	---	Jan-Mar	>6.0	---	---	---	---
Macyflet	D	None	---	---	5.0-6.0	Apparent	Dec-May	---	---
Aeric Epiaquents	D	None	---	---	-1.0-0.5	Perched	Jan-Dec	---	1.0
1312:									
Longdis	C	None	---	---	>6.0	---	---	---	---
Dugway	C	None	---	---	5.0-6.0	Apparent	Jan-Sep	---	---
1313:									
Longdis	C	Occasional	---	Jan-Mar	>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
1320:									
Dugway	C	None	---	---	5.0-6.0	Apparent	Jan-Sep	---	---
1321:									
Dugway	C	None	---	---	5.0-6.0	Apparent	Jan-Sep	---	---
Updike	D	Occasional	---	Dec-Apr	5.0-6.0	Apparent	Mar-May	---	---
1325:									
Reywat	D	None	---	---	>6.0	---	---	---	---
Devada	D	None	---	---	>6.0	---	---	---	---
Hart Camp	D	None	---	---	>6.0	---	---	---	---
1326:									
Reywat	D	None	---	---	>6.0	---	---	---	---
1327:									
Reywat	D	None	---	---	>6.0	---	---	---	---
Westbutte	C	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
1328:									
Reywat	D	None	---	---	>6.0	---	---	---	---
Fernpoint	B	None	---	---	>6.0	---	---	---	---
1329:									
Reywat	D	None	---	---	>6.0	---	---	---	---
Devada	D	None	---	---	>6.0	---	---	---	---
1335:									
Westbutte	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop		None	---	---	>6.0	---	---	---	---
1336:									
Westbutte	C	None	---	---	>6.0	---	---	---	---
Ashtre	C	None	---	---	>6.0	---	---	---	---
Tusune	C	None	---	---	>6.0	---	---	---	---
1345:									
Layview	D	None	---	---	>6.0	---	---	---	---
Hapgood	B	None	---	---	>6.0	---	---	---	---
1346:									
Layview	D	None	---	---	>6.0	---	---	---	---
Westbutte	C	None	---	---	>6.0	---	---	---	---
Hapgood	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
1355:									
Badgercamp------	D	None	---	---	>6.0	---	---	---	---
Hackwood--------	B	None	---	---	>6.0	---	---	---	---
Kaste-----------	B	None	---	---	>6.0	---	---	---	---
1356:									
Badgercamp------	D	None	---	---	>6.0	---	---	---	---
Hackwood--------	B	None	---	---	>6.0	---	---	---	---
Kaste-----------	B	None	---	---	>6.0	---	---	---	---
1358:									
Badgercamp------	D	None	---	---	>6.0	---	---	---	---
Hackwood--------	B	None	---	---	>6.0	---	---	---	---
1360:									
Welch-----------	D	Occasional	Brief	Mar-Jun	0.0-1.5	Apparent	Nov-Jun	---	---
1361:									
Wetvit----------	D	Frequent	Long	Jan-May	0.0-1.0	Apparent	Jan-May	---	---
Wetvit----------	D	Occasional	Brief	Jan-May	1.0-1.5	Apparent	Jan-May	---	---
1365:									
Rubble Land-----	A	None	---	---	>6.0	---	---	---	---
Dosie-----------	C	None	---	---	>6.0	---	---	---	---
1366:									
Dosie-----------	C	None	---	---	>6.0	---	---	---	---
1367:									
Dosie-----------	C	None	---	---	>6.0	---	---	---	---
Fiddler---------	C	None	---	---	>6.0	---	---	---	---
Rubble Land-----	A	None	---	---	>6.0	---	---	---	---
1375:									
Cotant----------	D	None	---	---	>6.0	---	---	---	---
Madeline--------	D	None	---	---	>6.0	---	---	---	---
1380:									
Weimer----------	D	None	---	---	-1.0-0.5	Perched	Jan-Jun	Long	1.0
Boulder Lake----	D	None	---	---	-1.0-1.5	Perched	Dec-Jun	Long	1.0
1385:									
Fernpoint-------	B	None	---	---	>6.0	---	---	---	---
1395:									
Orr-------------	B	None	---	---	>6.0	---	---	---	---
Fernpoint-------	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
1400:									
Bombadil	D	None	---	---	>6.0	---	---	---	---
Ceejay	D	None	---	---	>6.0	---	---	---	---
1410:									
Fulstone	D	None	---	---	>6.0	---	---	---	---
Saraph	D	None	---	---	>6.0	---	---	---	---
Tuffo	D	None	---	---	>6.0	---	---	---	---
1412:									
Fulstone	D	None	---	---	>6.0	---	---	---	---
Nellspring	D	None	---	---	>6.0	---	---	---	---
Buffaran	D	None	---	---	>6.0	---	---	---	---
1420:									
Hangrock	D	None	---	---	>6.0	---	---	---	---
1430:									
Grassycan	D	None	---	---	>6.0	---	---	---	---
Grassycan	D	None	---	---	>6.0	---	---	---	---
1431:									
Esmod	D	None	---	---	>6.0	---	---	---	---
Powlow	D	None	---	---	>6.0	---	---	---	---
1440:									
Tusune	C	None	---	---	>6.0	---	---	---	---
Hartig	B	None	---	---	>6.0	---	---	---	---
1450:									
Emagert	B	Rare	---	---	5.0-6.0	Apparent	Jan-May	---	---
Wetvit	D	Frequent	Long	Jan-May	0.0-1.0	Apparent	Jan-May	---	---
1460:									
Weerweed	B	Rare	---	---	5.0-6.0	Apparent	Jan-May	---	---
1470:									
Ninamile	D	None	---	---	>6.0	---	---	---	---
9901:									
Playas	D	None	---	---	-1.0-1.0	Apparent	Feb-Sep	Long	1.0
9902:									
Rock Outcrop		None	---	---	>6.0	---	---	---	---
Rubble Land	A	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			
1010:									
Macyflet	>60	---	---	---	---	---	Low	Moderate	Low
Boulder Lake	>60	---	---	---	---	---	Moderate	High	Low
1011:									
Macyflet	>60	---	---	---	---	---	Low	Moderate	Low
1012:									
Macyflet	>60	---	---	---	---	---	Low	Moderate	Low
Indian Creek	>60	---	14-20	Thick	---	---	Low	High	Low
1015:									
Powlow	>60	---	14-20	Thin	---	---	Low	Moderate	Low
1020:									
Bearbutte	40-60	Soft	---	---	---	---	Moderate	Moderate	Low
Welch	>60	---	---	---	---	---	High	Moderate	Low
1025:									
Mesman	>60	---	---	---	---	---	Low	High	High
1030:									
Zorravista	>60	---	---	---	---	---	Low	High	Low
1035:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Madeline	10-20	Hard	---	---	---	---	Low	Moderate	Low
Crocan	10-14	Hard	---	---	---	---	Moderate	Moderate	Low
1036:									
Tinpan	20-40	Hard	---	---	---	---	Low	Low	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
1040:									
Langston	>60	---	---	---	---	---	Moderate	High	Low
1041:									
Langston	>60	---	---	---	---	---	Moderate	High	Low
Old Camp	10-20	Hard	---	---	---	---	Moderate	High	Low
Paypoint	>60	---	---	---	---	---	Moderate	High	Low
1045:									
Paypoint	>60	---	---	---	---	---	Moderate	High	Low
Langston	>60	---	---	---	---	---	Moderate	High	Low
1050:									
Skullwak	>60	---	---	---	---	---	Moderate	High	High
1055:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Hapgood	40-60	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			
1055 (con.):									
Hart Camp-------	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1060:									
Bombadil--------	7-14	Hard	---	---	---	---	Moderate	Moderate	Low
Chime-----------	20-30	Soft	---	---	---	---	Moderate	High	Low
1061:									
Old Camp--------	10-20	Hard	---	---	---	---	Moderate	High	Low
1062:									
Old Camp--------	10-20	Hard	---	---	---	---	Moderate	High	Low
Corral----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
1063:									
Old Camp--------	10-20	Hard	---	---	---	---	Moderate	High	Low
1065:									
Old Camp--------	10-20	Hard	---	---	---	---	Moderate	High	Low
Reywat----------	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
Rubble Land-----	>40	Hard	---	---	---	---	None	---	---
1070:									
Oreneva---------	20-40	Hard	---	---	---	---	Moderate	High	Low
1075:									
Surprise--------	>60	---	---	---	---	---	Moderate	Moderate	Low
1080:									
Bucklake--------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Rock Outcrop.									
Corral----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
1081:									
Bucklake--------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Fiddler---------	20-40	Hard	---	---	---	---	Low	High	Low
1083:									
Bucklake--------	20-40	Hard	---	---	---	---	Low	Moderate	Low
Rubble Land-----	>40	Hard	---	---	---	---	None	---	---
1090:									
Jaybee----------	7-14	Hard	---	---	---	---	Moderate	Moderate	Low
Verdico---------	20-40	Soft	---	---	---	---	Low	Moderate	Low
1095:									
Corral----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Mahala----------	20-40	Soft	---	---	---	---	Low	High	Low
1105:									
Frernik---------	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			
1110:									
Indian Creek----	>60	---	14-20	Thick	---	---	Low	High	Low
Buffaran--------	>60	---	14-20	Thick	---	---	Low	High	Low
1115:									
Lofftus---------	>60	---	20-40	Thick	---	---	Moderate	High	Low
Mesman----------	>60	---	---	---	---	---	Low	High	High
1120:									
McConnel--------	>60	---	---	---	---	---	Low	High	Low
1121:									
McConnel--------	>60	---	---	---	---	---	Low	High	Moderate
1125:									
Halvert---------	24-40	Soft	20-32	Thin	---	---	Low	Low	Low
Jaybee----------	7-14	Hard	---	---	---	---	Moderate	Moderate	Low
Tunnison--------	30-40	Hard	---	---	---	---	Moderate	High	Low
1130:									
Soughe----------	10-20	Hard	---	---	---	---	Moderate	High	Low
Rock Outcrop.									
1131:									
Soughe----------	10-20	Hard	---	---	---	---	Moderate	High	Low
Rock Outcrop.									
1135:									
Mcwatt----------	40-60	Hard	---	---	---	---	Low	High	Low
Old Camp--------	10-20	Hard	---	---	---	---	Moderate	High	Low
1140:									
Valmy-----------	>60	---	---	---	---	---	Low	High	Low
1141:									
Valmy-----------	>60	---	---	---	---	---	Low	High	Low
Langston--------	>60	---	---	---	---	---	Moderate	High	Low
Paypoint--------	>60	---	---	---	---	---	Moderate	High	Low
1145:									
Wendane---------	>60	---	---	---	---	---	High	High	High
1150:									
Saraph----------	14-20	Soft	---	---	---	---	Moderate	High	Low
Hangrock--------	>60	---	14-20	Thin	---	---	Low	Moderate	Low
Tuffo-----------	4-14	Soft	---	---	---	---	Moderate	Moderate	Low
1151:									
Saraph----------	14-20	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			
1151 (con.):									
Tuffo	4-14	Soft	---	---	---	---	Moderate	Moderate	Low
Yellowhills	>60	---	---	---	---	---	High	Moderate	Low
1155:									
Madeline	10-20	Hard	---	---	---	---	Low	Moderate	Low
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
1160:									
Wylo	14-20	Hard	---	---	---	---	Low	Moderate	Low
Bucklake	20-40	Hard	---	---	---	---	Low	Moderate	Low
Rock Outcrop.									
1162:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Nitpac	24-40	Soft	20-40	Thin	---	---	Moderate	Moderate	Low
1163:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Deseed	20-40	Hard	---	---	---	---	Low	High	Low
1164:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Ashcamp	7-14	Soft	---	---	---	---	Low	Moderate	Low
1165:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Nitpac	24-40	Soft	20-40	Thin	---	---	Moderate	Moderate	Low
Bidrim	10-14	Hard	---	---	---	---	Moderate	Moderate	Low
1166:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Bieber	>60	---	8-20	Thick	---	---	Moderate	High	Low
1167:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Reywat	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
1168:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
1170:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Bucklake	20-40	Hard	---	---	---	---	Low	Moderate	Low
1171:									
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Indian Creek	>60	---	14-20	Thick	---	---	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			
1172:									
Devada----------	12-20	Hard	---	---	---	---	Low	Moderate	Low
Madeline--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
1173:									
Devada----------	12-20	Hard	---	---	---	---	Low	Moderate	Low
Nitpac----------	24-40	Soft	20-40	Thin	---	---	Moderate	Moderate	Low
Uhaldi----------	20-40	Soft	---	---	---	---	Moderate	Moderate	Moderate
1174:									
Devada----------	12-20	Hard	---	---	---	---	Low	Moderate	Low
Uhaldi----------	20-40	Soft	---	---	---	---	Moderate	Moderate	Moderate
1175:									
Ferver----------	40-60	Soft	20-40	Thin	---	---	Moderate	High	Low
Tunnison--------	10-40	Hard	---	---	---	---	Moderate	High	Low
1180:									
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Karlo-----------	20-40	Hard	---	---	---	---	Low	High	Low
1181:									
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Madeline--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Tinpan----------	20-40	Hard	---	---	---	---	Low	Low	Low
1182:									
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Westbutte-------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1183:									
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Westbutte-------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1184:									
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Tinpan----------	20-40	Hard	---	---	---	---	Low	Low	Low
1185:									
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Hart Camp-------	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1186:									
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
Tinpan----------	20-40	Hard	---	---	---	---	Low	Low	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			
1186 (con.):									
Crocan	10-14	Hard	---	---	---	---	Moderate	Moderate	Low
1187:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Tinpan	20-40	Hard	---	---	---	---	Low	Low	Low
Hart Camp	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1188:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Newlands	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Hart Camp	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1189:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
Badgercamp	14-20	Soft	---	---	---	---	Moderate	Moderate	Low
Crocan	10-14	Hard	---	---	---	---	Moderate	Moderate	Low
1190:									
Ferver	40-60	Soft	20-40	Thin	---	---	Moderate	High	Low
Nitpac	24-40	Soft	20-40	Thin	---	---	Moderate	Moderate	Low
1195:									
Bitner	20-40	Soft	---	---	---	---	Low	Moderate	Low
Ashcamp	7-14	Soft	---	---	---	---	Low	Moderate	Low
1205:									
Davey	>60	---	---	---	---	---	Low	High	Low
1206:									
Davey	>60	---	---	---	---	---	Low	High	Low
Corral	12-20	Soft	---	---	---	---	Low	Moderate	Low
1210:									
Mazuma	>60	---	---	---	---	---	Low	High	High
Bighat	>60	---	---	---	---	---	Low	High	Low
1215:									
Raglan	>60	---	---	---	---	---	Low	High	High
Isolde	>60	---	---	---	---	---	Low	High	Low
1220:									
Schamp	>60	---	---	---	---	---	Low	High	Low
1221:									
Schamp	>60	---	---	---	---	---	Low	High	Low
1223:									
Schamp	>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			
1230:									
Raglan----------	>60	---	---	---	---	---	Low	High	High
Mazuma----------	>60	---	---	---	---	---	Low	High	High
1235:									
Chime-----------	20-30	Soft	---	---	---	---	Moderate	High	Low
1240:									
Toney-----------	20-36	Soft	---	---	---	---	Low	High	Low
Millerlux-------	12-20	Hard	---	---	---	---	Low	High	Low
Hart Camp-------	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1245:									
Saraph----------	14-20	Soft	---	---	---	---	Moderate	High	Low
Uhaldi----------	20-40	Soft	---	---	---	---	Moderate	Moderate	Moderate
Frentera--------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1250:									
Ashone----------	20-40	Soft	---	---	---	---	Moderate	Moderate	Low
Ashdos----------	20-40	Soft	---	---	---	---	Moderate	Moderate	Low
Bearbutte-------	40-60	Soft	---	---	---	---	Moderate	Moderate	Low
1251:									
Ashone----------	20-40	Soft	---	---	---	---	Moderate	Moderate	Low
Ashdos----------	20-40	Soft	---	---	---	---	Moderate	Moderate	Low
Ashtre----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
1253:									
Ashdos----------	20-40	Soft	---	---	---	---	Moderate	Moderate	Low
Ashtre----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
Hackwood--------	>60	---	---	---	---	---	Moderate	Moderate	Low
1255:									
Newlands--------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
1256:									
Newlands--------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Menbo-----------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1257:									
Newlands--------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1258:									
Newlands--------	40-60	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			
1258 (con.):									
Badgercamp------	14-20	Soft	---	---	---	---	Moderate	Moderate	Low
Hackwood--------	>60	---	---	---	---	---	Moderate	Moderate	Low
1265:									
Fitzwater-------	>60	---	---	---	---	---	Moderate	Moderate	Low
Westbutte-------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1270:									
Hartig----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1271:									
Hartig----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Newlands--------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1272:									
Hartig----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Rock Outcrop.									
1273:									
Hartig----------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood---------	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1275:									
Hart Camp-------	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1276:									
Hart Camp-------	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
Reywat----------	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
Westbutte-------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1277:									
Hart Camp-------	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
Ninemile--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
1278:									
Boltz-----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
Hart Camp-------	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1279:									
Hart Camp-------	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
Nutran----------	20-40	Soft	---	---	---	---	Low	Moderate	Low
Westbutte-------	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
1285:									
Zymans----------	40-60	Soft	---	---	---	---	Low	High	Low
Indian Creek----	>60	---	14-20	Thick	---	---	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			
1286:									
Zymans	40-60	Soft	---	---	---	---	Low	High	Low
Cotant	12-20	Soft	---	---	---	---	Low	Moderate	Low
Hart Camp	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1290:									
Hapgood	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
Badgercamp	14-20	Soft	---	---	---	---	Moderate	Moderate	Low
Hackwood	>60	---	---	---	---	---	Moderate	Moderate	Low
1295:									
Devoy	20-40	Hard	---	---	---	---	High	Moderate	Low
Blizzard	10-20	Hard	---	---	---	---	High	Moderate	Low
1296:									
Blizzard	10-20	Hard	---	---	---	---	High	Moderate	Low
1305:									
Updike	>60	---	---	---	---	---	Low	High	Moderate
Mazuma	>60	---	---	---	---	---	Low	High	High
1306:									
Updike	>60	---	---	---	---	---	Low	High	Moderate
Longdis	>60	---	---	---	---	---	Low	High	Low
1310:									
Longdis	>60	---	---	---	---	---	Low	High	Low
Updike	>60	---	---	---	---	---	Low	High	Moderate
1311:									
Longdis	>60	---	---	---	---	---	Low	High	Low
Macyflat	>60	---	---	---	---	---	Low	Moderate	Low
Aeric Epiaquents	>60	---	---	---	---	---	High	High	High
1312:									
Longdis	>60	---	---	---	---	---	Low	High	Low
Dugway	>60	---	20-40	Thin	---	---	Low	High	High
1313:									
Longdis	>60	---	---	---	---	---	Low	High	Low
1320:									
Dugway	>60	---	20-40	Thin	---	---	Low	High	High
1321:									
Dugway	>60	---	20-40	Thin	---	---	Low	High	High
Updike	>60	---	---	---	---	---	Low	High	Moderate

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			
1325:									
Reywat	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
Hart Camp	10-20	Soft	---	---	---	---	Moderate	Moderate	Low
1326:									
Reywat	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
1327:									
Reywat	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
Westbutte	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1328:									
Reywat	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
Fernpoint	>60	---	---	---	---	---	Low	High	Low
1329:									
Reywat	10-20	Hard	---	---	---	---	Moderate	Moderate	Low
Devada	12-20	Hard	---	---	---	---	Low	Moderate	Low
1335:									
Westbutte	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Rock Outcrop.									
1336:									
Westbutte	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Ashtre	20-40	Soft	---	---	---	---	Low	Moderate	Low
Tusune	20-40	Soft	---	---	---	---	Low	Moderate	Low
1345:									
Layview	10-14	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1346:									
Layview	10-14	Hard	---	---	---	---	Moderate	Moderate	Low
Westbutte	20-40	Hard	---	---	---	---	Moderate	Moderate	Low
Hapgood	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1355:									
Badgercamp	14-20	Soft	---	---	---	---	Moderate	Moderate	Low
Hackwood	>60	---	---	---	---	---	Moderate	Moderate	Low
Easte	40-60	Soft	---	---	---	---	Low	Moderate	Moderate
1356:									
Badgercamp	14-20	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			
1356 (con.):									
Hackwood--------	>60	---	---	---	---	---	Moderate	Moderate	Low
Easte-----------	40-60	Soft	---	---	---	---	Low	Moderate	Moderate
1358:									
Badgercamp------	14-20	Soft	---	---	---	---	Moderate	Moderate	Low
Hackwood--------	>60	---	---	---	---	---	Moderate	Moderate	Low
1360:									
Welch-----------	>60	---	---	---	---	---	High	Moderate	Low
1361:									
Wetvit----------	>60	---	---	---	---	---	High	Moderate	Low
Wetvit----------	>60	---	---	---	---	---	High	Moderate	Low
1365:									
Rubble Land-----	>40	Hard	---	---	---	---	None	---	---
Dosie-----------	40-60	Hard	---	---	---	---	Low	Moderate	Low
1366:									
Dosie-----------	40-60	Hard	---	---	---	---	Low	Moderate	Low
1367:									
Dosie-----------	40-60	Hard	---	---	---	---	Low	Moderate	Low
Fiddler---------	20-40	Hard	---	---	---	---	Low	High	Low
Rubble Land-----	>40	Hard	---	---	---	---	None	---	---
1375:									
Cotant----------	12-20	Soft	---	---	---	---	Low	Moderate	Low
Madeline--------	10-20	Hard	---	---	---	---	Low	Moderate	Low
1380:									
Weimer----------	>60	---	---	---	---	---	Moderate	High	Low
Boulder Lake----	>60	---	---	---	---	---	Moderate	High	Low
1385:									
Fernpoint-------	>60	---	---	---	---	---	Low	High	Low
1395:									
Orr-------------	>60	---	---	---	---	---	Moderate	Moderate	Low
Fernpoint-------	>60	---	---	---	---	---	Low	High	Low
1400:									
Bombadil--------	7-14	Hard	---	---	---	---	Moderate	Moderate	Low
Ceejay----------	14-20	Hard	---	---	---	---	Low	High	Low
1410:									
Fulstone--------	>60	---	14-20	Thick	---	---	Moderate	High	Low
Saraph----------	14-20	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			
1410 (con.):									
Tuffo	4-14	Soft	---	---	---	---	Moderate	Moderate	Low
1412:									
Fulstone	>60	---	14-20	Thick	---	---	Moderate	High	Low
Nellspring	>60	---	20-40	Thick	---	---	Low	Moderate	Low
Buffaran	>60	---	14-20	Thick	---	---	Low	High	Low
1420:									
Hangrock	>60	---	14-20	Thin	---	---	Low	Moderate	Low
1430:									
Grassycan	7-14	Hard	7-14	Thin	---	---	Low	Moderate	Low
Grassycan	7-14	Hard	7-14	Thin	---	---	Low	Moderate	Low
1431:									
Esmod	>60	---	14-20	Thick	---	---	Low	Moderate	Low
Powlow	>60	---	14-20	Thin	---	---	Low	Moderate	Low
1440:									
Tusune	20-40	Soft	---	---	---	---	Low	Moderate	Low
Hartig	40-60	Hard	---	---	---	---	Moderate	Moderate	Low
1450:									
Emagert	>60	---	---	---	---	---	High	Moderate	Low
Wetvit	>60	---	---	---	---	---	High	Moderate	Low
1460:									
Weerweed	>60	---	---	---	---	---	High	Moderate	Low
1470:									
Ninemile	10-20	Hard	---	---	---	---	Low	Moderate	Low
9901:									
Playas	>60	---	---	---	---	---	None	High	---
9902:									
Rock Outcrop.									
Rubble Land	>40	Hard	---	---	---	---	None	---	---

TABLE 20.--CLASSIFICATION OF THE SOILS

Soil name	Family or higher taxonomic class
Aeric Epiaquents	Aeric Epiaquents, frigid
Ashcamp	Vitritorrandic Argixerolls, ashy, mesic, shallow
Ashdos	Vitritorrandic Argixerolls, ashy, frigid
Ashone	Vitritorrandic Argixerolls, ashy, mesic
Ashtre	Vitritorrandic Argixerolls, ashy, frigid
Badgercamp	Argic Cryoborolls, loamy-skeletal, mixed, shallow
Bearbutte	Pachic Argixerolls, coarse-loamy, mixed, frigid
Bidrim	Lithic Argixerolls, clayey, montmorillonitic, mesic
Bieber	Argiduridic Durixerolls, clayey, montmorillonitic, mesic, shallow
Bighat	Typic Natrargids, fine-loamy over sandy or sandy-skeletal, mixed, mesic
Bitner	Vitritorrandic Haploxerolls, ashy, mesic
Blizzard	Argic Lithic Cryoborolls, clayey, montmorillonitic
Boltz	Vitritorrandic Haploxerolls, ashy, frigid
Bombadil	Lithic Xeric Haplargids, loamy, mixed, mesic
Boulder Lake	Aquic Haploxererts, fine, montmorillonitic, frigid
Bucklake	Aridic Argixerolls, fine, montmorillonitic, mesic
Buffaran	Xeric Argidurids, clayey, montmorillonitic, mesic, shallow
Ceejay	Xeric Haplargids, clayey, montmorillonitic, mesic
Chime	Durinodic Xeric Haplargids, fine-loamy, mixed, mesic
Corral	Xeric Haplargids, loamy, mixed, mesic, shallow
Cotant	Aridic Argixerolls, clayey, montmorillonitic, frigid, shallow
Crocan	Lithic Argixerolls, clayey, montmorillonitic, frigid
Davey	Xeric Haplocambids, sandy, mixed, mesic
Deseed	Xeric Haplargids, fine, montmorillonitic, frigid
Devada	Lithic Argixerolls, clayey, montmorillonitic, mesic
Devoy	Argic Cryoborolls, clayey-skeletal, montmorillonitic
Dosie	Pachic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Dugway	Natraxeralfic Natridurids, fine, montmorillonitic, mesic
Easte	Pachic Xerumbrepts, loamy-skeletal, mixed, frigid
Emagert	Vitritorrandic Haploxerolls, ashy, mesic
Esmod	Abruptic Xeric Argidurids, clayey, montmorillonitic, mesic, shallow
Fernpoint	Aridic Argixerolls, fine-loamy, mixed, mesic
Ferver	Vertic Argidurids, very-fine, montmorillonitic, mesic
Fiddler	Typic Argixerolls, clayey-skeletal, montmorillonitic, mesic
Fitzwater	Aridic Haploxerolls, loamy-skeletal, mixed, frigid
Frentera	Vitritorrandic Haploxerolls, ashy, frigid
Freznik	Xeric Paleargids, fine, montmorillonitic, frigid
Fulstone	Abruptic Xeric Argidurids, clayey, montmorillonitic, mesic, shallow
Grassycan	Abruptic Xeric Argidurids, clayey, montmorillonitic, mesic, shallow
Hackwood	Pachic Cryoborolls, fine-loamy, mixed
Halvert	Vertic Durixerolls, very-fine, montmorillonitic, mesic
Hangrock	Haploxeralfic Argidurids, ashy, mesic, shallow
Hapgood	Pachic Cryoborolls, loamy-skeletal, mixed
Hart Camp	Aridic Argixerolls, loamy, mixed, frigid, shallow
Hartig	Aridic Haploxerolls, loamy-skeletal, mixed, frigid
Indian Creek	Xeric Argidurids, clayey, montmorillonitic, mesic, shallow
Isolde	Typic Torripsamments, mixed, mesic
Jaybee	Lithic Xeric Haplargids, loamy, mixed, mesic
Karlo	Leptic Haploxererts, very-fine, montmorillonitic, frigid
Langston	Xeric Haplargids, fine-loamy over sandy or sandy-skeletal, mixed, mesic
Layview	Argic Lithic Cryoborolls, loamy-skeletal, mixed
Lofftus	Aquicambidic Haplodurids, ashy, mesic
Longdis	Xeric Natrargids, fine, montmorillonitic, mesic
Macyflet	Vertic Paleargids, very-fine, montmorillonitic, frigid
Madeline	Lithic Argixerolls, clayey, montmorillonitic, frigid
Mahala	Vertic Paleargids, fine, montmorillonitic, mesic
Maruma	Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic
McConnel	Xeric Haplocambids, sandy-skeletal, mixed, mesic

TABLE 20.--CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Mcwatt	Xeric Haplocambids, sandy-skeletal, mixed, mesic
Menbo	Pachic Argixerolls, clayey-skeletal, montmorillonitic, frigid
Mesman	Xeric Natrargids, fine-loamy, mixed, mesic
Millerlux	Lithic Xeric Haplargids, clayey, montmorillonitic, frigid
Nellspring	Vertic Argidurids, fine, montmorillonitic, mesic
Newlands	Argic Cryoborolls, fine-loamy, mixed
Ninemile	Lithic Argixerolls, clayey, montmorillonitic, frigid
Nitpac	Vertic Durixerolls, fine, montmorillonitic, mesic
Nutzan	Vitritorrandic Haploxerolls, ashy-skeletal, frigid
Old Camp	Lithic Xeric Haplargids, loamy-skeletal, mixed, mesic
Oreneva	Xeric Haplocambids, loamy-skeletal, mixed, frigid
Orr	Aridic Argixerolls, fine-loamy, mixed, mesic
Paypoint	Durinodic Xeric Haplargids, ashy over sandy or sandy-skeletal, mixed, mesic
Powlow	Argidic Durixerolls, clayey, montmorillonitic, mesic, shallow
Raglan	Durinodic Haplocambids, fine-loamy, mixed, mesic
Reywat	Lithic Argixerolls, loamy-skeletal, mixed, mesic
Saraph	Vitrixerandic Haplargids, ashy, mesic, shallow
Schamp	Xeric Haplargids, fine, montmorillonitic, mesic
Skullwak	Aeric Halaquepts, fine, montmorillonitic (calcareous), mesic
Soughe	Lithic Xeric Haplargids, loamy-skeletal, mixed, mesic
Surprise	Aridic Haploxerolls, coarse-loamy, mixed, mesic
Tinpan	Vertic Palexerolls, very-fine, montmorillonitic, frigid
Toney	Vertic Paleargids, fine, montmorillonitic, frigid
Tuffo	Vitrandic Torriorthents, ashy, nonacid, mesic, shallow
Tunnison	Aridic Haploxererts, very-fine, montmorillonitic, mesic
Tusune	Vitrandic Cryoborolls, ashy-skeletal
Uhaldi	Aridic Argixerolls, fine-loamy, mixed, mesic
Updike	Typic Natrargids, fine, montmorillonitic, mesic
Valmy	Haploduridic Torriorthents, coarse-loamy, mixed (calcareous), mesic
Verdico	Vertic Paleargids, fine, montmorillonitic, mesic
Weezweed	Vitritorrandic Haploxerolls, ashy, mesic
Weimer	Xeric Epiaquerts, very-fine, montmorillonitic, frigid
Welch	Cumulic Endoaquolls, fine-loamy, mixed, frigid
Wendane	Aeric Halaquepts, fine-silty, mixed (calcareous), mesic
Westbutte	Pachic Haploxerolls, loamy-skeletal, mixed, frigid
Wetvit	Aquandic Endoaquolls, ashy, mesic
Wylo	Lithic Argixerolls, clayey, montmorillonitic, mesic
Yellowhills	Vitritorrandic Haploxerolls, ashy, mesic
Zorravista	Xeric Torripsamments, mixed, mesic
Zymans	Aridic Argixerolls, fine, montmorillonitic, mesic

RANGELAND PLANTS AND WOODLAND UNDERSTORY

1010--MACYFLET-BOULDER LAKE 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--			
		MACYFLET	BOULDER LAKE	Inclusion 1	Inclusion 2
Cusick bluegrass	POCU3	20-30	---	---	---
Indian ricegrass	ORHY	---	---	---	15-25
Nevada bluegrass	PONE3	2-8	15-35	---	---
Thurber needlegrass	STTH2	25-35	---	5-15	---
basin wildrye	ELCI2	5-15	---	30-40	2-8
bluegrass	POA++	---	---	30-40	---
creeping wildrye	ELTR3	---	5-15	---	---
mat muhly	MURI	---	5-10	---	---
needleandthread	STCO4	---	---	---	20-40
thickspike wheatgrass	AGDA	---	---	---	2-5
lupine	LUPIN	2-5	---	2-5	---
big sagebrush	ARTR2	---	---	15-25	10-20
early sagebrush	ARLO9	15-25	---	---	---
rubber rabbitbrush	CHNA2	---	2-5	---	---
silver sagebrush	ARCA13	---	30-40	---	---
spiny hopsage	GRSP	---	---	---	2-5
Range site number		023XY090NV	023XY003NV	023XY082NV	023XY051NV
Potential production (lb/acre):					
Favorable years		900	1800	1100	900
Normal years		700	1400	800	700
Unfavorable years		450	700	600	500

1011--MACYFLET SILT 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--		
		MACYFLET	Inclusion 1	Inclusion 2
Cusick bluegrass	POCU3	20-30	---	---
Nevada bluegrass	PONE3	2-8	15-35	---
Thurber needlegrass	STTH2	25-35	---	5-15
basin wildrye	ELCI2	5-15	---	30-40
bluegrass	POA++	---	---	30-40
creeping wildrye	ELTR3	---	5-15	---
mat muhly	MURI	---	5-10	---
lupine	LUPIN	2-5	---	2-5
big sagebrush	ARTR2	---	---	15-25
early sagebrush	ARLO9	15-25	---	---
rubber rabbitbrush	CHNA2	---	2-5	---
silver sagebrush	ARCA13	---	30-40	---
Range site number		023XY090NV	023XY003NV	023XY082NV
Potential production (lb/acre):				
Favorable years		900	1800	1100
Normal years		700	1400	800
Unfavorable years		450	700	600

1012--MACYFLET-INDIAN 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--				
		MACYFLET	INDIAN CREEK	Inclusion 1	Inclusion 2	Inclusion 3
Cusick bluegrass	POCU3	20-30	---	---	---	---
Indian ricegrass	ORHY	---	---	15-25	5-15	---
Nevada bluegrass	PONE3	2-8	---	---	---	2-8
Sandberg bluegrass	POSE	---	---	---	2-5	---
Thurber needlegrass	STTH2	25-35	30-40	---	20-40	---
Webber needlegrass	STWE	---	5-15	---	2-8	---
basin wildrye	ELCI2	5-15	---	2-8	---	65-75
bluebunch wheatgrass	AGSP	---	2-8	---	---	---
bluegrass	POA++	---	5-10	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---
needleandthread	STCO4	---	---	20-40	---	---
thickspike wheatgrass	AGDA	---	---	2-5	---	---
lupine	LUPIN	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---
basin big sagebrush	ARTRT	---	---	---	---	5-10
big sagebrush	ARTR2	---	---	10-20	---	---
early sagebrush	ARLO9	15-25	---	---	---	---
low sagebrush	ARAR8	---	20-30	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	1-3
spiny hopsage	GRSP	---	---	2-5	2-5	---
Range site number		023XY090NV	023XY059NV	023XY051NV	023XY006NV	023XY009NV
Potential production (lb/acre):						
Favorable years		900	600	900	800	5500
Normal years		700	450	700	600	4500
Unfavorable years		450	300	500	400	2500

1015--POWLOW VERY GRAVELLY LOAM, 2 TO 15 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--				
		POWLOW	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	2-5	---	---	2-5	---
Indian ricegrass	ORHY	---	5-15	5-15	---	---
Sandberg bluegrass	POSE	---	2-5	2-5	---	---
Thurber needlegrass	STTH2	15-20	20-40	20-40	15-20	30-40
Webber needlegrass	STWE	---	2-8	2-8	---	5-15
basin wildrye	ELCI2	5-10	---	---	5-10	---
bluebunch wheatgrass	AGSP	30-40	---	---	30-40	2-8
bluegrass	POA++	---	---	---	---	5-10
bottlebrush squirreltail	SIHY	---	2-5	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	20-30	20-30	---	---
antelope bitterbrush	PUTR2	2-10	---	---	2-10	---
big sagebrush	ARTR2	15-25	---	---	15-25	---
low sagebrush	ARAR8	---	---	---	---	20-30
spiny hopsage	GRSP	---	2-5	2-5	---	---
Range site number		023XY020NV	023XY006NV	023XY006NV	023XY020NV	023XY059NV
Potential production (lb/acre):						
Favorable years		1100	800	800	1100	600
Normal years		900	600	600	900	450
Unfavorable years		600	400	400	600	300

1020--BEARBUTTE-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--				
		BEARBUTTE	WELCH	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	2-5
Idaho fescue	FEID	40-50	---	2-5	40-60	---
Nevada bluegrass	PONE3	---	40-50	---	---	---
Thurber needlegrass	STTH2	---	---	20-40	---	15-20
basin wildrye	ELCI2	---	---	---	---	5-10
bluebunch wheatgrass	AGSP	2-5	---	20-40	2-10	30-40
bluegrass	POA++	---	---	5-10	5-10	---
sedge	CAREX	---	5-15	---	---	---
antelope bitterbrush	PUTR2	10-20	---	2-10	---	2-10
big sagebrush	ARTR2	---	---	---	---	15-25
low sagebrush	ARAR8	---	---	15-25	10-20	---
mountain big sagebrush	ARVA2	10-20	---	---	---	---
Range site number		023XY066NV	023XY013NV	023XY078NV	023XY079NV	023XY020NV
Potential production (lb/acre):						
Favorable years		1300	2200	1300	1200	1100
Normal years		1100	1700	1000	900	900
Unfavorable years		900	1300	700	600	600

1025--MESMAN FINE SANDY LOAM, 0 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--				
		MESMAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	---	5-15	5-15	2-5
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	---
Thurber needlegrass	STTH2	20-40	5-15	20-40	20-40	---
Webber needlegrass	STWE	2-8	---	2-8	2-8	---
basin wildrye	ELCI2	---	30-40	---	---	5-20
bluegrass	POA++	---	30-40	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	2-5	2-5	2-5
globemallow	SPHAE	---	---	---	---	1-2
lupine	LUPIN	---	2-5	---	---	---
thelypody	THELY	---	---	---	---	2-4
Wyoming big sagebrush	ARTRW	20-30	---	20-30	20-30	---
big sagebrush	ARTR2	---	15-25	---	---	10-25
black greasewood	SAVE4	---	---	---	---	20-30
spiny hopsage	GRSP	2-5	---	2-5	2-5	5-15
Range site number		023XY006NV	023XY082NV	023XY006NV	023XY006NV	024XY022NV
Potential production (lb/acre):						
Favorable years		800	1100	800	800	800
Normal years		600	800	600	600	600
Unfavorable years		400	600	400	400	350

1030--ZORRAVISTA FINE SAND, 4 TO 15 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--			
		ZORRAVISTA	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	30-40	15-25	15-25	5-15
Sandberg bluegrass	POSE	---	---	---	2-5
Thurber needlegrass	STTH2	---	---	---	20-40
Webber needlegrass	STWE	---	---	---	2-8
basin wildrye	ELCI2	2-5	2-8	2-8	---
bottlebrush squirreltail	SIHY	---	---	---	2-5
needleandthread	STCO4	5-15	20-40	20-40	---
thickspike wheatgrass	AGDA	2-8	2-5	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30
basin big sagebrush	ARTRT	10-25	---	---	---
big sagebrush	ARTR2	---	10-20	10-20	---
fourwing saltbush	ATCA2	2-8	---	---	---
spiny hopsage	GRSP	5-10	2-5	2-5	2-5
Range site number		023XY011NV	023XY051NV	023XY051NV	023XY006NV
Potential production (lb/acre):					
Favorable years		800	900	900	800
Normal years		600	700	700	600
Unfavorable years		300	500	500	400

1035--NINEMILE-MADELINE-CROCAN 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--						
		NINEMILE	MADELINE	CROCAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	X	---	---	---	---
Cusick bluegrass	POCU3	---	---	X	---	---	---	---
Idaho fescue	FEID	30-50	5-20	X	40-50	10-20	X	10-20
Nevada bluegrass	PONE3	---	---	---	---	---	X	2-5
Sandberg bluegrass	POSE	---	---	---	---	---	X	---
Thurber needlegrass	STTH2	2-8	5-10	X	---	---	X	---
basin wildrye	ELCI2	---	5-10	---	---	---	X	---
bluebunch wheatgrass	AGSP	15-30	25-35	X	2-5	5-15	X	---
bluegrass	POA++	2-8	---	---	5-15	2-5	---	---
mountain brome	BRCA5	---	---	---	---	2-8	---	10-20
needlegrass	STIPA	---	---	---	---	5-15	---	10-20
onespike oatgrass	DAUN	---	---	---	1-3	---	---	---
purple oniongrass	MESP	---	---	---	---	---	---	2-5
slender wheatgrass	AGTR	---	---	---	---	---	---	2-8
western needlegrass	STOC2	---	---	X	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
low sagebrush	ARAR8	10-20	---	X	10-20	---	---	---
antelope bitterbrush	PUTR2	---	15-25	---	---	---	---	2-5
curlleaf mountainmahogany	CELE3	---	---	---	---	25-40	---	---
low sagebrush	ARAR8	10-20	---	X	10-20	---	---	---
mountain big sagebrush	ARVA2	---	5-15	---	---	5-10	X	---
snowberry	SYMPH	---	---	---	---	2-5	---	2-8

Range site number	023XY017NV	023XY015NV	023XY095NV	023XY014NV	023XY026NV	023XY024NV	023XY065NV
Potential production (lb/acre):							
Favorable years	900	1500	600	800	1400	700	2600
Normal years	700	1200	400	600	1100	500	1800
Unfavorable years	500	900	200	400	600	300	1400

1036--TINPAN-NINEMILE 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--				
		TINPAN	NINEMILE	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	X	---
Cusick bluegrass	POCU3	---	---	---	X	---
Idaho fescue	FEID	30-50	30-50	---	X	40-50
Sandberg bluegrass	POSE	---	---	5-10	---	---
Thurber needlegrass	STTH2	2-8	2-8	---	X	---
bluebunch wheatgrass	AGSP	15-30	15-30	---	X	2-5
bluegrass	POA++	2-8	2-8	---	---	5-15
bottlebrush squirreltail	SIHY	---	---	10-20	---	---
onespike oatgrass	DAUN	---	---	---	---	1-3
western needlegrass	STOC2	---	---	---	X	---
arrowleaf balsamroot	BASA3	---	---	---	---	2-5
eriogonum	ERIOG	---	---	1-5	---	---
low sagebrush	ARAR8	10-20	10-20	2-10	X	10-20
lupine	LUPIN	---	---	1-3	---	---
low sagebrush	ARAR8	10-20	10-20	2-10	X	10-20
rubber rabbitbrush	CHNA2	---	---	30-50	---	---
Range site number		023XY017NV	023XY017NV	023XY001NV	023XY095NV	023XY014NV
Potential production (lb/acre):						
Favorable years		900	900	350	600	800
Normal years		700	700	225	400	600
Unfavorable years		500	500	150	200	400

1040--LANGSTON GRAVELLY SANDY 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--		
		LANGSTON	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	5-15	15-25	2-5
Sandberg bluegrass	POSE	2-5	---	---
Thurber needlegrass	STTH2	20-40	---	---
Webber needlegrass	STWE	2-8	---	---
basin wildrye	ELCI2	---	2-8	5-20
bottlebrush squirreltail	SIHY	2-5	---	2-5
needleandthread	STCO4	---	20-40	---
thickspike wheatgrass	AGDA	---	2-5	---
globemallow	SPHAE	---	---	1-2
thelypody	THELY	---	---	2-4
Wyoming big sagebrush	ARTRW	20-30	---	---
big sagebrush	ARTR2	---	10-20	10-25
black greasewood	SAVE4	---	---	20-30
spiny hopsage	GRSP	2-5	2-5	5-15
Range site number		023XY006NV	023XY051NV	024XY022NV
Potential production (lb/acre):				
Favorable years		800	900	800
Normal years		600	700	600
Unfavorable years		400	500	350

1041--LANGSTON-OLD CAMP-PAYPOINT 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--					
		LANGSTON	OLD CAMP	PAYPOINT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	5-15	5-15	---	15-25	---	---
Nevada bluegrass	PONE3	---	---	---	---	2-10	2-8
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---
Thurber needlegrass	STTH2	20-40	20-40	5-15	---	---	---
Webber needlegrass	STWE	2-8	2-8	---	---	---	---
basin wildrye	ELCI2	---	---	30-40	2-8	40-60	65-75
bluegrass	POA++	---	---	30-40	---	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	---	---	---	---
needleandthread	STCO4	---	---	---	20-40	---	---
thickspike wheatgrass	AGDA	---	---	---	2-5	---	---
western wheatgrass	AGSM	---	---	---	---	2-10	---
lupine	LUPIN	---	---	2-5	---	---	---
povertyweed	IVAX	---	---	---	---	2-5	---
thelypody	THELY	---	---	---	---	1-3	---
Wyoming big sagebrush	ARTRW	20-30	20-30	---	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-15	5-10
big sagebrush	ARTR2	---	---	15-25	10-20	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	1-3
spiny hopsage	GRSP	2-5	2-5	---	2-5	---	---
Range site number		023XY006NV	023XY006NV	023XY082NV	023XY051NV	023XY005NV	023XY009NV
Potential production (lb/acre):							
Favorable years		800	800	1100	900	3000	5500
Normal years		600	600	800	700	2000	4500
Unfavorable years		400	400	600	500	1300	2500

1045--PAYPOINT-LANGSTON 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--				
		PAYPOINT	LANGSTON	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	5-15	2-5	15-25	---
Nevada bluegrass	PONE3	---	---	---	---	2-10
Sandberg bluegrass	POSE	---	2-5	---	---	---
Thurber needlegrass	STTH2	5-15	20-40	---	---	---
Webber needlegrass	STWE	---	2-8	---	---	---
basin wildrye	ELCI2	30-40	---	5-20	2-8	40-60
bluegrass	POA++	30-40	---	---	---	---
bottlebrush squirreltail	SIHY	---	2-5	2-5	---	---
needleandthread	STCO4	---	---	---	20-40	---
thickspike wheatgrass	AGDA	---	---	---	2-5	---
western wheatgrass	AGSM	---	---	---	---	2-10
globemallow	SPHAE	---	---	1-2	---	---
lupine	LUPIN	2-5	---	---	---	---
povertyweed	IVAX	---	---	---	---	2-5
thelypody	THELY	---	---	2-4	---	1-3
Wyoming big sagebrush	ARTRW	---	20-30	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-15
big sagebrush	ARTR2	15-25	---	10-25	10-20	---
black greasewood	SAVE4	---	---	20-30	---	---
spiny hopsage	GRSP	---	2-5	5-15	2-5	---
Range site number		023XY082NV	023XY006NV	024XY022NV	023XY051NV	023XY005NV
Potential production (lb/acre):						
Favorable years		1100	800	800	900	3000
Normal years		800	600	600	700	2000
Unfavorable years		600	400	350	500	1300

1050--SKULLWAK SILT 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--		
		SKULLWAK	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	---	---	2-5
Lemmon alkaligrass	PULE	20-35	2-8	---
Nevada bluegrass	PONE3	40-50	10-20	---
basin wildrye	ELCI2	2-8	50-60	5-20
bottlebrush squirreltail	SIHY	---	---	2-5
inland saltgrass	DISPS2	5-20	2-8	---
globemallow	SPHAE	---	---	1-2
other perennial forbs	PPFF	10-20	---	---
thelypody	THELY	---	---	2-4
big sagebrush	ARTR2	---	---	10-25
black greasewood	SAVE4	---	5-10	20-30
other shrubs	SSSS	0-5	---	---
spiny hopsage	GRSP	---	---	5-15
threadleaf rubber rabbitbrush	CHNAC2	---	2-5	---
Range site number		023XY002NV	023XY010NV	024XY022NV
Potential production (lb/acre):				
Favorable years		1300	2200	800
Normal years		1000	1700	600
Unfavorable years		700	1000	350

1055--DEVADA-HAPGOOD-HART CAMP 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--					
		DEVADA	HAPGOOD	HART CAMP	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	10-20	5-20	15-25	30-50	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	2-8
Thurber needlegrass	STTH2	10-25	---	5-10	---	2-8	---
basin wildrye	ELCI2	---	---	5-10	---	---	65-75
bluebunch wheatgrass	AGSP	20-50	---	25-35	---	15-30	---
bluegrass	POA++	5-10	---	---	5-15	2-8	---
mountain brome	BRCA5	---	10-20	---	---	---	---
needlegrass	STIPA	---	10-20	---	---	---	---
purple oniongrass	MESP	---	2-5	---	---	---	---
slender wheatgrass	AGTR	---	2-8	---	---	---	---
goldenweed	HAPLO2	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	---	2-5	15-25	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
low sagebrush	ARAR8	10-20	---	---	35-45	10-20	---
mountain big sagebrush	ARVA2	---	---	5-15	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	1-3
snowberry	SYMPH	---	2-8	---	---	---	---
Range site number		023XY031NV	023XY065NV	023XY015NV	023XY008NV	023XY017NV	023XY009NV
Potential production (lb/acre):							
Favorable years		900	2600	1500	400	900	5500
Normal years		700	1800	1200	250	700	4500
Unfavorable years		500	1400	900	200	500	2500

1060--BOMBADIL-CHIME 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--				
		BOMBADIL	CHIME	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	5-15	5-15	5-15	5-15	---
Nevada bluegrass	PONE3	---	---	---	---	2-10
Sandberg bluegrass	POSE	2-8	2-8	2-5	2-5	---
Thurber needlegrass	STTH2	15-25	15-25	20-40	20-40	---
Webber needlegrass	STWE	---	---	2-8	2-8	---
basin wildrye	ELCI2	---	---	---	---	40-60
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	---
western wheatgrass	AGSM	---	---	---	---	2-10
globemallow	SPHAE	1-2	1-2	---	---	---
povertyweed	IVAX	---	---	---	---	2-5
thelypody	THELY	---	---	---	---	1-3
Wyoming big sagebrush	ARTRW	20-35	20-35	20-30	20-30	---
basin big sagebrush	ARTRT	---	---	---	---	5-15
spiny hopsage	GRSP	5-20	5-20	2-5	2-5	---
Range site number		024XY020NV	024XY020NV	023XY006NV	023XY006NV	023XY005NV
Potential production (lb/acre):						
Favorable years		700	700	800	800	3000
Normal years		450	450	600	600	2000
Unfavorable years		300	300	400	400	1300

1061--OLD CAMP GRAVELLY LOAM, 8 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--			
		OLD CAMP	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	5-15	5-15	5-15	5-15
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-8
Thurber needlegrass	STTH2	20-40	20-40	20-40	15-25
Webber needlegrass	STWE	2-8	2-8	2-8	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5
globemallow	SPHAE	---	---	---	1-2
Wyoming big sagebrush	ARTRW	20-30	20-30	20-30	20-35
spiny hopsage	GRSP	2-5	2-5	2-5	5-20
Range site number		023XY006NV	023XY006NV	023XY006NV	024XY020NV
Potential production (lb/acre):					
Favorable years		800	800	800	700
Normal years		600	600	600	450
Unfavorable years		400	400	400	300

1062--OLD CAMP-CORRAL 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	CORRAL	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	---	30-40	---	---
Indian ricegrass	ORHY	5-15	5-15	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---
Thurber needlegrass	STTH2	20-40	20-40	2-8	30-40	10-20
Webber needlegrass	STWE	2-8	2-8	---	5-15	---
basin wildrye	ELCI2	---	---	5-10	---	2-10
bluebunch wheatgrass	AGSP	---	---	25-40	2-8	40-60
bluegrass	POA++	---	---	2-5	5-10	---
bottlebrush squirreltail	SIHY	2-5	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	20-30	20-30	---	---	10-20
antelope bitterbrush	PUTR2	---	---	2-10	---	2-5
big sagebrush	ARTR2	---	---	---	---	15-25
low sagebrush	ARAR8	---	---	---	20-30	---
mountain big sagebrush	ARVA2	---	---	10-20	---	10-20
spiny hopsage	GRSP	2-5	2-5	---	---	---
Range site number		023XY006NV	023XY006NV	023XY007NV	023XY059NV	023XY039NV
Potential production (lb/acre):						
Favorable years		800	800	1600	600	900
Normal years		600	600	1200	450	700
Unfavorable years		400	400	900	300	500

1063--OLD CAMP VERY STONY LOAM, 8 TO 30 PERCENT SLOPES

(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--				
		OLD CAMP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	2-5	---	X
Cusick bluegrass	POCU3	---	---	---	---	X
Indian ricegrass	ORHY	5-15	5-15	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---
Thurber needlegrass	STTH2	20-40	20-40	15-20	10-20	---
Webber needlegrass	STWE	2-8	2-8	---	---	---
basin wildrye	ELCI2	---	---	5-10	2-10	---
bluebunch wheatgrass	AGSP	---	---	30-40	40-60	X
bottlebrush squirreltail	SIHY	2-5	2-5	---	---	---
prairie junegrass	KOPY	---	---	---	---	X
Wyoming big sagebrush	ARTRW	20-30	20-30	---	10-20	---
antelope bitterbrush	PUTR2	---	---	2-10	2-5	---
big sagebrush	ARTR2	---	---	15-25	15-25	---
low sagebrush	ARAR8	---	---	---	---	X
mountain big sagebrush	ARVA2	---	---	---	10-20	---
spiny hopsage	GRSP	2-5	2-5	---	---	---
Range site number		023XY006NV	023XY006NV	023XY020NV	023XY039NV	023XY091NV
Potential production (lb/acre):						
Favorable years		800	800	1100	900	600
Normal years		600	600	900	700	400
Unfavorable years		400	400	600	500	200

1065--OLD CAMP-REYWAT-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--						
		OLD CAMP	REYWAT	RUBBLE LAND	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	---	---	15-30	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	2-10	40-50
Sandberg bluegrass	POSE	2-5	---	---	---	---	---	---
Thurber needlegrass	STTH2	20-40	10-20	---	---	5-15	---	---
Webber needlegrass	STWE	2-8	---	---	---	---	---	---
basin wildrye	ELCI2	---	2-10	---	2-8	---	40-60	---
bluebunch wheatgrass	AGSP	---	40-60	---	---	40-60	---	---
bluegrass	POA++	---	---	---	---	2-8	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	5-10	---	---	---
sedge	CAREX	---	---	---	---	---	---	5-15
western wheatgrass	AGSM	---	---	---	---	---	2-10	---
Hooker balsamroot	BAHO	---	---	---	---	2-5	---	---
povertyweed	IVAX	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	---	1-2	---	---
thelypody	THELY	---	---	---	---	---	1-3	---
Lahontan sagebrush	ARARL*	---	---	---	---	10-20	---	---
Wyoming big sagebrush	ARTRW	20-30	10-20	---	30-40	---	---	---
antelope bitterbrush	PUTR2	---	2-5	---	T-10	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-15	---
big sagebrush	ARTR2	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	---	---	---
spiny hopsage	GRSP	2-5	---	---	2-10	---	---	---
winterfat	EULA5	---	---	---	T-10	---	---	---
Range site number		023XY006NV	023XY039NV	none	023XY088NV	023XY037NV	023XY005NV	023XY013NV
Potential production (lb/acre):								
Favorable years		800	900		350	700	3000	2200
Normal years		600	700		200	600	2000	1700
Unfavorable years		400	500		100	400	1300	1300

1070--ORENEVA VERY GRAVELLY LOAM, 2 TO 15 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--			
		ORENEVA	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	2-5	---	---	2-5
Indian ricegrass	ORHY	---	5-15	---	---
Sandberg bluegrass	POSE	---	2-5	---	---
Thurber needlegrass	STTH2	15-20	20-40	5-15	15-20
Webber needlegrass	STWE	---	2-8	---	---
basin wildrye	ELCI2	5-10	---	30-40	5-10
bluebunch wheatgrass	AGSP	30-40	---	---	30-40
bluegrass	POA++	---	---	30-40	---
bottlebrush squirreltail	SIHY	---	2-5	---	---
lupine	LUPIN	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	20-30	---	---
antelope bitterbrush	PUTR2	2-10	---	---	2-10
big sagebrush	ARTR2	15-25	---	15-25	15-25
spiny hopsage	GRSP	---	2-5	---	---
Range site number		023XY020NV	023XY006NV	023XY082NV	023XY020NV
Potential production (lb/acre):					
Favorable years		1100	800	1100	1100
Normal years		900	600	800	900
Unfavorable years		600	400	600	600

1075--SURPRISE GRAVELLY LOAMY SAND, 2 TO 15 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--			
		SURPRISE	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	---	---	---	2-8
Canby bluegrass	POCA	2-5	---	---	---
Indian ricegrass	ORHY	---	15-25	---	---
Nevada bluegrass	PONE3	---	---	2-8	40-60
Thurber needlegrass	STTH2	15-20	---	---	---
basin wildrye	ELCI2	5-10	2-8	65-75	2-8
bluebunch wheatgrass	AGSP	30-40	---	---	---
meadow barley	HOBR2	---	---	---	2-8
needleandthread	STCO4	---	20-40	---	---
sedge	CAREX	---	---	---	10-20
thickspike wheatgrass	AGDA	---	2-5	---	---
antelope bitterbrush	PUTR2	2-10	---	---	---
basin big sagebrush	ARTRT	---	---	5-10	---
big sagebrush	ARTR2	15-25	10-20	---	---
rubber rabbitbrush	CHNA2	---	---	1-3	---
spiny hopsage	GRSP	---	2-5	---	---
Range site number		023XY020NV	023XY051NV	023XY009NV	023XY089NV
Potential production (lb/acre):					
Favorable years		1100	900	5500	4000
Normal years		900	700	4500	3000
Unfavorable years		600	500	2500	2000

1080--BUCKLAKE-ROCK OUTCROP-CORRAL 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--					
		BUCKLAKE	ROCK OUTCROP	CORRAL	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	2-5	---	---
Indian ricegrass	ORHY	---	---	5-15	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	---	---	---
Thurber needlegrass	STTH2	10-20	---	20-40	2-5	10-20	10-25
Webber needlegrass	STWE	---	---	2-8	---	---	---
basin wildrye	ELCI2	2-10	---	---	10-20	2-10	---
bluebunch wheatgrass	AGSP	40-60	---	---	20-40	40-60	20-50
bluegrass	POA++	---	---	---	---	---	5-10
bottlebrush squirreltail	SIHY	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	10-20	---	20-30	---	10-20	---
antelope bitterbrush	PUTR2	2-5	---	---	2-10	2-5	---
big sagebrush	ARTR2	15-25	---	---	---	15-25	---
low sagebrush	ARAR8	---	---	---	---	---	10-20
mountain big sagebrush	ARVA2	10-20	---	---	5-15	10-20	---
spiny hopsage	GRSP	---	---	2-5	---	---	---
Range site number		023XY039NV	none	023XY006NV	023XY041NV	023XY039NV	023XY031NV
Potential production (lb/acre):							
Favorable years		900		800	1400	900	900
Normal years		700		600	1200	700	700
Unfavorable years		500		400	900	500	500

1081--BUCKLAKE-FIDDLER 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--				
		BUCKLAKE	FIDDLER	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	X	---	30-40	---
Nevada bluegrass	PONE3	---	X	---	---	---
Sandberg bluegrass	POSE	---	X	---	---	---
Thurber needlegrass	STTH2	10-20	X	10-25	2-8	---
basin wildrye	ELCI2	2-10	X	---	5-10	---
bluebunch wheatgrass	AGSP	40-60	X	20-50	25-40	---
bluegrass	POA++	---	---	5-10	2-5	---
Wyoming big sagebrush	ARTRW	10-20	---	---	---	---
antelope bitterbrush	PUTR2	2-5	---	---	2-10	---
big sagebrush	ARTR2	15-25	---	---	---	---
low sagebrush	ARAR8	---	---	10-20	---	---
mountain big sagebrush	ARVA2	10-20	X	---	10-20	---
Range site number		023XY039NV	023XY024NV	023XY031NV	023XY007NV	none
Potential production (lb/acre):						
Favorable years		900	700	900	1600	
Normal years		700	500	700	1200	
Unfavorable years		500	300	500	900	

1083--BUCKLAKE-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--				
		BUCKLAKE	RUBBLE LAND	Inclusion 1	Inclusion 2	Inclusion 3
Thurber needlegrass	STTH2	10-20	---	10-20	10-25	5-10
basin wildrye	ELCI2	2-10	---	2-10	---	2-10
bluebunch wheatgrass	AGSP	40-60	---	40-60	20-50	60-70
bluegrass	POA++	---	---	---	5-10	---
Wyoming big sagebrush	ARTRW	10-20	---	10-20	---	---
antelope bitterbrush	PUTR2	2-5	---	2-5	---	2-8
big sagebrush	ARTR2	15-25	---	15-25	---	---
low sagebrush	ARAR8	---	---	---	10-20	---
mountain big sagebrush	ARVA2	10-20	---	10-20	---	10-20
Range site number		023XY039NV	none	023XY039NV	023XY031NV	023XY016NV
Potential production (lb/acre):						
Favorable years		900		900	900	1500
Normal years		700		700	700	1100
Unfavorable years		500		500	500	800

1090--JAYBEE-VERDICO 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--					
		JAYBEE	VERDICO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	2-5	---	---
Idaho fescue	FEID	---	---	---	---	30-50	---
Indian ricegrass	ORHY	2-8	2-8	---	---	---	5-15
Nevada bluegrass	PONE3	---	---	2-8	---	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	2-5
Thurber needlegrass	STTH2	15-30	15-30	---	15-20	2-8	20-40
Webber needlegrass	STWE	---	---	---	---	---	2-8
basin wildrye	ELCI2	---	---	65-75	5-10	---	---
bluebunch wheatgrass	AGSP	---	---	---	30-40	15-30	---
bluegrass	POA++	---	---	---	---	2-8	---
bottlebrush squirreltail	SIHY	2-5	2-5	---	---	---	2-5
desert needlegrass	STSP3	2-10	2-10	---	---	---	---
Lahontan sagebrush	ARARL*	30-45	30-45	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	20-30
antelope bitterbrush	PUTR2	---	---	---	2-10	---	---
basin big sagebrush	ARTRT	---	---	5-10	---	---	---
big sagebrush	ARTR2	---	---	---	15-25	---	---
ephedra	EPHED	2-5	2-5	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	10-20	---
rubber rabbitbrush	CHNA2	---	---	1-3	---	---	---
shadscale	ATCO	2-5	2-5	---	---	---	---
spiny hopsage	GRSP	2-5	2-5	---	---	---	2-5
Range site number		023XY047NV	023XY047NV	023XY009NV	023XY020NV	023XY017NV	023XY006NV
Potential production (lb/acre):							
Favorable years		500	500	5500	1100	900	800
Normal years		350	350	4500	900	700	600
Unfavorable years		200	200	2500	600	500	400

1095--CORRAL-MAHALA 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--				
		CORRAL	MAHALA	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	---	---	5-20	---
Indian ricegrass	ORHY	5-15	---	15-25	---	---
Nevada bluegrass	PONE3	---	---	---	---	2-8
Sandberg bluegrass	POSE	2-5	---	---	---	---
Thurber needlegrass	STTH2	20-40	10-25	---	5-10	---
Webber needlegrass	STWE	2-8	---	---	---	---
basin wildrye	ELCI2	---	---	2-8	5-10	65-75
bluebunch wheatgrass	AGSP	---	20-50	---	25-35	---
bluegrass	POA++	---	5-10	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	---
needleandthread	STCO4	---	---	20-40	---	---
thickspike wheatgrass	AGDA	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	20-30	---	---	---	---
antelope bitterbrush	PUTR2	---	---	---	15-25	---
basin big sagebrush	ARTRT	---	---	---	---	5-10
big sagebrush	ARTR2	---	---	10-20	---	---
low sagebrush	ARAR8	---	10-20	---	---	---
mountain big sagebrush	ARVA2	---	---	---	5-15	---
rubber rabbitbrush	CHNA2	---	---	---	---	1-3
spiny hopsage	GRSP	2-5	---	2-5	---	---
Range site number		023XY006NV	023XY031NV	023XY051NV	023XY015NV	023XY009NV
Potential production (lb/acre):						
Favorable years		800	900	900	1500	5500
Normal years		600	700	700	1200	4500
Unfavorable years		400	500	500	900	2500

1105--FREZNIK VERY STONY LOAM, 2 TO 15 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--		
		FREZNIK	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	30-45	---	5-10
Thurber needlegrass	STTH2	---	30-40	---
Webber needlegrass	STWE	2-5	5-15	---
bluebunch wheatgrass	AGSP	---	2-8	---
bluegrass	POA++	---	5-10	---
bottlebrush squirreltail	SIHY	---	---	10-20
eriogonum	ERIOG	---	---	1-5
lupine	LUPIN	---	---	1-3
Douglas rabbitbrush	CHVI8	---	2-5	---
low sagebrush	ARAR8	30-45	20-30	2-10
rubber rabbitbrush	CHNA2	---	---	30-50
Range site number		023XY021NV	023XY059NV	023XY001NV
Potential production (lb/acre):				
Favorable years		300	600	350
Normal years		200	450	225
Unfavorable years		150	300	150

1110--INDIAN 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--				
		INDIAN CREEK	BUFFARAN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	5-15	5-15	---	5-15
Sandberg bluegrass	POSE	---	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	30-40	20-40	20-40	10-25	20-40
Webber needlegrass	STWE	5-15	2-8	2-8	---	2-8
bluebunch wheatgrass	AGSP	2-8	---	---	20-50	---
bluegrass	POA++	5-10	---	---	5-10	---
bottlebrush squirreltail	SIHY	---	2-5	2-5	---	2-5
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	20-30	20-30	---	20-30
low sagebrush	ARAR8	20-30	---	---	10-20	---
spiny hopsage	GRSP	---	2-5	2-5	---	2-5
Range site number		023XY059NV	023XY006NV	023XY006NV	023XY031NV	023XY006NV
Potential production (lb/acre):						
Favorable years		600	800	800	900	800
Normal years		450	600	600	700	600
Unfavorable years		300	400	400	500	400

1115--LOFFTUS-MESMAN COMPLEX, 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--					
		LOFFTUS	MESMAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	---	---	---	2-8
Indian ricegrass	ORHY	---	2-5	---	5-15	---	---
Lemmon alkaligrass	PULE	2-8	---	---	---	---	---
Nevada bluegrass	PONE3	10-20	---	---	---	2-8	40-60
Sandberg bluegrass	POSE	---	---	---	2-5	---	---
Thurber needlegrass	STTH2	---	---	5-15	20-40	---	---
Webber needlegrass	STWE	---	---	---	2-8	---	---
basin wildrye	ELCI2	50-60	5-20	30-40	---	65-75	2-8
bluegrass	POA++	---	---	30-40	---	---	---
bottlebrush squirreltail	SIHY	---	2-5	---	2-5	---	---
inland saltgrass	DISPS2	2-8	---	---	---	---	---
meadow barley	HOBR2	---	---	---	---	---	2-8
sedge	CAREX	---	---	---	---	---	10-20
globemallow	SPHAE	---	1-2	---	---	---	---
lupine	LUPIN	---	---	2-5	---	---	---
thelypody	THELY	---	2-4	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	10-25	15-25	---	---	---
black greasewood	SAVE4	5-10	20-30	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	1-3	---
spiny hopsage	GRSP	---	5-15	---	2-5	---	---
threadleaf rubber rabbitbrush	CHNAC2	2-5	---	---	---	---	---

Range site number	023XY010NV	024XY022NV	023XY082NV	023XY006NV	023XY009NV	023XY089NV
Potential production (lb/acre):						
Favorable years	2200	800	1100	800	5500	4000
Normal years	1700	600	800	600	4500	3000
Unfavorable years	1000	350	600	400	2500	2000

1120--MCCONNEL VERY STONY SANDY 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--		
		MCCONNEL	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	5-15	10-20	2-10
Sandberg bluegrass	POSE	2-8	---	2-5
Thurber needlegrass	STTH2	15-25	---	---
basin wildrye	ELCI2	---	---	10-20
bottlebrush squirreltail	SIHY	2-5	5-10	2-5
globemallow	SPHAE	1-2	---	---
Anderson peachbrush	PRAN2	---	---	2-8
Wyoming big sagebrush	ARTRW	20-35	---	---
basin big sagebrush	ARTRT	---	---	15-25
black greasewood	SAVE4	---	---	2-8
bud sagebrush	ARSP5	---	5-15	---
other shrubs	SSSS	---	---	2-8
shadscale	ATCO	---	40-50	---
spiny hopsage	GRSP	5-20	5-15	15-30
winterfat	EULA5	---	2-5	---
Range site number		024XY020NV	024XY065NV	024XY041NV
Potential production (lb/acre):				
Favorable years		700	900	1000
Normal years		450	700	800
Unfavorable years		300	500	600

1121--MCCONNEL GRAVELLY FINE SANDY 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--			
		MCCONNEL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	5-15	10-20	5-15	---
Nevada bluegrass	PONE3	---	---	---	2-10
Sandberg bluegrass	POSE	2-8	---	2-5	---
Thurber needlegrass	STTH2	15-25	---	20-40	---
Webber needlegrass	STWE	---	---	2-8	---
basin wildrye	ELCI2	---	---	---	40-60
bottlebrush squirreltail	SIHY	2-5	5-10	2-5	---
western wheatgrass	AGSM	---	---	---	2-10
globemallow	SPHAE	1-2	---	---	---
povertyweed	IVAX	---	---	---	2-5
thelypody	THELY	---	---	---	1-3
Wyoming big sagebrush	ARTRW	20-35	---	20-30	---
basin big sagebrush	ARTRT	---	---	---	5-15
bud sagebrush	ARSP5	---	5-15	---	---
shadscale	ATCO	---	40-50	---	---
spiny hopsage	GRSP	5-20	5-15	2-5	---
winterfat	EULA5	---	2-5	---	---
Range site number		024XY020NV	024XY065NV	023XY006NV	023XY005NV
Potential production (lb/acre):					
Favorable years		700	900	800	3000
Normal years		450	700	600	2000
Unfavorable years		300	500	400	1300

1125--HALVERT-JAYBEE-TUNNISON 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--						
		HALVERT	JAYBEE	TUNNISON	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	2-5	---	---
Idaho fescue	FEID	---	---	---	---	---	X	---
Indian ricegrass	ORHY	---	2-8	---	5-15	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	X	15-35
Sandberg bluegrass	POSE	---	2-5	5-10	2-5	---	X	---
Thurber needlegrass	STTH2	5-15	15-30	---	20-40	15-20	X	---
Webber needlegrass	STWE	---	---	---	2-8	---	---	---
basin wildrye	ELCI2	---	---	---	---	5-10	X	---
bluebunch wheatgrass	AGSP	40-60	---	---	---	30-40	X	---
bluegrass	POA++	2-8	---	---	---	---	---	---
bottlebrush squirreltail	SIHY	---	2-5	10-20	2-5	---	---	---
creeping wildrye	ELTR3	---	---	---	---	---	---	5-15
desert needlegrass	STSP3	---	2-10	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	---	5-10
Hooker balsamroot	BAHO	2-5	---	---	---	---	---	---
eriogonum	ERIOG	---	---	1-5	---	---	---	---
lupine	LUPIN	---	---	1-3	---	---	---	---
tapertip hawksbeard	CRAC2	1-2	---	---	---	---	---	---
Lahontan sagebrush	ARARL*	10-20	30-45	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---	---	---
antelope bitterbrush	PUTR2	---	---	---	---	2-10	---	---
big sagebrush	ARTR2	---	---	---	---	15-25	---	---
ephedra	EPHED	---	2-5	---	---	---	---	---
low sagebrush	ARAR8	---	---	2-10	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	---	X	---
rubber rabbitbrush	CHNA2	---	---	30-50	---	---	---	2-5
shadscale	ATCO	---	2-5	---	---	---	---	---
silver sagebrush	ARCA13	---	---	---	---	---	---	30-40
spiny hopsage	GRSP	---	2-5	---	2-5	---	---	---

Range site number	023XY037NV	023XY047NV	023XY001NV	023XY006NV	023XY020NV	023XY024NV	023XY003NV
Potential production (lb/acre):							
Favorable years	700	500	350	800	1100	700	1800
Normal years	600	350	225	600	900	500	1400
Unfavorable years	400	200	150	400	600	300	700

1130--SOUGHE-ROCK OUTCROP COMPLEX, 4 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--			
		SOUGHE	ROCK OUTCROP	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	5-15	---	---	5-15
Sandberg bluegrass	POSE	2-5	---	---	2-5
Thurber needlegrass	STTH2	20-40	---	10-20	20-40
Webber needlegrass	STWE	2-8	---	---	2-8
basin wildrye	ELCI2	---	---	2-10	---
bluebunch wheatgrass	AGSP	---	---	40-60	---
bottlebrush squirreltail	SIHY	2-5	---	---	2-5
Wyoming big sagebrush	ARTRW	20-30	---	10-20	20-30
antelope bitterbrush	PUTR2	---	---	2-5	---
big sagebrush	ARTR2	---	---	15-25	---
mountain big sagebrush	ARVA2	---	---	10-20	---
spiny hopsage	GRSP	2-5	---	---	2-5
Range site number		023XY006NV	none	023XY039NV	023XY006NV
Potential production (lb/acre):					
Favorable years		800		900	800
Normal years		600		700	600
Unfavorable years		400		500	400

1131--SOUGHE-ROCK OUTCROP COMPLEX, 30 TO 50 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--				
		SOUGHE	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	2-5	---	---
Indian ricegrass	ORHY	5-15	---	---	5-15	---
Nevada bluegrass	PONE3	---	---	---	---	2-8
Sandberg bluegrass	POSE	2-5	---	---	2-8	---
Thurber needlegrass	STTH2	20-40	---	15-20	15-25	---
Webber needlegrass	STWE	2-8	---	---	---	---
basin wildrye	ELCI2	---	---	5-10	---	65-75
bluebunch wheatgrass	AGSP	---	---	30-40	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	2-5	---
globemallow	SPHAE	---	---	---	1-2	---
Wyoming big sagebrush	ARTRW	20-30	---	---	20-35	---
antelope bitterbrush	PUTR2	---	---	2-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10
big sagebrush	ARTR2	---	---	15-25	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	1-3
spiny hopsage	GRSP	2-5	---	---	5-20	---
Range site number		023XY006NV	none	023XY020NV	024XY020NV	023XY009NV
Potential production (lb/acre):						
Favorable years		800		1100	700	5500
Normal years		600		900	450	4500
Unfavorable years		400		600	300	2500

1135--MCWATT-OLD CAMP 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--					
		MCWATT	OLD CAMP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	2-5	2-5
Indian ricegrass	ORHY	5-15	5-15	---	5-15	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	---	---
Thurber needlegrass	STTH2	20-40	20-40	---	20-40	15-20	15-20
Webber needlegrass	STWE	2-8	2-8	---	2-8	---	---
basin wildrye	ELCI2	---	---	---	---	5-10	5-10
bluebunch wheatgrass	AGSP	---	---	---	---	30-40	30-40
bottlebrush squirreltail	SIHY	2-5	2-5	---	2-5	---	---
Wyoming big sagebrush	ARTRW	20-30	20-30	---	20-30	---	---
antelope bitterbrush	PUTR2	---	---	---	---	2-10	2-10
big sagebrush	ARTR2	---	---	---	---	15-25	15-25
spiny hopsage	GRSP	2-5	2-5	---	2-5	---	---
Range site number		023XY006NV	023XY006NV	none	023XY006NV	023XY020NV	023XY020NV
Potential production (lb/acre):							
Favorable years		800	800		800	1100	1100
Normal years		600	600		600	900	900
Unfavorable years		400	400		400	600	600

1140--VALMY 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--		
		VALMY	Inclusion 1	Inclusion 2
basin wildrye	ELCI2	55-65	---	15-20
bottlebrush squirreltail	SIHY	---	5-10	2-10
creeping wildrye	ELTR3	5-15	---	---
inland saltgrass	DISPS2	---	---	2-8
western wheatgrass	AGSM	5-15	---	---
basin big sagebrush	ARTRT	10-15	---	---
black greasewood	SAVE4	2-8	15-30	50-65
bud sagebrush	ARSP5	---	2-8	---
seepweed	SUAED	---	2-8	---
shadscale	ATCO	---	30-50	---
Range site number		024XY006NV	024XY003NV	024XY008NV
Potential production (lb/acre):				
Favorable years		1500	600	700
Normal years		1100	450	450
Unfavorable years		600	300	300

1141--VALMY-LANGSTON-PAYPOINT 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--					
		VALMY	LANGSTON	PAYPOINT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	2-5	5-15	---	---	5-15	5-15
Nevada bluegrass	PONE3	---	---	---	2-10	---	---
Sandberg bluegrass	POSE	---	2-5	---	---	2-5	2-5
Thurber needlegrass	STTH2	---	20-40	5-15	---	20-40	20-40
Webber needlegrass	STWE	---	2-8	---	---	2-8	2-8
basin wildrye	ELCI2	5-20	---	30-40	40-60	---	---
bluegrass	POA++	---	---	30-40	---	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	---	---	2-5	2-5
western wheatgrass	AGSM	---	---	---	2-10	---	---
globemallow	SPHAE	1-2	---	---	---	---	---
lupine	LUPIN	---	---	2-5	---	---	---
povertyweed	IVAX	---	---	---	2-5	---	---
thelypody	THELY	2-4	---	---	1-3	---	---
Wyoming big sagebrush	ARTRW	---	20-30	---	---	20-30	20-30
basin big sagebrush	ARTRT	---	---	---	5-15	---	---
big sagebrush	ARTR2	10-25	---	15-25	---	---	---
black greasewood	SAVE4	20-30	---	---	---	---	---
spiny hopsage	GRSP	5-15	2-5	---	---	2-5	2-5
Range site number		024XY022NV	023XY006NV	023XY082NV	023XY005NV	023XY006NV	023XY006NV
Potential production (lb/acre):							
Favorable years		800	800	1100	3000	800	800
Normal years		600	600	800	2000	600	600
Unfavorable years		350	400	600	1300	400	400

1145--WENDANE SILT LOAM, 0 TO 2 PERCENT SLOPES, 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--			
		WENDANE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	25-35	---
basin wildrye	ELCI2	5-15	---	2-5	---
bottlebrush squirreltail	SIHY	---	5-10	---	---
inland saltgrass	DISPS2	5-10	---	---	---
needleandthread	STCO4	---	---	5-10	---
black greasewood	SAVE4	60-75	15-30	35-45	---
bud sagebrush	ARSP5	---	2-8	---	---
seepweed	SUAED	---	2-8	---	---
shadscale	ATCO	---	30-50	---	---
spiny hopsage	GRSP	---	---	5-15	---
Range site number		024XY011NV	024XY003NV	024XY066NV	none
Potential production (lb/acre):					
Favorable years		500	600	600	
Normal years		350	450	400	
Unfavorable years		200	300	250	

1150--SARAPH-HANGROCK-TUFFO 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--						
		SARAPH	HANGROCK	TUFFO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	5-15	15-30	---	---	2-8	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	2-5	---
Thurber needlegrass	STTH2	20-40	20-40	---	5-15	---	15-30	---
Webber needlegrass	STWE	2-8	2-8	---	---	5-15	---	---
basin wildrye	ELCI2	---	---	2-8	30-40	---	---	---
bluegrass	POA++	---	---	---	30-40	---	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	5-10	---	---	2-5	---
desert needlegrass	STSP3	---	---	---	---	---	2-10	---
lupine	LUPIN	---	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---	---
Lahontan sagebrush	ARARL*	---	---	---	---	---	30-45	---
Wyoming big sagebrush	ARTRW	20-30	20-30	30-40	---	---	---	---
antelope bitterbrush	PUTR2	---	---	T-10	---	---	---	---
big sagebrush	ARTR2	---	---	---	15-25	---	---	---
ephedra	EPHED	---	---	---	---	---	2-5	---
shadscale	ATCO	---	---	---	---	---	2-5	---
spiny hopsage	GRSP	2-5	2-5	2-10	---	---	2-5	---
winterfat	EULA5	---	---	T-10	---	---	---	---
Range site number		023XY006NV	023XY006NV	023XY088NV	023XY082NV	023XY093NV	023XY047NV	none
Potential production (lb/acre):								
Favorable years		800	800	350	1100	600	500	
Normal years		600	600	200	800	450	350	
Unfavorable years		400	400	100	600	300	200	

1151--SARAPH-TUFFO-YELLOWHILLS 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--				
		SARAPH	TUFFO	YELLOWHILLS	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	2-5	---	---	---
Idaho fescue	FEID	---	---	40-50	---	---
Indian ricegrass	ORHY	5-15	---	---	---	---
Sandberg bluegrass	POSE	2-5	---	---	---	---
Thurber needlegrass	STTH2	20-40	15-20	10-20	---	10-25
Webber needlegrass	STWE	2-8	---	---	---	---
basin wildrye	ELCI2	---	5-10	2-5	---	---
bluebunch wheatgrass	AGSP	---	30-40	2-8	---	20-50
bluegrass	POA++	---	---	---	---	5-10
bottlebrush squirreltail	SIHY	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	20-30	---	---	---	---
antelope bitterbrush	PUTR2	---	2-10	---	---	---
basin big sagebrush	ARTRT	---	---	15-25	---	---
big sagebrush	ARTR2	---	15-25	---	---	---
low sagebrush	ARAR8	---	---	---	---	10-20
spiny hopsage	GRSP	2-5	---	---	---	---
Range site number		023XY006NV	023XY020NV	023XY071NV	none	023XY031NV
Potential production (lb/acre):						
Favorable years		800	1100	1000		900
Normal years		600	900	800		700
Unfavorable years		400	600	600		500

1155--MADELINE-NINEMILE COMPLEX, 4 TO 15 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--					
		MADELINE	NINEMILE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	2-5	2-5	---
Idaho fescue	FEID	5-20	30-50	---	---	---	30-40
Thurber needlegrass	STTH2	5-10	2-8	10-25	15-20	15-20	2-8
basin wildrye	ELCI2	5-10	---	---	5-10	5-10	5-10
bluebunch wheatgrass	AGSP	25-35	15-30	20-50	30-40	30-40	25-40
bluegrass	POA++	---	2-8	5-10	---	---	2-5
antelope bitterbrush	PUTR2	15-25	---	---	2-10	2-10	2-10
big sagebrush	ARTR2	---	---	---	15-25	15-25	---
low sagebrush	ARAR8	---	10-20	10-20	---	---	---
mountain big sagebrush	ARVA2	5-15	---	---	---	---	10-20
Range site number		023XY015NV	023XY017NV	023XY031NV	023XY020NV	023XY020NV	023XY007NV
Potential production (lb/acre):							
Favorable years		1500	900	900	1100	1100	1600
Normal years		1200	700	700	900	900	1200
Unfavorable years		900	500	500	600	600	900

1160--WYLO-BUCKLAKE-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--					
		WYLO	BUCKLAKE	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	---	---	5-15	---
Sandberg bluegrass	POSE	---	---	---	---	2-5	---
Thurber needlegrass	STTH2	5-15	10-20	---	---	20-40	5-15
Webber needlegrass	STWE	---	---	---	5-15	2-8	---
basin wildrye	ELCI2	---	2-10	---	---	---	---
bluebunch wheatgrass	AGSP	40-60	40-60	---	---	---	40-60
bluegrass	POA++	2-8	---	---	---	---	2-8
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	---
Hooker balsamroot	BAHO	2-5	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	1-2	---	---	---	---	1-2
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
Lahontan sagebrush	ARARL*	10-20	---	---	---	---	10-20
Wyoming big sagebrush	ARTRW	---	10-20	---	---	20-30	---
antelope bitterbrush	PUTR2	---	2-5	---	---	---	---
big sagebrush	ARTR2	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	---	---
spiny hopsage	GRSP	---	---	---	---	2-5	---
Range site number		023XY037NV	023XY039NV	none	023XY093NV	023XY006NV	023XY037NV
Potential production (lb/acre):							
Favorable years		700	900		600	800	700
Normal years		600	700		450	600	600
Unfavorable years		400	500		300	400	400

1162--DEVADA-NITPAC 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--					
		DEVADA	NITPAC	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	2-5	---
Idaho fescue	FEID	---	---	---	---	---	30-50
Sandberg bluegrass	POSE	---	---	30-45	---	---	---
Thurber needlegrass	STTH2	10-25	10-25	---	30-40	15-20	2-8
Webber needlegrass	STWE	---	---	2-5	5-15	---	---
basin wildrye	ELCI2	---	---	---	---	5-10	---
bluebunch wheatgrass	AGSP	20-50	20-50	---	2-8	30-40	15-30
bluegrass	POA++	5-10	5-10	---	5-10	---	2-8
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	---	---	---	---	2-10	---
big sagebrush	ARTR2	---	---	---	---	15-25	---
low sagebrush	ARAR8	10-20	10-20	30-45	20-30	---	10-20
Range site number		023XY031NV	023XY031NV	023XY021NV	023XY059NV	023XY020NV	023XY017NV
Potential production (lb/acre):							
Favorable years		900	900	300	600	1100	900
Normal years		700	700	200	450	900	700
Unfavorable years		500	500	150	300	600	500

1163--DEVADA-DESEED COMPLEX, 2 TO 15 PERCENT SLOPES

(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--					
		DEVADA	DESEED	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	2-5	2-5	2-5	2-5	X
Cusick bluegrass	POCU3	---	---	---	---	---	X
Thurber needlegrass	STTH2	10-25	15-20	15-20	15-20	15-20	---
basin wildrye	ELCI2	---	5-10	5-10	5-10	5-10	---
bluebunch wheatgrass	AGSP	20-50	30-40	30-40	30-40	30-40	X
bluegrass	POA++	5-10	---	---	---	---	---
prairie junegrass	KOPY	---	---	---	---	---	X
antelope bitterbrush	PUTR2	---	2-10	2-10	2-10	2-10	---
big sagebrush	ARTR2	---	15-25	15-25	15-25	15-25	---
low sagebrush	ARAR8	10-20	---	---	---	---	X
Range site number		023XY031NV	023XY020NV	023XY020NV	023XY020NV	023XY020NV	023XY091NV
Potential production (lb/acre):							
Favorable years		900	1100	1100	1100	1100	600
Normal years		700	900	900	900	900	400
Unfavorable years		500	600	600	600	600	200

1164--DEVADA-ASHCAMP 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--					
		DEVADA	ASHCAMP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	2-5	---	---	---	---
Indian ricegrass	ORHY	---	---	---	5-15	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	---
Thurber needlegrass	STTH2	10-25	15-20	5-15	20-40	30-40	---
Webber needlegrass	STWE	---	---	---	2-8	5-15	---
basin wildrye	ELCI2	---	5-10	---	---	---	---
bluebunch wheatgrass	AGSP	20-50	30-40	40-60	---	2-8	---
bluegrass	POA++	5-10	---	2-8	---	5-10	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---
Hooker balsamroot	BAHO	---	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	---	---	1-2	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---
Lahontan sagebrush	ARARL*	---	---	10-20	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---	---
antelope bitterbrush	PUTR2	---	2-10	---	---	---	---
big sagebrush	ARTR2	---	15-25	---	---	---	---
low sagebrush	ARAR8	10-20	---	---	---	20-30	---
spiny hopsage	GRSP	---	---	---	2-5	---	---
Range site number		023XY031NV	023XY020NV	023XY037NV	023XY006NV	023XY059NV	none
Potential production (lb/acre):							
Favorable years		900	1100	700	800	600	
Normal years		700	900	600	600	450	
Unfavorable years		500	600	400	400	300	

1165--DEVADA-NITPAC-BIDRIM 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--						
		DEVADA	NITPAC	BIDRIM	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	X	---	---	---	---
Cusick bluegrass	POCU3	---	---	X	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	5-10	---	30-45	---
Thurber needlegrass	STTH2	10-25	10-25	---	---	10-20	---	30-40
Webber needlegrass	STWE	---	---	---	---	---	2-5	5-15
basin wildrye	ELCI2	---	---	---	---	2-10	---	---
bluebunch wheatgrass	AGSP	20-50	20-50	X	---	40-60	---	2-8
bluegrass	POA++	5-10	5-10	---	---	---	---	5-10
bottlebrush squirreltail	SIHY	---	---	---	10-20	---	---	---
prairie junegrass	KOPY	---	---	X	---	---	---	---
eriogonum	ERIOG	---	---	---	1-5	---	---	---
lupine	LUPIN	---	---	---	1-3	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	10-20	---	---
antelope bitterbrush	PUTR2	---	---	---	---	2-5	---	---
big sagebrush	ARTR2	---	---	---	---	15-25	---	---
low sagebrush	ARAR8	10-20	10-20	X	2-10	---	30-45	20-30
mountain big sagebrush	ARVA2	---	---	---	---	10-20	---	---
rubber rabbitbrush	CHNA2	---	---	---	30-50	---	---	---

Range site number	023XY031NV	023XY031NV	023XY091NV	023XY001NV	023XY039NV	023XY021NV	023XY059NV
Potential production (lb/acre):							
Favorable years	900	900	600	350	900	300	600
Normal years	700	700	400	225	700	200	450
Unfavorable years	500	500	200	150	500	150	300

1166--DEVADA-BIEBER 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--			
		DEVADA	BIEBER	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	---	---	5-15	---
Sandberg bluegrass	POSE	---	---	2-5	---
Thurber needlegrass	STTH2	10-25	10-25	20-40	10-20
Webber needlegrass	STWE	---	---	2-8	---
basin wildrye	ELCI2	---	---	---	2-10
bluebunch wheatgrass	AGSP	20-50	20-50	---	40-60
bluegrass	POA++	5-10	5-10	---	---
bottlebrush squirreltail	SIHY	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	20-30	10-20
antelope bitterbrush	PUTR2	---	---	---	2-5
big sagebrush	ARTR2	---	---	---	15-25
low sagebrush	ARAR8	10-20	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	10-20
spiny hopsage	GRSP	---	---	2-5	---
Range site number		023XY031NV	023XY031NV	023XY006NV	023XY039NV
Potential production (lb/acre):					
Favorable years		900	900	800	900
Normal years		700	700	600	700
Unfavorable years		500	500	400	500

1167--DEVADA-REYWAT 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--					
		DEVADA	REYWAT	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	2-5	---	---	---	---
Idaho fescue	FEID	---	---	---	---	5-20	---
Thurber needlegrass	STTH2	10-25	15-20	10-20	10-20	5-10	30-40
Webber needlegrass	STWE	---	---	---	---	---	5-15
basin wildrye	ELCI2	---	5-10	2-10	2-10	5-10	---
bluebunch wheatgrass	AGSP	20-50	30-40	40-60	40-60	25-35	2-8
bluegrass	POA++	5-10	---	---	---	---	5-10
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	10-20	10-20	---	---
antelope bitterbrush	PUTR2	---	2-10	2-5	2-5	15-25	---
big sagebrush	ARTR2	---	15-25	15-25	15-25	---	---
low sagebrush	ARAR8	10-20	---	---	---	---	20-30
mountain big sagebrush	ARVA2	---	---	10-20	10-20	5-15	---
Range site number		023XY031NV	023XY020NV	023XY039NV	023XY039NV	023XY015NV	023XY059NV
Potential production (lb/acre):							
Favorable years		900	1100	900	900	1500	600
Normal years		700	900	700	700	1200	450
Unfavorable years		500	600	500	500	900	300

1168--DEVADA EXTREMELY COBBLY LOAM, 4 TO 15 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--				
		DEVADA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Thurber needlegrass	STTH2	10-25	---	10-20	30-40	10-25
Webber needlegrass	STWE	---	---	---	5-15	---
basin wildrye	ELCI2	---	---	2-10	---	---
bluebunch wheatgrass	AGSP	20-50	---	40-60	2-8	20-50
bluegrass	POA++	5-10	---	---	5-10	5-10
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	10-20	---	---
antelope bitterbrush	PUTR2	---	---	2-5	---	---
big sagebrush	ARTR2	---	---	15-25	---	---
low sagebrush	ARAR8	10-20	---	---	20-30	10-20
mountain big sagebrush	ARVA2	---	---	10-20	---	---
Range site number		023XY031NV	none	023XY039NV	023XY059NV	023XY031NV
Potential production (lb/acre):						
Favorable years		900		900	600	900
Normal years		700		700	450	700
Unfavorable years		500		500	300	500

1170--DEVADA-BUCKLAKE 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--					
		DEVADA	BUCKLAKE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	X	---
Cusick bluegrass	POCU3	---	---	---	---	X	---
Idaho fescue	FEID	---	---	---	30-40	---	X
Nevada bluegrass	PONE3	---	---	---	---	---	X
Sandberg bluegrass	POSE	---	---	---	---	---	X
Thurber needlegrass	STTH2	10-25	10-20	5-10	2-8	---	X
basin wildrye	ELCI2	---	2-10	2-10	5-10	---	X
bluebunch wheatgrass	AGSP	20-50	40-60	60-70	25-40	X	X
bluegrass	POA++	5-10	---	---	2-5	---	---
prairie junegrass	KOPY	---	---	---	---	X	---
Wyoming big sagebrush	ARTRW	---	10-20	---	---	---	---
antelope bitterbrush	PUTR2	---	2-5	2-8	2-10	---	---
big sagebrush	ARTR2	---	15-25	---	---	---	---
low sagebrush	ARAR8	10-20	---	---	---	X	---
mountain big sagebrush	ARVA2	---	10-20	10-20	10-20	---	X
Range site number		023XY031NV	023XY039NV	023XY016NV	023XY007NV	023XY091NV	023XY024NV
Potential production (lb/acre):							
Favorable years		900	900	1500	1600	600	700
Normal years		700	700	1100	1200	400	500
Unfavorable years		500	500	800	900	200	300

1171--DEVADA-INDIAN 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--				
		DEVADA	INDIAN CREEK	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	2-5	---	---
Idaho fescue	FEID	---	---	---	---	5-20
Thurber needlegrass	STTH2	10-25	30-40	15-20	10-25	5-10
Webber needlegrass	STWE	---	5-15	---	---	---
basin wildrye	ELCI2	---	---	5-10	---	5-10
bluebunch wheatgrass	AGSP	20-50	2-8	30-40	20-50	25-35
bluegrass	POA++	5-10	5-10	---	5-10	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---
antelope bitterbrush	PUTR2	---	---	2-10	---	15-25
big sagebrush	ARTR2	---	---	15-25	---	---
low sagebrush	ARAR8	10-20	20-30	---	10-20	---
mountain big sagebrush	ARVA2	---	---	---	---	5-15
Range site number		023XY031NV	023XY059NV	023XY020NV	023XY031NV	023XY015NV
Potential production (lb/acre):						
Favorable years		900	600	1100	900	1500
Normal years		700	450	900	700	1200
Unfavorable years		500	300	600	500	900

1172--DEVADA-MADELINE-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--						
		DEVADA	MADELINE	NINEMILE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	5-20	30-50	---	30-50	---	10-20
Nevada bluegrass	PONE3	---	---	---	---	---	40-50	2-5
Thurber needlegrass	STTH2	10-25	5-10	2-8	10-25	2-8	---	---
basin wildrye	ELCI2	---	5-10	---	---	---	---	---
bluebunch wheatgrass	AGSP	20-50	25-35	15-30	20-50	15-30	---	---
bluegrass	POA++	5-10	---	2-8	5-10	2-8	---	---
mountain brome	BRCA5	---	---	---	---	---	---	10-20
needlegrass	STIPA	---	---	---	---	---	---	10-20
purple oniongrass	MESP	---	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	---	5-15	---
slender wheatgrass	AGTR	---	---	---	---	---	---	2-8
antelope bitterbrush	PUTR2	---	15-25	---	---	---	---	2-5
low sagebrush	ARAR8	10-20	---	10-20	10-20	10-20	---	---
mountain big sagebrush	ARVA2	---	5-15	---	---	---	---	---
snowberry	SYMPH	---	---	---	---	---	---	2-8
Range site number		023XY031NV	023XY015NV	023XY017NV	023XY031NV	023XY017NV	023XY013NV	023XY065NV
Potential production (lb/acre):								
Favorable years		900	1500	900	900	900	2200	2600
Normal years		700	1200	700	700	700	1700	1800
Unfavorable years		500	900	500	500	500	1300	1400

1173--DEVADA-NITPAC-UHALDI 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--						
		DEVADA	NITPAC	UHALDI	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	2-5	---	---	---	---
Idaho fescua	FEID	---	---	---	30-50	30-40	5-20	---
Thurber needlegrass	STTH2	10-25	10-25	15-20	2-8	2-8	5-10	10-20
basin wildrye	ELCI2	---	---	5-10	---	5-10	5-10	2-10
bluebunch wheatgrass	AGSP	20-50	20-50	30-40	15-30	25-40	25-35	40-60
bluegrass	POA++	5-10	5-10	---	2-8	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	10-20
antelope bitterbrush	PUTR2	---	---	2-10	---	2-10	15-25	2-5
big sagebrush	ARTR2	---	---	15-25	---	---	---	15-25
low sagebrush	ARAR8	10-20	10-20	---	10-20	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	10-20	5-15	10-20
Range site number		023XY031NV	023XY031NV	023XY020NV	023XY017NV	023XY007NV	023XY015NV	023XY039NV
Potential production (lb/acre):								
Favorable years		900	900	1100	900	1600	1500	900
Normal years		700	700	900	700	1200	1200	700
Unfavorable years		500	500	600	500	900	900	500

1174--DEVADA-UHALDI 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--				
		DEVADA	UHALDI	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	2-5	---	2-5	---
Idaho fescue	FEID	---	---	---	---	30-40
Thurber needlegrass	STTH2	10-25	15-20	10-20	15-20	2-8
basin wildrye	ELCI2	---	5-10	2-10	5-10	5-10
bluebunch wheatgrass	AGSP	20-50	30-40	40-60	30-40	25-40
bluegrass	POA++	5-10	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	10-20	---	---
antelope bitterbrush	PUTR2	---	2-10	2-5	2-10	2-10
big sagebrush	ARTR2	---	15-25	15-25	15-25	---
low sagebrush	ARAR8	10-20	---	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	10-20
Range site number		023XY031NV	023XY020NV	023XY039NV	023XY020NV	023XY007NV
Potential production (lb/acre):						
Favorable years		900	1100	900	1100	1600
Normal years		700	900	700	900	1200
Unfavorable years		500	600	500	600	900

1175--FERVER-TUNNISON 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--				
		FERVER	TUNNISON	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	---	---	---	---	15-35
Sandberg bluegrass	POSE	---	5-10	30-45	---	---
Thurber needlegrass	STTH2	30-40	---	---	10-25	---
Webber needlegrass	STWE	5-15	---	2-5	---	---
bluebunch wheatgrass	AGSP	2-8	---	---	20-50	---
bluegrass	POA++	5-10	---	---	5-10	---
bottlebrush squirreltail	SIHY	---	10-20	---	---	---
creeping wildrye	ELTR3	---	---	---	---	5-15
mat muhly	MURI	---	---	---	---	5-10
eriogonum	ERIOG	---	1-5	---	---	---
lupine	LUPIN	---	1-3	---	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---
low sagebrush	ARAR8	20-30	2-10	30-45	10-20	---
rubber rabbitbrush	CHNA2	---	30-50	---	---	2-5
silver sagebrush	ARCA13	---	---	---	---	30-40
Range site number		023XY059NV	023XY001NV	023XY021NV	023XY031NV	023XY003NV
Potential production (lb/acre):						
Favorable years		600	350	300	900	1800
Normal years		450	225	200	700	1400
Unfavorable years		300	150	150	500	700

1180--NINEMILE-KARLO 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	KARLO	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	---	30-50	5-20	10-20
Sandberg bluegrass	POSE	---	5-10	---	---	---
Thurber needlegrass	STTH2	2-8	---	2-8	5-10	---
basin wildrye	ELCI2	---	---	---	5-10	---
bluebunch wheatgrass	AGSP	15-30	---	15-30	25-35	5-15
bluegrass	POA++	2-8	---	2-8	---	2-5
bottlebrush squirreltail	SIHY	---	10-20	---	---	---
mountain brome	BRCA5	---	---	---	---	2-8
needlegrass	STIPA	---	---	---	---	5-15
eriogonum	ERIOG	---	1-5	---	---	---
lupine	LUPIN	---	1-3	---	---	---
antelope bitterbrush	PUTR2	---	---	---	15-25	---
curlleaf mountainmahogany	CELE3	---	---	---	---	25-40
low sagebrush	ARAR8	10-20	2-10	10-20	---	---
mountain big sagebrush	ARVA2	---	---	---	5-15	5-10
rubber rabbitbrush	CHNA2	---	30-50	---	---	---
snowberry	SYMPH	---	---	---	---	2-5
Range site number		023XY017NV	023XY001NV	023XY017NV	023XY015NV	023XY026NV
Potential production (lb/acre):						
Favorable years		900	350	900	1500	1400
Normal years		700	225	700	1200	1100
Unfavorable years		500	150	500	900	600

1181--NINEMILE-MADELINE-TINPAN 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--					
		NINEMILE	MADELINE	TINPAN	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	---	X
Cusick bluegrass	POCU3	---	---	---	---	---	X
Idaho fescue	FEID	30-50	5-20	30-50	---	10-20	X
Nevada bluegrass	PONE3	---	---	---	---	2-5	---
Sandberg bluegrass	POSE	---	---	---	5-10	---	---
Thurber needlegrass	STTH2	2-8	5-10	2-8	---	---	X
basin wildrye	ELCI2	---	5-10	---	---	---	---
bluebunch wheatgrass	AGSP	15-30	25-35	15-30	---	---	X
bluegrass	POA++	2-8	---	2-8	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	10-20	---	---
mountain brome	BRCA5	---	---	---	---	10-20	---
needlegrass	STIPA	---	---	---	---	10-20	---
purple oniongrass	MESP	---	---	---	---	2-5	---
slender wheatgrass	AGTR	---	---	---	---	2-8	---
western needlegrass	STOC2	---	---	---	---	---	X
eriogonum	ERIOG	---	---	---	1-5	---	---
low sagebrush	ARAR8	10-20	---	10-20	2-10	---	X
lupine	LUPIN	---	---	---	1-3	---	---
antelope bitterbrush	PUTR2	---	15-25	---	---	2-5	---
low sagebrush	ARAR8	10-20	---	10-20	2-10	---	X
mountain big sagebrush	ARVA2	---	5-15	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	30-50	---	---
snowberry	SYMPH	---	---	---	---	2-8	---
Range site number		023XY017NV	023XY015NV	023XY017NV	023XY001NV	023XY065NV	023XY095NV
Potential production (lb/acre):							
Favorable years		900	1500	900	350	2600	600
Normal years		700	1200	700	225	1800	400
Unfavoreble years		500	900	500	150	1400	200

1182--NINEMILE-WESTBUTTE COMPLEX, 2 TO 15 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--			
		NINEMILE	WESTBUTTE	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	---	---	2-5
Idaho fescue	FEID	30-50	30-40	---	2-15
Thurber needlegrass	STTH2	2-8	2-8	10-25	35-50
basin wildrye	ELCI2	---	5-10	---	---
bluebunch wheatgrass	AGSP	15-30	25-40	20-50	15-25
bluegrass	POA++	2-8	2-5	5-10	---
antelope bitterbrush	PUTR2	---	2-10	---	2-5
big sagebrush	ARTR2	---	---	---	10-20
low sagebrush	ARAR8	10-20	---	10-20	---
mountain big sagebrush	ARVA2	---	10-20	---	---
Range site number		023XY017NV	023XY007NV	023XY031NV	023XY096NV
Potential production (lb/acre):					
Favorable years		900	1600	900	1100
Normal years		700	1200	700	900
Unfavorable years		500	900	500	600

1183--NINEMILE-WESTBUTTE ASSOCIATION, 30 TO 50 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--				
		NINEMILE	WESTBUTTE	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	30-40	40-60	40-60	---
Thurber needlegrass	STTH2	2-8	2-8	---	---	10-25
basin wildrye	ELCI2	---	5-10	---	---	---
bluebunch wheatgrass	AGSP	15-30	25-40	2-10	---	20-50
bluegrass	POA++	2-8	2-5	5-10	2-8	5-10
needlegrass	STIPA	---	---	---	5-15	---
antelope bitterbrush	PUTR2	---	2-10	---	---	---
low sagebrush	ARAR8	10-20	---	10-20	---	10-20
mountain big sagebrush	ARVA2	---	10-20	---	10-20	---
Range site number		023XY017NV	023XY007NV	023XY079NV	023XY094NV	023XY031NV
Potential production (lb/acre):						
Favorable years		900	1600	1200	1300	900
Normal years		700	1200	900	1000	700
Unfavoreble years		500	900	600	700	500

1184--NINEMILE-TINPAN 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--				
		NINEMILE	TINPAN	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	X
Cusick bluegrass	POCU3	---	---	---	---	X
Idaho fescue	FEID	30-50	30-50	---	40-50	X
Thurber needlegrass	STTH2	2-8	2-8	10-25	---	X
bluebunch wheatgrass	AGSP	15-30	15-30	20-50	2-5	X
bluegrass	POA++	2-8	2-8	5-10	5-15	---
onespike oatgrass	DAUN	---	---	---	1-3	---
western needlegrass	STOC2	---	---	---	---	X
arrowleaf balsamroot	BASA3	---	---	---	2-5	---
low sagebrush	ARAR8	10-20	10-20	10-20	10-20	X
Range site number		023XY017NV	023XY017NV	023XY031NV	023XY014NV	023XY095NV
Potential production (lb/acre):						
Favorable years		900	900	900	800	600
Normal years		700	700	700	600	400
Unfavorable years		500	500	500	400	200

1185--NINEMILE-HART CAMP 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	HART CAMP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	---	---	5-15
Idaho fescue	FEID	30-50	5-20	---	15-25	30-40	50-60
Thurber needlegrass	STTH2	2-8	5-10	10-25	---	2-8	---
basin wildrye	ELCI2	---	5-10	---	---	5-10	2-5
bluebunch wheatgrass	AGSP	15-30	25-35	20-50	---	25-40	5-15
bluegrass	POA++	2-8	---	5-10	5-15	2-5	---
goldenweed	HAPLO2	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	---	15-25	---	---	2-10	---
low sagebrush	ARAR8	10-20	---	10-20	35-45	---	---
mountain big sagebrush	ARVA2	---	5-15	---	---	10-20	5-15
snowberry	SYMPH	---	---	---	---	---	2-5
Range site number		023XY017NV	023XY015NV	023XY031NV	023XY008NV	023XY007NV	023XY054NV
Potential production (lb/acre):							
Favorable years		900	1500	900	400	1600	1500
Normal years		700	1200	700	250	1200	1200
Unfavorable years		500	900	500	200	900	900

1186--NINEMILE-TINPAN-CROCAN 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--						
		NINEMILE	TINPAN	CROCAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	X	---	---	---	---
Cusick bluegrass	POCU3	---	---	X	---	---	---	---
Idaho fescue	FEID	30-50	30-50	X	---	---	40-50	5-20
Sandberg bluegrass	POSE	---	---	---	---	5-10	---	---
Thurber needlegrass	STTH2	2-8	2-8	X	10-25	---	---	5-10
basin wildrye	ELCI2	---	---	---	---	---	---	5-10
bluebunch wheatgrass	AGSP	15-30	15-30	X	20-50	---	2-5	25-35
bluegrass	POA++	2-8	2-8	---	5-10	---	5-15	---
bottlebrush squirreltail	SIHY	---	---	---	---	10-20	---	---
onespike oatgrass	DAUN	---	---	---	---	---	1-3	---
western needlegrass	STOC2	---	---	X	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	2-5	---
eriogonum	ERIOG	---	---	---	---	1-5	---	---
low sagebrush	ARAR8	10-20	10-20	X	10-20	2-10	10-20	---
lupine	LUPIN	---	---	---	---	1-3	---	---
antelope bitterbrush	PUTR2	---	---	---	---	---	---	15-25
low sagebrush	ARAR8	10-20	10-20	X	10-20	2-10	10-20	---
mountain big sagebrush	ARVA2	---	---	---	---	---	---	5-15
rubber rabbitbrush	CHNA2	---	---	---	---	30-50	---	---
Range site number		023XY017NV	023XY017NV	023XY095NV	023XY031NV	023XY001NV	023XY014NV	023XY015NV
Potential production (lb/acre):								
Favorable years		900	900	600	900	350	800	1500
Normal years		700	700	400	700	225	600	1200
Unfavorable years		500	500	200	500	150	400	900

1187--NINEMILE-TINPAN-HART CAMP 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	TINPAN	HART CAMP	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	30-50	5-20	15-25	---	40-60
Thurber needlegrass	STTH2	2-8	2-8	5-10	---	10-25	---
basin wildrye	ELCI2	---	---	5-10	---	---	---
bluebunch wheatgrass	AGSP	15-30	15-30	25-35	---	20-50	---
bluegrass	POA++	2-8	2-8	---	5-15	5-10	2-8
needlegrass	STIPA	---	---	---	---	---	5-15
goldenweed	HAPLO2	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	---	---	15-25	---	---	---
low sagebrush	ARAR8	10-20	10-20	---	35-45	10-20	---
mountain big sagebrush	ARVA2	---	---	5-15	---	---	10-20
Range site number		023XY017NV	023XY017NV	023XY015NV	023XY008NV	023XY031NV	023XY094NV
Potential production (lb/acre):							
Favorable years		900	900	1500	400	900	1300
Normal years		700	700	1200	250	700	1000
Unfavorable years		500	500	900	200	500	700

1188--NINEMILE-NEWLANDS-HART CAMP 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	NEWLANDS	HART CAMP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-50	10-20	5-20	---	30-50	---	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	---	---
Thurber needlegrass	STTH2	2-8	---	5-10	5-10	2-8	10-25	5-15
basin wildrye	ELCI2	---	---	5-10	2-10	---	---	30-40
bluebunch wheatgrass	AGSP	15-30	---	25-35	60-70	15-30	20-50	---
bluegrass	POA++	2-8	---	---	---	2-8	5-10	30-40
mountain brome	BRCA5	---	10-20	---	---	---	---	---
needlegrass	STIPA	---	10-20	---	---	---	---	---
purple oniongrass	MESP	---	2-5	---	---	---	---	---
slender wheatgrass	AGTR	---	2-8	---	---	---	---	---
lupine	LUPIN	---	---	---	---	---	---	2-5
antelope bitterbrush	PUTR2	---	2-5	15-25	2-8	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	---	15-25
low sagebrush	ARAR8	10-20	---	---	---	10-20	10-20	---
mountain big sagebrush	ARVA2	---	---	5-15	10-20	---	---	---
snowberry	SYMPH	---	2-8	---	---	---	---	---
Range site number		023XY017NV	023XY065NV	023XY015NV	023XY016NV	023XY017NV	023XY031NV	023XY082NV
Potential production (lb/acre):								
Favorable years		900	2600	1500	1500	900	900	1100
Normal years		700	1800	1200	1100	700	700	800
Unfavorable years		500	1400	900	800	500	500	600

1189--NINEMILE-BADGERCAMP-CROCAN 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--						
		NINEMILE	BADGERCAMP	CROCAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	X	---	---	---	---
Cusick bluegrass	POCU3	---	---	X	---	---	---	---
Idaho fescue	FEID	30-50	10-20	X	5-20	10-20	X	40-50
Nevada bluegrass	PONE3	---	---	---	---	2-5	X	---
Thurber needlegrass	STTH2	2-8	---	X	5-10	---	---	---
basin wildrye	ELCI2	---	---	---	5-10	---	---	---
big squirreltail	SIJU	---	---	---	---	---	X	---
bluebunch wheatgrass	AGSP	15-30	5-15	X	25-35	---	---	2-5
bluegrass	POA++	2-8	2-5	---	---	---	---	5-15
melic	MELIC	---	---	---	---	---	X	---
mountain brome	BRCA5	---	2-8	---	---	10-20	X	---
needlegrass	STIPA	---	5-15	---	---	10-20	---	---
onespike oatgrass	DAUN	---	---	---	---	---	---	1-3
purple oniongrass	MESP	---	---	---	---	2-5	---	---
slender wheatgrass	AGTR	---	---	---	---	2-8	X	---
western needlegrass	STOC2	---	---	X	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	2-5
low sagebrush	ARAR8	10-20	---	X	---	---	---	10-20
meadowrue	THALI2	---	---	---	---	---	X	---
antelope bitterbrush	PUTR2	---	---	---	15-25	2-5	---	---
curlleaf mountainmahogany	CELE3	---	25-40	---	---	---	---	---
low sagebrush	ARAR8	10-20	---	X	---	---	---	10-20
mountain big sagebrush	ARVA2	---	5-10	---	5-15	---	X	---
snowberry	SYMPH	---	2-5	---	---	2-8	X	---
quaking aspen	POTRT	---	---	---	---	---	X	---

Range site number	023XY017NV	023XY026NV	023XY095NV	023XY015NV	023XY065NV	023XY028NV	023XY014NV
Potential production (lb/acre):							
Favoreble years	900	1400	600	1500	2600	600	800
Normal years	700	1100	400	1200	1800	400	600
Unfavorable years	500	600	200	900	1400	250	400

1190--FERVER-NITPAC 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--					
		FERVER	NITPAC	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Nevada bluegrass	PONE3	---	---	---	---	15-35	---
Sandberg bluegrass	POSE	---	---	5-10	---	---	---
Thurber needlegrass	STTH2	30-40	10-25	---	10-25	---	---
Webber needlegrass	STWE	5-15	---	---	---	---	---
bluebunch wheatgrass	AGSP	2-8	20-50	---	20-50	---	---
bluegrass	POA++	5-10	5-10	---	5-10	---	---
bottlebrush squirreltail	SIHY	---	---	10-20	---	---	---
creeping wildrye	ELTR3	---	---	---	---	5-15	---
mat muhly	MURI	---	---	---	---	5-10	5-10
dock	RUMEX	---	---	---	---	---	1-2
eriogonum	ERIOG	---	---	1-5	---	---	---
eveningprimrose	OENOT	---	---	---	---	---	2-5
lupine	LUPIN	---	---	1-3	---	---	---
povertyweed	IVAX	---	---	---	---	---	5-10
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---	---
low sagebrush	ARAR8	20-30	10-20	2-10	10-20	---	---
rubber rabbitbrush	CHNA2	---	---	30-50	---	2-5	---
silver sagebrush	ARCA13	---	---	---	---	30-40	---
Range site number		023XY059NV	023XY031NV	023XY001NV	023XY031NV	023XY003NV	023XY023NV
Potential production (lb/acre):							
Favorable years		600	900	350	900	1800	1500
Normal years		450	700	225	700	1400	400
Unfavorable years		300	500	150	500	700	0

1195--BITNER-ASHCAMP 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--				
		BITNER	ASHCAMP	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	2-5	2-5	---	---	2-5
Cusick bluegrass	POCU3	---	---	---	2-8	---
Idaho fescue	FEID	2-15	---	---	40-60	---
Thurber needlegrass	STTH2	35-50	15-20	10-20	5-15	15-20
basin wildrye	ELCI2	---	5-10	2-10	---	5-10
bluebunch wheatgrass	AGSP	15-25	30-40	40-60	2-8	30-40
Wyoming big sagebrush	ARTRW	---	---	10-20	15-25	---
antelope bitterbrush	PUTR2	2-5	2-10	2-5	---	2-10
big sagebrush	ARTR2	10-20	15-25	15-25	---	15-25
mountain big sagebrush	ARVA2	---	---	10-20	---	---
Range site number		023XY096NV	023XY020NV	023XY039NV	023XY072NV	023XY020NV
Potential production (lb/acre):						
Favorable years		1100	1100	900	800	1100
Normal years		900	900	700	500	900
Unfavorable years		600	600	500	350	600

1205--DAVEY LOAMY FINE SAND, 2 TO 15 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--			
		DAVEY	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	15-25	---	30-40	5-15
Sandberg bluegrass	POSE	---	---	---	2-5
Thurber needlegrass	STTH2	---	5-15	---	20-40
Webber needlegrass	STWE	---	---	---	2-8
basin wildrye	ELCI2	2-8	30-40	2-5	---
bluegrass	POA++	---	30-40	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5
needleandthread	STCO4	20-40	---	5-15	---
thickspike wheatgrass	AGDA	2-5	---	2-8	---
lupine	LUPIN	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30
basin big sagebrush	ARTRT	---	---	10-25	---
big sagebrush	ARTR2	10-20	15-25	---	---
fourwing saltbush	ATCA2	---	---	2-8	---
spiny hopsage	GRSP	2-5	---	5-10	2-5
Range site number		023XY051NV	023XY082NV	023XY011NV	023XY006NV
Potential production (lb/acre):					
Favorable years		900	1100	800	800
Normal years		700	800	600	600
Unfavorable years		500	600	300	400

1206--DAVEY-CORRAL 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--					
		DAVEY	CORRAL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-25	15-25	15-25	30-40	5-15	---
Sandberg bluegrass	POSE	---	---	---	---	2-5	---
Thurber needlegrass	STTH2	---	---	---	---	20-40	5-15
Webber needlegrass	STWE	---	---	---	---	2-8	---
basin wildrye	ELCI2	2-8	2-8	2-8	2-5	---	30-40
bluegrass	POA++	---	---	---	---	---	30-40
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	---
needleandthread	STCO4	20-40	20-40	20-40	5-15	---	---
thickspike wheatgrass	AGDA	2-5	2-5	2-5	2-8	---	---
lupine	LUPIN	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	20-30	---
basin big sagebrush	ARTRT	---	---	---	10-25	---	---
big sagebrush	ARTR2	10-20	10-20	10-20	---	---	15-25
fourwing saltbush	ATCA2	---	---	---	2-8	---	---
spiny hopsage	GRSP	2-5	2-5	2-5	5-10	2-5	---
Range site number		023XY051NV	023XY051NV	023XY051NV	023XY011NV	023XY006NV	023XY082NV
Potential production (lb/acre):							
Favorable years		900	900	900	800	800	1100
Normal years		700	700	700	600	600	800
Unfavorable years		500	500	500	300	400	600

1210--MAZUMA-BIGHAT 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--			
		MAZUMA	BIGHAT	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	10-20	5-15	---	---
bottlebrush squirreltail	SIHY	5-10	5-10	5-10	5-10
black greasewood	SAVE4	---	---	15-30	15-30
bud sagebrush	ARSP5	5-15	20-30	2-8	2-8
seepweed	SUAED	---	---	2-8	2-8
shadscale	ATCO	40-50	30-40	30-50	30-50
spiny hopsage	GRSP	5-15	2-5	---	---
winterfat	EULA5	2-5	2-5	---	---
Range site number		024XY065NV	024XY002NV	024XY003NV	024XY003NV
Potential production (lb/acre):					
Favorable years		900	750	600	600
Normal years		700	450	450	450
Unfavorable years		500	300	300	300

1215--RAGLAN-ISOLDE 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--				
		RAGLAN	ISOLDE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	25-35	---	5-15	---
Sandberg bluegrass	POSE	---	---	---	2-8	---
Thurber needlegrass	STTH2	---	---	---	15-25	---
basin wildrye	ELCI2	---	2-5	---	---	55-65
bottlebrush squirreltail	SIHY	5-10	---	2-10	2-5	---
creeping wildrye	ELTR3	---	---	---	---	5-15
needleandthread	STCO4	---	5-10	---	---	---
western wheatgrass	AGSM	---	---	---	---	5-15
globemallow	SPHAE	---	---	---	1-2	---
Wyoming big sagebrush	ARTRW	---	---	---	20-35	---
basin big sagebrush	ARTRT	---	---	---	---	10-15
black greasewood	SAVE4	15-30	35-45	---	---	2-8
bud sagebrush	ARSP5	2-8	---	---	---	---
seepweed	SUAED	2-8	---	---	---	---
shadscale	ATCO	30-50	---	75-85	---	---
spiny hopsage	GRSP	---	5-15	---	5-20	---
Range site number		024XY003NV	024XY066NV	024XY067NV	024XY020NV	024XY006NV
Potential production (lb/acre):						
Favorable years		600	600	300	700	1500
Normal years		450	400	200	450	1100
Unfavorable years		300	250	75	300	600

1220--SCHAMP VERY STONY LOAM, 4 TO 15 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--				
		SCHAMP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	5-15	5-15	---	---
Nevada bluegrass	PONE3	---	---	---	2-8	2-10
Sandberg bluegrass	POSE	2-5	2-5	2-8	---	---
Thurber needlegrass	STTH2	20-40	20-40	15-25	---	---
Webber needlegrass	STWE	2-8	2-8	---	---	---
basin wildrye	ELCI2	---	---	---	65-75	40-60
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	---	---
western wheatgrass	AGSM	---	---	---	---	2-10
globemallow	SPHAE	---	---	1-2	---	---
povertyweed	IVAX	---	---	---	---	2-5
thelypody	THELY	---	---	---	---	1-3
Wyoming big sagebrush	ARTRW	20-30	20-30	20-35	---	---
basin big sagebrush	ARTRT	---	---	---	5-10	5-15
rubber rabbitbrush	CHNA2	---	---	---	1-3	---
spiny hopsage	GRSP	2-5	2-5	5-20	---	---
Range site number		023XY006NV	023XY006NV	024XY020NV	023XY009NV	023XY005NV
Potential production (lb/acre):						
Favorable years		800	800	700	5500	3000
Normal years		600	600	450	4500	2000
Unfavorable years		400	400	300	2500	1300

1221--SCHAMP VERY STONY LOAM, 30 TO 50 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--			
		SCHAMP	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	2-5	---	---
Indian ricegrass	ORHY	5-15	---	---	5-15
Nevada bluegrass	PONE3	---	---	2-10	---
Sandberg bluegrass	POSE	2-5	---	---	2-8
Thurber needlegrass	STTH2	20-40	15-20	---	15-25
Webber needlegrass	STWE	2-8	---	---	---
basin wildrye	ELCI2	---	5-10	40-60	---
bluebunch wheatgrass	AGSP	---	30-40	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	2-5
western wheatgrass	AGSM	---	---	2-10	---
globemallow	SPHAE	---	---	---	1-2
povertyweed	IVAX	---	---	2-5	---
thelypody	THELY	---	---	1-3	---
Wyoming big sagebrush	ARTRW	20-30	---	---	20-35
antelope bitterbrush	PUTR2	---	2-10	---	---
basin big sagebrush	ARTRT	---	---	5-15	---
big sagebrush	ARTR2	---	15-25	---	---
spiny hopsage	GRSP	2-5	---	---	5-20
Range site number		023XY006NV	023XY020NV	023XY005NV	024XY020NV
Potential production (lb/acre):					
Favorable years		800	1100	3000	700
Normal years		600	900	2000	450
Unfavorable years		400	600	1300	300

1223--SCHAMP LOAM, 4 TO 15 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--			
		SCHAMP	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	5-15	5-15	5-15	15-25
Sandberg bluegrass	POSE	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	20-40	20-40	20-40	---
Webber needlegrass	STWE	2-8	2-8	2-8	---
basin wildrye	ELCI2	---	---	---	2-8
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	---
needleandthread	STCO4	---	---	---	20-40
thickspike wheatgrass	AGDA	---	---	---	2-5
Wyoming big sagebrush	ARTRW	20-30	20-30	20-30	---
big sagebrush	ARTR2	---	---	---	10-20
spiny hopsage	GRSP	2-5	2-5	2-5	2-5
Range site number		023XY006NV	023XY006NV	023XY006NV	023XY051NV
Potential production (lb/acre):					
Favorable years		800	800	800	900
Normal years		600	600	600	700
Unfavorable years		400	400	400	500

1230--RAGLAN-MAZUMA 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--					
		RAGLAN	MAZUMA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	10-20	---	25-35	5-15	---
Lemmon alkaligrass	PULE	---	---	---	---	---	20-35
Nevada bluegrass	PONE3	---	---	---	---	---	40-50
Sandberg bluegrass	POSE	---	---	---	---	2-8	---
Thurber needlegrass	STTH2	---	---	---	---	15-25	---
basin wildrye	ELCI2	---	---	55-65	2-5	---	2-8
bottlebrush squirreltail	SIHY	5-10	5-10	---	---	2-5	---
creeping wildrye	ELTR3	---	---	5-15	---	---	---
inland saltgrass	DISPS2	---	---	---	---	---	5-20
needleandthread	STCO4	---	---	---	5-10	---	---
western wheatgrass	AGSM	---	---	5-15	---	---	---
globemallow	SPHAE	---	---	---	---	1-2	---
other perennial forbs	PPFF	---	---	---	---	---	10-20
Wyoming big sagebrush	ARTRW	---	---	---	---	20-35	---
basin big sagebrush	ARTRT	---	---	10-15	---	---	---
black greasewood	SAVE4	15-30	---	2-8	35-45	---	---
bud sagebrush	ARSP5	2-8	5-15	---	---	---	---
other shrubs	SSSS	---	---	---	---	---	0-5
seepweed	SUAED	2-8	---	---	---	---	---
shadscale	ATCO	30-50	40-50	---	---	---	---
spiny hopsage	GRSP	---	5-15	---	5-15	5-20	---
wintarfat	EULA5	---	2-5	---	---	---	---

Range site number	024XY003NV	024XY065NV	024XY006NV	024XY066NV	024XY020NV	023XY002NV
Potential production (lb/acre):						
Favorable years	600	900	1500	600	700	1300
Normal years	450	700	1100	400	450	1000
Unfavorable years	300	500	600	250	300	700

1235--CHIME GRAVELLY LOAM, 4 TO 15 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--			
		CHIME	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	5-15	5-15	2-5	---
Nevada bluegrass	PONE3	---	---	---	2-10
Sandberg bluegrass	POSE	2-8	2-5	---	---
Thurber needlegrass	STTH2	15-25	20-40	---	---
Webber needlegrass	STWE	---	2-8	---	---
basin wildrye	ELCI2	---	---	---	40-60
bottlebrush squirreltail	SIHY	2-5	2-5	2-10	---
desert needlegrass	STSP3	---	---	2-10	---
western wheatgrass	AGSM	---	---	---	2-10
globemallow	SPHAE	1-2	---	---	---
povertyweed	IVAX	---	---	---	2-5
thelypody	THELY	---	---	---	1-3
Wyoming big sagebrush	ARTRW	20-35	20-30	---	---
basin big sagebrush	ARTRT	---	---	---	5-15
bud sagebrush	ARSP5	---	---	15-30	---
shadscale	ATCO	---	---	30-50	---
spiny hopsage	GRSP	5-20	2-5	---	---
Range site number		024XY020NV	023XY006NV	024XY025NV	023XY005NV
Potential production (lb/acre):					
Favorable years		700	800	250	3000
Normal years		450	600	150	2000
Unfavorable years		300	400	75	1300

1240--TONEY-MILLERLUX-HART CAMP 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--					
		TONEY	MILLERLUX	HART CAMP	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	---	5-20	30-50	---	10-20
Nevada bluegrass	PONE3	---	---	---	---	---	2-5
Sandberg bluegrass	POSE	---	30-45	---	---	5-10	---
Thurber needlegrass	STTH2	2-8	---	5-10	2-8	---	---
Webber needlegrass	STWE	---	2-5	---	---	---	---
basin wildrye	ELCI2	---	---	5-10	---	---	---
bluebunch wheatgrass	AGSP	15-30	---	25-35	15-30	---	---
bluegrass	POA++	2-8	---	---	2-8	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	10-20	---
mountain brome	BRCA5	---	---	---	---	---	10-20
needlegrass	STIPA	---	---	---	---	---	10-20
purple oniongrass	MESP	---	---	---	---	---	2-5
slender wheatgrass	AGTR	---	---	---	---	---	2-8
eriogonum	ERIOG	---	---	---	---	1-5	---
lupine	LUPIN	---	---	---	---	1-3	---
antelope bitterbrush	PUTR2	---	---	15-25	---	---	2-5
low sagebrush	ARAR8	10-20	30-45	---	10-20	2-10	---
mountain big sagebrush	ARVA2	---	---	5-15	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	30-50	---
snowberry	SYMPH	---	---	---	---	---	2-8

Range site number	023XY017NV	023XY021NV	023XY015NV	023XY017NV	023XY001NV	023XY065NV
Potential production (lb/acre):						
Favorable years	900	300	1500	900	350	2600
Normal years	700	200	1200	700	225	1800
Unfavorable years	500	150	900	500	150	1400

1245--SARAPH-UHALDI-FRENTERA 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--						
		SARAPH	UHALDI	FRENTERA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	2-5	---	---	---	2-5	---
Cusick bluegrass	POCU3	---	---	2-8	---	---	---	---
Idaho fescue	FEID	---	---	40-60	---	---	---	---
Indian ricegrass	ORHY	5-15	---	---	---	5-15	---	---
Sandberg bluegrass	POSE	2-5	---	---	---	2-5	---	---
Thurber needlegrass	STTH2	20-40	15-20	5-15	5-15	20-40	15-20	30-40
Webber needlegrass	STWE	2-8	---	---	---	2-8	---	5-15
basin wildrye	ELCI2	---	5-10	---	30-40	---	5-10	---
bluebunch wheatgrass	AGSP	---	30-40	2-8	---	---	30-40	2-8
bluegrass	POA++	---	---	---	30-40	---	---	5-10
bottlebrush squirreltail	SIHY	2-5	---	---	---	2-5	---	---
lupine	LUPIN	---	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	20-30	---	15-25	---	20-30	---	---
antelope bitterbrush	PUTR2	---	2-10	---	---	---	2-10	---
big sagebrush	ARTR2	---	15-25	---	15-25	---	15-25	---
low sagebrush	ARAR8	---	---	---	---	---	---	20-30
spiny hopsage	GRSP	2-5	---	---	---	2-5	---	---
Range site number		023XY006NV	023XY020NV	023XY072NV	023XY082NV	023XY006NV	023XY020NV	023XY059NV
Potential production (lb/acre):								
Favorable years		800	1100	800	1100	800	1100	600
Normal years		600	900	500	800	600	900	450
Unfavorable years		400	600	350	600	400	600	300

1250--ASHONE-ASHDOS-BEARBUTTE 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--					
		ASHONE	ASHDOS	BEARBUTTE	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	2-5	40-60	40-50	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	40-50	---
Sandberg bluegrass	POSE	---	---	---	30-45	---	---
Thurber needlegrass	STTH2	20-40	---	---	---	---	---
Webber needlegrass	STWE	---	---	---	2-5	---	---
bluebunch wheatgrass	AGSP	20-40	2-10	2-5	---	---	---
bluegrass	POA++	5-10	5-10	---	---	---	---
sedge	CAREX	---	---	---	---	5-15	---
antelope bitterbrush	PUTR2	2-10	---	10-20	---	---	---
low sagebrush	ARAR8	15-25	10-20	---	30-45	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	---	---
Range site number		023XY078NV	023XY079NV	023XY066NV	023XY021NV	023XY013NV	none
Potential production (lb/acre):							
Favorable years		1300	1200	1300	300	2200	
Normal years		1000	900	1100	200	1700	
Unfavorable years		700	600	900	150	1300	

1251--ASHONE-ASHDOS-ASHTRE 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--						
		ASHONE	ASHDOS	ASHTRE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	X	2-5	---	---
Cusick bluegrass	POCU3	---	---	---	X	---	---	---
Idaho fescue	FEID	2-5	40-60	40-60	X	---	40-50	---
Thurber needlegrass	STTH2	20-40	---	---	X	15-20	10-20	5-15
basin wildrye	ELCI2	---	---	---	---	5-10	2-5	30-40
bluebunch wheatgrass	AGSP	20-40	2-10	---	X	30-40	2-8	---
bluegrass	POA++	5-10	5-10	2-8	---	---	---	30-40
needlegrass	STIPA	---	---	5-15	---	---	---	---
western needlegrass	STOC2	---	---	---	X	---	---	---
low sagebrush	ARAR8	15-25	10-20	---	X	---	---	---
lupine	LUPIN	---	---	---	---	---	---	2-5
antelope bitterbrush	PUTR2	2-10	---	---	---	2-10	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	15-25	---
big sagebrush	ARTR2	---	---	---	---	15-25	---	15-25
low sagebrush	ARAR8	15-25	10-20	---	X	---	---	---
mountain big sagebrush	ARVA2	---	---	10-20	---	---	---	---
Range site number		023XY078NV	023XY079NV	023XY094NV	023XY095NV	023XY020NV	023XY071NV	023XY082NV
Potential production (lb/acre):								
Favorable years		1300	1200	1300	600	1100	1000	1100
Normal years		1000	900	1000	400	900	800	800
Unfavoreble years		700	600	700	200	600	600	600

1253--ASHDOS-ASHTRE-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--						
		ASHDOS	ASHTRE	HACKWOOD	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	5-15	---	---	---
Idaho fescue	FEID	40-60	40-60	X	50-60	40-50	---	X
Nevada bluegrass	PONE3	---	---	X	---	---	40-50	X
basin wildrye	ELCI2	---	---	---	2-5	---	---	---
big squirreltail	SIJU	---	---	X	---	---	---	---
bluebunch wheatgrass	AGSP	2-10	---	---	5-15	2-5	---	---
bluegrass	POA++	5-10	2-8	---	---	---	---	---
melic	MELIC	---	---	X	---	---	---	---
mountain brome	BRCA5	---	---	X	---	---	---	X
needlegrass	STIPA	---	5-15	---	---	---	---	---
rush	JUNCU	---	---	---	---	---	---	X
sedge	CAREX	---	---	---	---	---	5-15	X
slender wheatgrass	AGTR	---	---	X	---	---	---	---
groundsel	SENEC	---	---	---	---	---	---	X
meadowrue	THALI2	---	---	X	---	---	---	X
yarrow	ACHIL	---	---	---	---	---	---	X
Woods rose	ROWO	---	---	---	---	---	---	X
antelope bitterbrush	PUTR2	---	---	---	---	10-20	---	---
low sagebrush	ARAR8	10-20	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	X	5-15	10-20	---	---
snowberry	SYMPH	---	---	X	2-5	---	---	---
quaking aspen	POTRT	---	---	X	---	---	---	X

Range site number	023XY079NV	023XY094NV	023XY028NV	023XY054NV	023XY066NV	023XY013NV	023XY029NV
Potential production (lb/acre):							
Favorable years	1200	1300	600	1500	1300	2200	1600
Normal years	900	1000	400	1200	1100	1700	1300
Unfavorable years	600	700	250	900	900	1300	1000

1255--NEWLANDS-NINEMILE COMPLEX, 4 TO 15 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--				
		NEWLANDS	NINEMILE	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-40	30-50	15-25	30-40	30-40
Thurber needlegrass	STTH2	2-8	2-8	---	2-8	2-8
basin wildrye	ELCI2	5-10	---	---	5-10	5-10
bluebunch wheatgrass	AGSP	25-40	15-30	---	25-40	25-40
bluegrass	POA++	2-5	2-8	5-15	2-5	2-5
goldenweed	HAPLO2	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---
antelope bitterbrush	PUTR2	2-10	---	---	2-10	2-10
low sagebrush	ARAR8	---	10-20	35-45	---	---
mountain big sagebrush	ARVA2	10-20	---	---	10-20	10-20
Range site number		023XY007NV	023XY017NV	023XY008NV	023XY007NV	023XY007NV
Potential production (lb/acre):						
Favorable years		1600	900	400	1600	1600
Normal years		1200	700	250	1200	1200
Unfavorable years		900	500	200	900	900

1256--NEWLANDS-MENBO 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--				
		NEWLANDS	MENBO	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	10-20	30-40	---	5-20	10-20
Nevada bluegrass	PONE3	2-5	---	---	---	---
Thurber needlegrass	STTH2	---	2-8	5-10	5-10	---
basin wildrye	ELCI2	---	5-10	2-10	5-10	---
bluebunch wheatgrass	AGSP	---	25-40	60-70	25-35	5-15
bluegrass	POA++	---	2-5	---	---	2-5
mountain brome	BRCA5	10-20	---	---	---	2-8
needlegrass	STIPA	10-20	---	---	---	5-15
purple oniongrass	MESP	2-5	---	---	---	---
slender wheatgrass	AGTR	2-8	---	---	---	---
antelope bitterbrush	PUTR2	2-5	2-10	2-8	15-25	---
curlleaf mountainmahogany	CELE3	---	---	---	---	25-40
mountain big sagebrush	ARVA2	---	10-20	10-20	5-15	5-10
snowberry	SYMPH	2-8	---	---	---	2-5
Range site number		023XY065NV	023XY007NV	023XY016NV	023XY015NV	023XY026NV
Potential production (lb/acre):						
Favoreble years		2600	1600	1500	1500	1400
Normal years		1800	1200	1100	1200	1100
Unfavorable years		1400	900	800	900	600

1257--NEWLANDS-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--			
		NEWLANDS	HAPGOOD	Inclusion 1	Inclusion 2
Idaho fescue	FEID	10-20	10-20	30-40	X
Nevada bluegrass	PONE3	2-5	2-5	---	X
Thurber needlegrass	STTH2	---	---	2-8	---
basin wildrye	ELCI2	---	---	5-10	---
big squirreltail	SIJU	---	---	---	X
bluebunch wheatgrass	AGSP	---	---	25-40	---
bluegrass	POA++	---	---	2-5	---
melic	MELIC	---	---	---	X
mountain brome	BRCA5	10-20	10-20	---	X
needlegrass	STIPA	10-20	10-20	---	---
purple oniongrass	MESP	2-5	2-5	---	---
slender wheatgrass	AGTR	2-8	2-8	---	X
meadowrue	THALI2	---	---	---	X
antelope bitterbrush	PUTR2	2-5	2-5	2-10	---
mountain big sagebrush	ARVA2	---	---	10-20	X
snowberry	SYMPH	2-8	2-8	---	X
quaking aspen	POTRT	---	---	---	X
Range site number		023XY065NV	023XY065NV	023XY007NV	023XY028NV
Potential production (lb/acre):					
Favoreble years		2600	2600	1600	600
Normal years		1800	1800	1200	400
Unfavorable years		1400	1400	900	250

1258--NEWLANDS-BADGERCAMP-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--					
		NEWLANDS	BADGERCAMP	HACKWOOD	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	10-20	10-20	X	30-50	30-40	---
Nevada bluegrass	PONE3	2-5	---	X	---	---	---
Thurber needlegrass	STTH2	---	---	---	2-8	2-8	---
basin wildrye	ELCI2	---	---	---	---	5-10	---
big squirreltail	SIJU	---	---	X	---	---	---
bluebunch wheatgrass	AGSP	---	5-15	---	15-30	25-40	---
bluegrass	POA++	---	2-5	---	2-8	2-5	---
melic	MELIC	---	---	X	---	---	---
mountain brome	BRCA5	10-20	2-8	X	---	---	---
needlegrass	STIPA	10-20	5-15	---	---	---	---
purple oniongrass	MESP	2-5	---	---	---	---	---
slender wheatgrass	AGTR	2-8	---	X	---	---	---
meadowrue	THALI2	---	---	X	---	---	---
antelope bitterbrush	PUTR2	2-5	---	---	---	2-10	---
curlleaf mountainmahogany	CELE3	---	25-40	---	---	---	---
low sagebrush	ARAR8	---	---	---	10-20	---	---
mountain big sagebrush	ARVA2	---	5-10	X	---	10-20	---
snowberry	SYMPH	2-8	2-5	X	---	---	---
quaking aspen	POTRT	---	---	X	---	---	---

Range site number	023XY065NV	023XY026NV	023XY028NV	023XY017NV	023XY007NV	none
Potential production (lb/acre):						
Favorable years	2600	1400	600	900	1600	
Normal years	1800	1100	400	700	1200	
Unfavorable years	1400	600	250	500	900	

1265--FITZWATER-WESTBUTTE 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--					
		FITZWATER	WESTBUTTE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	30-40	---	10-20	X	---
Nevada bluegrass	PONE3	---	---	---	2-5	X	2-8
Thurber needlegrass	STTH2	5-10	2-8	10-20	---	---	---
basin wildrye	ELCI2	2-10	5-10	2-10	---	---	40-60
big squirreltail	SIJU	---	---	---	---	X	---
bluebunch wheatgrass	AGSP	60-70	25-40	40-60	---	---	---
bluegrass	POA++	---	2-5	---	---	---	---
melic	MELIC	---	---	---	---	X	---
mountain brome	BRCA5	---	---	---	10-20	X	---
needlegrass	STIPA	---	---	---	10-20	---	---
purple oniongrass	MESP	---	---	---	2-5	---	---
sedge	CAREX	---	---	---	---	---	2-5
slender wheatgrass	AGTR	---	---	---	2-8	X	---
wheatgrass	AGROP2	---	---	---	---	---	5-15
meadowrue	THALI2	---	---	---	---	X	---
Wyoming big sagebrush	ARTRW	---	---	10-20	---	---	---
antelope bitterbrush	PUTR2	2-8	2-10	2-5	2-5	---	---
big sagebrush	ARTR2	---	---	15-25	---	---	---
mountain big sagebrush	ARVA2	10-20	10-20	10-20	---	X	5-15
snowberry	SYMPH	---	---	---	2-8	X	---
quaking aspen	POTRT	---	---	---	---	X	---

Range site number	023XY016NV	023XY007NV	023XY039NV	023XY065NV	023XY028NV	023XY056NV
Potential production (lb/acre):						
Favorable years	1500	1600	900	2600	600	2200
Normal years	1100	1200	700	1800	400	1700
Unfavorable years	800	900	500	1400	250	1200

1270--HARTIG GRAVELLY LOAM, 8 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--				
		HARTIG	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	---	30-40	30-50	5-20
Thurber needlegrass	STTH2	5-10	5-10	2-8	2-8	5-10
basin wildrye	ELCI2	2-10	2-10	5-10	---	5-10
bluebunch wheatgrass	AGSP	60-70	60-70	25-40	15-30	25-35
bluegrass	POA++	---	---	2-5	2-8	---
antelope bitterbrush	PUTR2	2-8	2-8	2-10	---	15-25
low sagebrush	ARAR8	---	---	---	10-20	---
mountain big sagebrush	ARVA2	10-20	10-20	10-20	---	5-15
Range site number		023XY016NV	023XY016NV	023XY007NV	023XY017NV	023XY015NV
Potential production (lb/acre):						
Favorable years		1500	1500	1600	900	1500
Normal years		1100	1100	1200	700	1200
Unfavorable years		800	800	900	500	900

1271--HARTIG-NEWLANDS 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--				
		HARTIG	NEWLANDS	Inclusion 1	Inclusion 2	Inclusion 3
Columbia needlegrass	STNE3	---	---	---	---	5-15
Cusick bluegrass	POCU3	---	5-15	---	---	---
Idaho fescue	FEID	---	50-60	X	10-20	---
Nevada bluegrass	PONE3	---	---	X	---	---
Thurber needlegrass	STTH2	5-10	---	---	---	---
basin wildrye	ELCI2	2-10	2-5	---	---	---
big squirreltail	SIJU	---	---	X	---	---
bluebunch wheatgrass	AGSP	60-70	5-15	---	5-15	---
bluegrass	POA++	---	---	---	2-5	---
melic	MELIC	---	---	X	---	---
mountain brome	BRCA5	---	---	X	2-8	5-15
needlegrass	STIPA	---	---	---	5-15	---
slender wheatgrass	AGTR	---	---	X	---	5-10
meadowrue	THALI2	---	---	X	---	---
antelope bitterbrush	PUTR2	2-8	---	---	---	---
curlleaf mountainmahogany	CELE3	---	---	---	25-40	---
mountain big sagebrush	ARVA2	10-20	5-15	X	5-10	---
quaking aspen	POTRT	---	---	X	---	45-60
snowberry	SYMPH	---	2-5	X	2-5	2-5
quaking aspen	POTRT	---	---	X	---	45-60

Range site number	023XY016NV	023XY054NV	023XY028NV	023XY026NV	023XY027NV
Potential production (lb/acre):					
Favorable years	1500	1500	600	1400	800
Normal years	1100	1200	400	1100	500
Unfavorable years	800	900	250	600	300

1272--HARTIG-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--					
		HARTIG	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	---	---	40-60	---	---
Indian ricegrass	ORHY	---	---	---	---	---	5-15
Sandberg bluegrass	POSE	---	---	---	---	---	2-5
Thurber needlegrass	STTH2	5-10	---	5-10	---	10-20	20-40
Webber needlegrass	STWE	---	---	---	---	---	2-8
basin wildrye	ELCI2	2-10	---	2-10	---	2-10	---
bluebunch wheatgrass	AGSP	60-70	---	60-70	2-10	40-60	---
bluegrass	POA++	---	---	---	5-10	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	10-20	20-30
antelope bitterbrush	PUTR2	2-8	---	2-8	---	2-5	---
big sagebrush	ARTR2	---	---	---	---	15-25	---
low sagebrush	ARAR8	---	---	---	10-20	---	---
mountain big sagebrush	ARVA2	10-20	---	10-20	---	10-20	---
spiny hopsage	GRSP	---	---	---	---	---	2-5
Range site number		023XY016NV	none	023XY016NV	023XY079NV	023XY039NV	023XY006NV
Potential production (lb/acre):							
Favorable years		1500		1500	1200	900	800
Normal years		1100		1100	900	700	600
Unfavorable years		800		800	600	500	400

1273--HARTIG-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--				
		HARTIG	HAPGOOD	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	10-20	30-40	10-20	10-20
Nevada bluegrass	PONE3	---	2-5	---	---	2-5
Thurber needlegrass	STTH2	5-10	---	2-8	---	---
basin wildrye	ELCI2	2-10	---	5-10	---	---
bluebunch wheatgrass	AGSP	60-70	---	25-40	5-15	---
bluegrass	POA++	---	---	2-5	2-5	---
mountain brome	BRCA5	---	10-20	---	2-8	10-20
needlegrass	STIPA	---	10-20	---	5-15	10-20
purple oniongrass	MESP	---	2-5	---	---	2-5
slender wheatgrass	AGTR	---	2-8	---	---	2-8
antelope bitterbrush	PUTR2	2-8	2-5	2-10	---	2-5
curlleaf mountainmahogany	CELE3	---	---	---	25-40	---
mountain big sagebrush	ARVA2	10-20	---	10-20	5-10	---
snowberry	SYMPH	---	2-8	---	2-5	2-8
Range site number		023XY016NV	023XY065NV	023XY007NV	023XY026NV	023XY065NV
Potential production (lb/acre):						
Favorable years		1500	2600	1600	1400	2600
Normal years		1100	1800	1200	1100	1800
Unfavorable years		800	1400	900	600	1400

1275--HART CAMP STONY LOAM, 8 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--			
		HART CAMP	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	2-5
Idaho fescue	FEID	5-20	---	5-20	---
Thurber needlegrass	STTH2	5-10	5-10	5-10	15-20
basin wildrye	ELCI2	5-10	2-10	5-10	5-10
bluebunch wheatgrass	AGSP	25-35	60-70	25-35	30-40
antelope bitterbrush	PUTR2	15-25	2-8	15-25	2-10
big sagebrush	ARTR2	---	---	---	15-25
mountain big sagebrush	ARVA2	5-15	10-20	5-15	---
Range site number		023XY015NV	023XY016NV	023XY015NV	023XY020NV
Potential production (lb/acre):					
Favorable years		1500	1500	1500	1100
Normal years		1200	1100	1200	900
Unfavorable years		900	800	900	600

1276--HART CAMP-REYWAT-WESTBUTTE 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--					
		HART CAMP	REYWAT	WESTBUTTE	Inclusion 1	Inclusion 2	Inclusion 3
Cusick bluegrass	POCU3	---	---	---	---	5-15	---
Idaho fescue	FEID	5-20	---	30-40	---	50-60	X
Nevada bluegrass	PONE3	---	---	---	---	---	X
Sandberg bluegrass	POSE	---	---	---	---	---	X
Thurber needlegrass	STTH2	5-10	10-20	2-8	5-10	---	X
basin wildrye	ELCI2	5-10	2-10	5-10	2-10	2-5	X
bluebunch wheatgrass	AGSP	25-35	40-60	25-40	60-70	5-15	X
bluegrass	POA++	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	10-20	---	---	---	---
antelope bitterbrush	PUTR2	15-25	2-5	2-10	2-8	---	---
big sagebrush	ARTR2	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	5-15	10-20	10-20	10-20	5-15	X
snowberry	SYMPH	---	---	---	---	2-5	---

Range site number	023XY015NV	023XY039NV	023XY007NV	023XY016NV	023XY054NV	023XY024NV
Potential production (lb/acre):						
Favorable years	1500	900	1600	1500	1500	700
Normal years	1200	700	1200	1100	1200	500
Unfavorable years	900	500	900	800	900	300

1277--HART CAMP-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--					
		HART CAMP	NINEMILE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	5-15	---	---	5-15
Idaho fescue	FEID	5-20	30-50	50-60	---	15-25	40-60
Thurber needlegrass	STTH2	5-10	2-8	---	5-10	---	---
basin wildrye	ELCI2	5-10	---	2-5	2-10	---	2-8
bluebunch wheatgrass	AGSP	25-35	15-30	5-15	60-70	---	---
bluegrass	POA++	---	2-8	---	---	5-15	---
goldenweed	HAPLO2	---	---	---	---	2-5	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---
antelope bitterbrush	PUTR2	15-25	---	---	2-8	---	---
low sagebrush	ARAR8	---	10-20	---	---	35-45	---
mountain big sagebrush	ARVA2	5-15	---	5-15	10-20	---	5-15
snowberry	SYMPH	---	---	2-5	---	---	---
Range site number		023XY015NV	023XY017NV	023XY054NV	023XY016NV	023XY008NV	023XY084NV
Potential production (lb/acre):							
Favorable years		1500	900	1500	1500	400	1800
Normal years		1200	700	1200	1100	250	1500
Unfavorable years		900	500	900	800	200	1200

1278--BOLTZ-HART CAMP 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--					
		BOLTZ	HART CAMP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	---	5-15	5-15
Idaho fescue	FEID	40-50	5-20	40-60	30-40	50-60	40-60
Thurber needlegrass	STTH2	---	5-10	---	2-8	---	---
basin wildrye	ELCI2	---	5-10	---	5-10	2-5	2-8
bluebunch wheatgrass	AGSP	2-5	25-35	---	25-40	5-15	---
bluegrass	POA++	---	---	2-8	2-5	---	---
needlegrass	STIPA	---	---	5-15	---	---	---
antelope bitterbrush	PUTR2	10-20	15-25	---	2-10	---	---
mountain big sagebrush	ARVA2	10-20	5-15	10-20	10-20	5-15	5-15
snowberry	SYMPH	---	---	---	---	2-5	---
Range site number		023XY066NV	023XY015NV	023XY094NV	023XY007NV	023XY054NV	023XY084NV
Potential production (lb/acre):							
Favorable years		1300	1500	1300	1600	1500	1800
Normal years		1100	1200	1000	1200	1200	1500
Unfavorable years		900	900	700	900	900	1200

1279--HART CAMP-NUTZAN-WESTBUTTE 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--						
		HART CAMP	NUTZAN	WESTBUTTE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	---	---	---	5-15
Idaho fescue	FEID	5-20	40-50	30-40	15-25	40-60	30-50	50-60
Thurber needlegrass	STTH2	5-10	---	2-8	---	---	2-8	---
basin wildrye	ELCI2	5-10	---	5-10	---	---	---	2-5
bluebunch wheatgrass	AGSP	25-35	2-5	25-40	---	2-10	15-30	5-15
bluegrass	POA++	---	---	2-5	5-15	5-10	2-8	---
goldenweed	HAPLO2	---	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---	---
antelope bitterbrush	PUTR2	15-25	10-20	2-10	---	---	---	---
low sagebrush	ARAR8	---	---	---	35-45	10-20	10-20	---
mountain big sagebrush	ARVA2	5-15	10-20	10-20	---	---	---	5-15
snowberry	SYMPH	---	---	---	---	---	---	2-5
Range site number		023XY015NV	023XY066NV	023XY007NV	023XY008NV	023XY079NV	023XY017NV	023XY054NV
Potential production (lb/acre):								
Favorable years		1500	1300	1600	400	1200	900	1500
Normal years		1200	1100	1200	250	900	700	1200
Unfavorable years		900	900	900	200	600	500	900

1285--ZYMANS-INDIAN 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--			
		ZYMANS	INDIAN CREEK	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	2-5	---	---	---
Indian ricegrass	ORHY	---	---	5-15	---
Sandberg bluegrass	POSE	---	---	2-5	---
Thurber needlegrass	STTH2	15-20	30-40	20-40	10-20
Webber needlegrass	STWE	---	5-15	2-8	---
basin wildrye	ELCI2	5-10	---	---	2-10
bluebunch wheatgrass	AGSP	30-40	2-8	---	40-60
bluegrass	POA++	---	5-10	---	---
bottlebrush squirreltail	SIHY	---	---	2-5	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	20-30	10-20
antelope bitterbrush	PUTR2	2-10	---	---	2-5
big sagebrush	ARTR2	15-25	---	---	15-25
low sagebrush	ARAR8	---	20-30	---	---
mountain big sagebrush	ARVA2	---	---	---	10-20
spiny hopsage	GRSP	---	---	2-5	---
Range site number		023XY020NV	023XY059NV	023XY006NV	023XY039NV
Potential production (lb/acre):					
Favorable years		1100	600	800	900
Normal years		900	450	600	700
Unfavorable years		600	300	400	500

1286--ZYMANS-COTANT-HART CAMP 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--				
		ZYMANS	COTANT	HART CAMP	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	2-5	---	---	---	---
Idaho fescue	FEID	---	30-50	5-20	---	---
Indian ricegrass	ORHY	---	---	---	5-15	5-15
Sandberg bluegrass	POSE	---	---	---	2-5	2-5
Thurber needlegrass	STTH2	15-20	2-8	5-10	20-40	20-40
Wabber needlegrass	STWE	---	---	---	2-8	2-8
basin wildrye	ELCI2	5-10	---	5-10	---	---
bluebunch wheatgrass	AGSP	30-40	15-30	25-35	---	---
bluegrass	POA++	---	2-8	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	2-5
Wyoming big sagebrush	ARTRW	---	---	---	20-30	20-30
antelope bitterbrush	PUTR2	2-10	---	15-25	---	---
big sagebrush	ARTR2	15-25	---	---	---	---
low sagebrush	ARAR8	---	10-20	---	---	---
mountain big sagebrush	ARVA2	---	---	5-15	---	---
spiny hopsage	GRSP	---	---	---	2-5	2-5
Range site number		023XY020NV	023XY017NV	023XY015NV	023XY006NV	023XY006NV
Potential production (lb/acre):						
Favorable years		1100	900	1500	800	800
Normal years		900	700	1200	600	600
Unfavorable years		600	500	900	400	400

1290--HAPGOOD-BADGERCAMP-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--					
		HAPGOOD	BADGERCAMP	HACKWOOD	Inclusion 1	Inclusion 2	Inclusion 3
Columbia needlegrass	STNE3	---	---	---	5-15	---	---
Idaho fescue	FEID	10-20	10-20	X	---	30-40	---
Letterman needlegrass	STLE4	---	---	---	---	---	X
Nevada bluegrass	PONE3	2-5	---	X	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	2-8	---
basin wildrye	ELCI2	---	---	---	---	5-10	---
big squirreltail	SIJU	---	---	X	---	---	---
bluebunch wheatgrass	AGSP	---	5-15	---	---	25-40	X
bluegrass	POA++	---	2-5	---	---	2-5	---
melic	MELIC	---	---	X	---	---	---
mountain brome	BRCA5	10-20	2-8	X	5-15	---	---
muttongrass	POFE	---	---	---	---	---	X
needlegrass	STIPA	10-20	5-15	---	---	---	---
purple oniongrass	MESP	2-5	---	---	---	---	---
sedge	CAREX	---	---	---	---	---	X
slender wheatgrass	AGTR	2-8	---	X	5-10	---	---
meadowrue	THALI2	---	---	X	---	---	---
antelope bitterbrush	PUTR2	2-5	---	---	---	2-10	---
common juniper	JUCO6	---	---	---	---	---	X
curlleaf mountainmahogany	CELE3	---	25-40	---	---	---	---
mountain big sagebrush	ARVA2	---	5-10	X	---	10-20	X
quaking aspen	POTRT	---	---	X	45-60	---	---
snowberry	SYMPH	2-8	2-5	X	2-5	---	---
snowbrush ceanothus	CEVE	---	---	---	---	---	X
white fir	ABCO	---	---	---	---	---	X
quaking aspen	POTRT	---	---	X	45-60	---	---

Range site number	023XY065NV	023XY026NV	023XY028NV	023XY027NV	023XY007NV	023XY092NV
Potential production (lb/acre):						
Favorable years	2600	1400	600	800	1600	700
Normal years	1800	1100	400	500	1200	500
Unfavorable years	1400	600	250	300	900	300

1295--DEVOY-BLIZZARD COMPLEX, 2 TO 15 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--					
		DEVOY	BLIZZARD	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	---	---	---	5-15
Idaho fescue	FEID	40-60	30-50	30-50	30-50	40-60	50-60
Thurber needlegrass	STTH2	---	2-8	2-8	2-8	---	---
basin wildrye	ELCI2	---	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	---	15-30	15-30	15-30	---	5-15
bluegrass	POA++	2-8	2-8	2-8	2-8	2-8	---
needlegrass	STIPA	5-15	---	---	---	5-15	---
low sagebrush	ARAR8	---	10-20	10-20	10-20	---	---
mountain big sagebrush	ARVA2	10-20	---	---	---	10-20	5-15
snowberry	SYMPH	---	---	---	---	---	2-5
Range site number		023XY094NV	023XY017NV	023XY017NV	023XY017NV	023XY094NV	023XY054NV
Potential production (lb/acre):							
Favorable years		1300	900	900	900	1300	1500
Normal years		1000	700	700	700	1000	1200
Unfavorable years		700	500	500	500	700	900

1296--BLIZZARD VERY COBBLY SILTY CLAY LOAM, 0 TO 15 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--			
		BLIZZARD	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-50	30-50	5-20	10-20
Nevada bluegrass	PONE3	---	---	---	2-5
Thurber needlegrass	STTH2	2-8	2-8	5-10	---
basin wildrye	ELCI2	---	---	5-10	---
bluebunch wheatgrass	AGSP	15-30	15-30	25-35	---
bluegrass	POA++	2-8	2-8	---	---
mountain brome	BRCA5	---	---	---	10-20
needlegrass	STIPA	---	---	---	10-20
purple oniongrass	MESP	---	---	---	2-5
slender wheatgrass	AGTR	---	---	---	2-8
antelope bitterbrush	PUTR2	---	---	15-25	2-5
low sagebrush	ARAR8	10-20	10-20	---	---
mountain big sagebrush	ARVA2	---	---	5-15	---
snowberry	SYMPH	---	---	---	2-8
Range site number		023XY017NV	023XY017NV	023XY015NV	023XY065NV
Potential production (lb/acre):					
Favorable years		900	900	1500	2600
Normal years		700	700	1200	1800
Unfavorable years		500	500	900	1400

1305--UPDIKE-MAZUMA 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--				
		UPDIKE	MAZUMA	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	10-20	2-5	---	---
Lemmon alkaligrass	PULE	---	---	---	20-35	2-8
Nevada bluegrass	PONE3	---	---	---	40-50	10-20
basin wildrye	ELCI2	15-20	---	5-20	2-8	50-60
bottlebrush squirreltail	SIHY	2-10	5-10	2-5	---	---
inland saltgrass	DISPS2	2-8	---	---	5-20	2-8
globemallow	SPHAE	---	---	1-2	---	---
other perennial forbs	PPFF	---	---	---	10-20	---
thelypody	THELY	---	---	2-4	---	---
big sagebrush	ARTR2	---	---	10-25	---	---
black greasewood	SAVE4	50-65	---	20-30	---	5-10
bud sagebrush	ARSP5	---	5-15	---	---	---
other shrubs	SSSS	---	---	---	0-5	---
shadscale	ATCO	---	40-50	---	---	---
spiny hopsage	GRSP	---	5-15	5-15	---	---
threadleaf rubber rabbitbrush	CHNAC2	---	---	---	---	2-5
winterfat	EULA5	---	2-5	---	---	---
Range site number		024XY008NV	024XY065NV	024XY022NV	023XY002NV	023XY010NV
Potential production (lb/acre):						
Favorable years		700	900	800	1300	2200
Normal years		450	700	600	1000	1700
Unfavorable years		300	500	350	700	1000

1306--UPDIKE-LONGDIS 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--			
		UPDIKE	LONGDIS	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	---	2-5	---	---
Lemmon alkaligrass	PULE	---	---	2-8	---
Nevada bluegrass	PONE3	---	---	10-20	---
basin wildrye	ELCI2	15-20	5-20	50-60	---
bottlebrush squirreltail	SIHY	2-10	2-5	---	---
inland saltgrass	DISPS2	2-8	---	2-8	---
globemallow	SPHAE	---	1-2	---	---
thelypody	THELY	---	2-4	---	---
big sagebrush	ARTR2	---	10-25	---	---
black greasewood	SAVE4	50-65	20-30	5-10	---
spiny hopsage	GRSP	---	5-15	---	---
threadleaf rubber rabbitbrush	CHNAC2	---	---	2-5	---
Range site number		024XY008NV	024XY022NV	023XY010NV	none
Potential production (lb/acre):					
Favorable years		700	800	2200	
Normal years		450	600	1700	
Unfavoreble years		300	350	1000	

1310--LONGDIS-UPDIKE 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--					
		LONGDIS	UPDIKE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	---	---	---	---	---
Lemmon alkaligrass	PULE	---	2-8	---	20-35	---	---
Nevada bluegrass	PONE3	---	10-20	2-10	40-50	---	---
Thurber needlegrass	STTH2	---	---	---	---	5-15	---
basin wildrye	ELCI2	5-20	50-60	40-60	2-8	30-40	---
bluegrass	POA++	---	---	---	---	30-40	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	---	---
inland saltgrass	DISPS2	---	2-8	---	5-20	---	---
western wheatgrass	AGSM	---	---	2-10	---	---	---
globemallow	SPHAE	1-2	---	---	---	---	---
lupine	LUPIN	---	---	---	---	2-5	---
other perennial forbs	PPFF	---	---	---	10-20	---	---
povertyweed	IVAX	---	---	2-5	---	---	---
thelypody	THELY	2-4	---	1-3	---	---	---
basin big sagebrush	ARTRT	---	---	5-15	---	---	---
big sagebrush	ARTR2	10-25	---	---	---	15-25	---
black greasewood	SAVE4	20-30	5-10	---	---	---	---
other shrubs	SSSS	---	---	---	0-5	---	---
spiny hopsage	GRSP	5-15	---	---	---	---	---
threadleaf rubber rabbitbrush	CHNAC2	---	2-5	---	---	---	---

Range site number	024XY022NV	023XY010NV	023XY005NV	023XY002NV	023XY082NV	none
Potential production (lb/acre):						
Favorable years	800	2200	3000	1300	1100	
Normal years	600	1700	2000	1000	800	
Unfavorable years	350	1000	1300	700	600	

1311--LONGDIS-MACYFLET-AERIC EPIAQUENTS 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--					
		LONGDIS	MACYFLET	AERIC EPIAQU	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	2-5	---
Cusick bluegrass	POCU3	---	20-30	---	---	---	---
Indian ricegrass	ORHY	---	---	---	15-25	---	---
Nevada bluegrass	PONE3	15-35	2-8	---	---	---	---
Thurber needlegrass	STTH2	---	25-35	---	---	15-20	30-40
Webber needlegrass	STWE	---	---	---	---	---	5-15
basin wildrye	ELCI2	---	5-15	---	2-8	5-10	---
bluebunch wheatgrass	AGSP	---	---	---	---	30-40	2-8
bluegrass	POA++	---	---	---	---	---	5-10
creeping wildrye	ELTR3	5-15	---	---	---	---	---
mat muhly	MURI	5-10	---	5-10	---	---	---
needleandthread	STCO4	---	---	---	20-40	---	---
thickspike wheatgrass	AGDA	---	---	---	2-5	---	---
dock	RUMEX	---	---	1-2	---	---	---
eveningprimrose	OENOT	---	---	2-5	---	---	---
lupine	LUPIN	---	2-5	---	---	---	---
povertyweed	IVAX	---	---	5-10	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5
antelope bitterbrush	PUTR2	---	---	---	---	2-10	---
big sagebrush	ARTR2	---	---	---	10-20	15-25	---
early sagebrush	ARLO9	---	15-25	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	20-30
rubber rabbitbrush	CHNA2	2-5	---	---	---	---	---
silver sagebrush	ARCA13	30-40	---	---	---	---	---
spiny hopsage	GRSP	---	---	---	2-5	---	---

Range site number	023XY003NV	023XY090NV	023XY023NV	023XY051NV	023XY020NV	023XY059NV
Potential production (lb/acre):						
Favorable years	1800	900	1500	900	1100	600
Normal years	1400	700	400	700	900	450
Unfavorable years	700	450	0	500	600	300

1312--LONGDIS-DUGWAY 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--				
		LONGDIS	DUGWAY	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	2-5	---	---	5-15	---
Lemmon alkaligrass	PULE	---	---	2-8	---	---
Nevada bluegrass	PONE3	---	2-10	10-20	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---
Thurber needlegrass	STTH2	---	---	---	20-40	5-15
Webber needlegrass	STWE	---	---	---	2-8	---
basin wildrye	ELCI2	5-20	40-60	50-60	---	30-40
bluegrass	POA++	---	---	---	---	30-40
bottlebrush squirreltail	SIHY	2-5	---	---	2-5	---
inland saltgrass	DISPS2	---	---	2-8	---	---
western wheatgrass	AGSM	---	2-10	---	---	---
globemallow	SPHAE	1-2	---	---	---	---
lupine	LUPIN	---	---	---	---	2-5
povertyweed	IVAX	---	2-5	---	---	---
thelypody	THELY	2-4	1-3	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---
basin big sagebrush	ARTRT	---	5-15	---	---	---
big sagebrush	ARTR2	10-25	---	---	---	15-25
black greasewood	SAVE4	20-30	---	5-10	---	---
spiny hopsage	GRSP	5-15	---	---	2-5	---
threadleaf rubber rabbitbrush	CHNAC2	---	---	2-5	---	---
Range site number		024XY022NV	023XY005NV	023XY010NV	023XY006NV	023XY082NV
Potential production (lb/acre):						
Favorable years		800	3000	2200	800	1100
Normal years		600	2000	1700	600	800
Unfavorable years		350	1300	1000	400	600

1313--LONGDIS SILT 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--			
		LONGDIS	Inclusion 1	Inclusion 2	Inclusion 3
Lemmon alkaligrass	PULE	---	20-35	---	---
Nevada bluegrass	PONE3	15-35	40-50	2-8	---
basin wildrye	ELCI2	---	2-8	65-75	---
creeping wildrye	ELTR3	5-15	---	---	---
inland saltgrass	DISPS2	---	5-20	---	---
mat muhly	MURI	5-10	---	---	5-10
dock	RUMEX	---	---	---	1-2
eveningprimrose	OENOT	---	---	---	2-5
other perennial forbs	PPFF	---	10-20	---	---
povertyweed	IVAX	---	---	---	5-10
basin big sagebrush	ARTRT	---	---	5-10	---
other shrubs	SSSS	---	0-5	---	---
rubber rabbitbrush	CHNA2	2-5	---	1-3	---
silver sagebrush	ARCA13	30-40	---	---	---
Range site number		023XY003NV	023XY002NV	023XY009NV	023XY023NV
Potential production (lb/acre):					
Favorable years		1800	1300	5500	1500
Normal years		1400	1000	4500	400
Unfavorable years		700	700	2500	0

1320--DUGWAY 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--				
		DUGWAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	---	---	2-8
Indian ricegrass	ORHY	---	---	2-5	30-40	---
Lemmon alkaligrass	PULE	---	2-8	---	---	---
Nevada bluegrass	PONE3	2-10	10-20	---	---	40-60
basin wildrye	ELCI2	40-60	50-60	5-20	2-5	2-8
bottlebrush squirreltail	SIHY	---	---	2-5	---	---
inland saltgrass	DISPS2	---	2-8	---	---	---
meadow barley	HOBR2	---	---	---	---	2-8
needleandthread	STCO4	---	---	---	5-15	---
sedge	CAREX	---	---	---	---	10-20
thickspike wheatgrass	AGDA	---	---	---	2-8	---
western wheatgrass	AGSM	2-10	---	---	---	---
globemallow	SPHAE	---	---	1-2	---	---
povertyweed	IVAX	2-5	---	---	---	---
thelypody	THELY	1-3	---	2-4	---	---
basin big sagebrush	ARTRT	5-15	---	---	10-25	---
big sagebrush	ARTR2	---	---	10-25	---	---
black greasewood	SAVE4	---	5-10	20-30	---	---
fourwing saltbush	ATCA2	---	---	---	2-8	---
spiny hopsage	GRSP	---	---	5-15	5-10	---
threadleaf rubber rabbitbrush	CHNAC2	---	2-5	---	---	---

Range site number	023XY005NV	023XY010NV	024XY022NV	023XY011NV	023XY089NV
Potential production (lb/acre):					
Favorable years	3000	2200	800	800	4000
Normal years	2000	1700	600	600	3000
Unfavorable years	1300	1000	350	300	2000

1321--DUGWAY-UPDIKE 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--				
		DUGWAY	UPDIKE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	2-5	---	---
Lemmon alkaligrass	PULE	---	2-8	---	---	20-35
Nevada bluegrass	PONE3	2-10	10-20	---	---	40-50
basin wildrye	ELCI2	40-60	50-60	5-20	15-20	2-8
bottlebrush squirreltail	SIHY	---	---	2-5	2-10	---
inland saltgrass	DISPS2	---	2-8	---	2-8	5-20
western wheatgrass	AGSM	2-10	---	---	---	---
globemallow	SPHAE	---	---	1-2	---	---
other perennial forbs	PPFF	---	---	---	---	10-20
povertyweed	IVAX	2-5	---	---	---	---
thelypody	THELY	1-3	---	2-4	---	---
basin big sagebrush	ARTRT	5-15	---	---	---	---
big sagebrush	ARTR2	---	---	10-25	---	---
black greasewood	SAVE4	---	5-10	20-30	50-65	---
other shrubs	SSSS	---	---	---	---	0-5
spiny hopsage	GRSP	---	---	5-15	---	---
threadleaf rubber rabbitbrush	CHNAC2	---	2-5	---	---	---
Range site number		023XY005NV	023XY010NV	024XY022NV	024XY008NV	023XY002NV
Potential production (lb/acre):						
Favorable years		3000	2200	800	700	1300
Normal years		2000	1700	600	450	1000
Unfavorable years		1300	1000	350	300	700

1325--REYWAT-DEVADA-HART CAMP 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--						
		REYWAT	DEVADA	HART CAMP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	2-5	---	---	---	---	---	---
Idaho fescue	FEID	---	---	5-20	---	---	X	30-40
Nevada bluegrass	PONE3	---	---	---	---	---	X	---
Sandberg bluegrass	POSE	---	---	---	---	---	X	---
Thurber needlegrass	STTH2	15-20	10-25	5-10	10-20	30-40	X	2-8
Webber needlegrass	STWE	---	---	---	---	5-15	---	---
basin wildrye	ELCI2	5-10	---	5-10	2-10	---	X	5-10
bluebunch wheatgrass	AGSP	30-40	20-50	25-35	40-60	2-8	X	25-40
bluegrass	POA++	---	5-10	---	---	5-10	---	2-5
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	10-20	---	---	---
antelope bitterbrush	PUTR2	2-10	---	15-25	2-5	---	---	2-10
big sagebrush	ARTR2	15-25	---	---	15-25	---	---	---
low sagebrush	ARAR8	---	10-20	---	---	20-30	---	---
mountain big sagebrush	ARVA2	---	---	5-15	10-20	---	X	10-20
Range site number		023XY020NV	023XY031NV	023XY015NV	023XY039NV	023XY059NV	023XY024NV	023XY007NV
Potential production (lb/acre):								
Favoreble years		1100	900	1500	900	600	700	1600
Normal years		900	700	1200	700	450	500	1200
Unfavorable years		600	500	900	500	300	300	900

1326--REYWAT VERY STONY LOAM, 8 TO 30 PERCENT SLOPES

(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--			
		REYWAT	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	---	X	---
Indian ricegrass	ORHY	---	5-15	---	---
Nevada bluegrass	PONE3	---	---	X	---
Sandberg bluegrass	POSE	---	2-5	X	---
Thurber needlegrass	STTH2	10-20	20-40	X	5-10
Webber needlegrass	STWE	---	2-8	---	---
basin wildrye	ELCI2	2-10	---	X	2-10
bluebunch wheatgrass	AGSP	40-60	---	X	60-70
bottlebrush squirreltail	SIHY	---	2-5	---	---
Wyoming big sagebrush	ARTRW	10-20	20-30	---	---
antelope bitterbrush	PUTR2	2-5	---	---	2-8
big sagebrush	ARTR2	15-25	---	---	---
mountain big sagebrush	ARVA2	10-20	---	X	10-20
spiny hopsage	GRSP	---	2-5	---	---
Range site number		023XY039NV	023XY006NV	023XY024NV	023XY016NV
Potential production (lb/acre):					
Favorable years		900	800	700	1500
Normal years		700	600	500	1100
Unfavorable years		500	400	300	800

1327--REYWAT-WESTBUTTE-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--					
		REYWAT	WESTBUTTE	HAPGOOD	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	2-5	---	---	---	---	---
Idaho fescue	FEID	---	30-40	10-20	---	---	5-20
Nevada bluegrass	PONE3	---	---	2-5	---	---	---
Thurber needlegrass	STTH2	15-20	2-8	---	10-25	10-20	5-10
basin wildrye	ELCI2	5-10	5-10	---	---	2-10	5-10
bluebunch wheatgrass	AGSP	30-40	25-40	---	20-50	40-60	25-35
bluegrass	POA++	---	2-5	---	5-10	---	---
mountain brome	BRCA5	---	---	10-20	---	---	---
needlegrass	STIPA	---	---	10-20	---	---	---
purple oniongrass	MESP	---	---	2-5	---	---	---
slender wheatgrass	AGTR	---	---	2-8	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	10-20	---
antelope bitterbrush	PUTR2	2-10	2-10	2-5	---	2-5	15-25
big sagebrush	ARTR2	15-25	---	---	---	15-25	---
low sagebrush	ARAR8	---	---	---	10-20	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	10-20	5-15
snowberry	SYMPH	---	---	2-8	---	---	---
Range site number		023XY020NV	023XY007NV	023XY065NV	023XY031NV	023XY039NV	023XY015NV
Potential production (lb/acre):							
Favorable years		1100	1600	2600	900	900	1500
Normal years		900	1200	1800	700	700	1200
Unfavorable years		600	900	1400	500	500	900

1328--REYWAT-FERNPOINT 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--				
		REYWAT	FERNPOINT	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	2-5	2-5	---	---	2-5
Indian ricegrass	ORHY	---	---	5-15	5-15	---
Sandberg bluegrass	POSE	---	---	2-5	2-5	---
Thurber needlegrass	STTH2	15-20	15-20	20-40	20-40	15-20
Webber needlegrass	STWE	---	---	2-8	2-8	---
basin wildrye	ELCI2	5-10	5-10	---	---	5-10
bluebunch wheatgrass	AGSP	30-40	30-40	---	---	30-40
bottlebrush squirreltail	SIHY	---	---	2-5	2-5	---
Wyoming big sagebrush	ARTRW	---	---	20-30	20-30	---
antelope bitterbrush	PUTR2	2-10	2-10	---	---	2-10
big sagebrush	ARTR2	15-25	15-25	---	---	15-25
spiny hopsage	GRSP	---	---	2-5	2-5	---
Range site number		023XY020NV	023XY020NV	023XY006NV	023XY006NV	023XY020NV
Potential production (lb/acre):						
Favorable years		1100	1100	800	800	1100
Normal years		900	900	600	600	900
Unfavorable years		600	600	400	400	600

1329--REYWAT-DEVADA 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--				
		REYWAT	DEVADA	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	2-5	---	---
Idaho fescue	FEID	---	---	---	30-40	---
Indian ricegrass	ORHY	---	---	---	---	5-15
Sandberg bluegrass	POSE	---	---	---	---	2-5
Thurber needlegrass	STTH2	10-20	10-25	15-20	2-8	20-40
Webber needlegrass	STWE	---	---	---	---	2-8
basin wildrye	ELCI2	2-10	---	5-10	5-10	---
bluebunch wheatgrass	AGSP	40-60	20-50	30-40	25-40	---
bluegrass	POA++	---	5-10	---	2-5	---
bottlebrush squirreltail	SIHY	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	10-20	---	---	---	20-30
antelope bitterbrush	PUTR2	2-5	---	2-10	2-10	---
big sagebrush	ARTR2	15-25	---	15-25	---	---
low sagebrush	ARAR8	---	10-20	---	---	---
mountain big sagebrush	ARVA2	10-20	---	---	10-20	---
spiny hopsage	GRSP	---	---	---	---	2-5
Range site number		023XY039NV	023XY031NV	023XY020NV	023XY007NV	023XY006NV
Potential production (lb/acre):						
Favorable years		900	900	1100	1600	800
Normal years		700	700	900	1200	600
Unfavorable years		500	500	600	900	400

1335--WESTBUTTE-ROCK OUTCROP 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--				
		WESTBUTTE	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-40	---	X	X	5-20
Nevada bluegrass	PONE3	---	---	X	X	---
Sandberg bluegrass	POSE	---	---	---	X	---
Thurber needlegrass	STTH2	2-8	---	---	X	5-10
basin wildrye	ELCI2	5-10	---	---	X	5-10
big squirreltail	SIJU	---	---	X	---	---
bluebunch wheatgrass	AGSP	25-40	---	---	X	25-35
bluegrass	POA++	2-5	---	---	---	---
melic	MELIC	---	---	X	---	---
mountain brome	BRCA5	---	---	X	---	---
slender wheatgrass	AGTR	---	---	X	---	---
meadowrue	THALI2	---	---	X	---	---
antelope bitterbrush	PUTR2	2-10	---	---	---	15-25
mountain big sagebrush	ARVA2	10-20	---	X	X	5-15
snowberry	SYMPH	---	---	X	---	---
quaking aspen	POTRT	---	---	X	---	---
Range site number		023XY007NV	none	023XY028NV	023XY024NV	023XY015NV
Potential production (lb/acre):						
Favorable years		1600		600	700	1500
Normal years		1200		400	500	1200
Unfavorable years		900		250	300	900

1336--WESTBUTTE-ASHTRE-TUSUNE 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--						
		WESTBUTTE	ASHTRE	TUSUNE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	---	---	5-15	5-10	---	---	---
Idaho fescue	FEID	30-40	40-60	50-60	20-40	30-40	40-50	30-50
Thurber needlegrass	STTH2	2-8	---	---	---	2-8	---	2-8
basin wildrye	ELCI2	5-10	---	2-5	---	5-10	---	---
bluebunch wheatgrass	AGSP	25-40	---	5-15	2-5	25-40	2-5	15-30
bluegrass	POA++	2-5	2-8	---	---	2-5	---	2-8
needlegrass	STIPA	---	5-15	---	5-15	---	---	---
antelope bitterbrush	PUTR2	2-10	---	---	---	2-10	10-20	---
low sagebrush	ARAR8	---	---	---	---	---	---	10-20
mountain big sagebrush	ARVA2	10-20	10-20	5-15	15-25	10-20	10-20	---
snowberry	SYMPH	---	---	2-5	---	---	---	---
Range site number		023XY007NV	023XY094NV	023XY054NV	023XY061NV	023XY007NV	023XY066NV	023XY017NV
Potential production (lb/acre):								
Favorable years		1600	1300	1500	900	1600	1300	900
Normal years		1200	1000	1200	700	1200	1100	700
Unfavorable years		900	700	900	500	900	900	500

1345--LAYVIEW-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--				
		LAYVIEW	HAPGOOD	Inclusion 1	Inclusion 2	Inclusion 3
Columbia needlegrass	STNE3	---	---	---	---	5-15
Idaho fescue	FEID	40-50	10-20	15-25	10-20	---
Nevada bluegrass	PONE3	---	2-5	---	---	---
bluebunch wheatgrass	AGSP	2-5	---	---	5-15	---
bluegrass	POA++	5-15	---	5-15	2-5	---
mountain brome	BRCA5	---	10-20	---	2-8	5-15
needlegrass	STIPA	---	10-20	---	5-15	---
onespike oatgrass	DAUN	1-3	---	---	---	---
purple oniongrass	MESP	---	2-5	---	---	---
slender wheatgrass	AGTR	---	2-8	---	---	5-10
arrowleaf balsamroot	BASA3	2-5	---	---	---	---
goldenweed	HAPLO2	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---
antelope bitterbrush	PUTR2	---	2-5	---	---	---
curlleaf mountainmahogany	CELE3	---	---	---	25-40	---
low sagebrush	ARAR8	10-20	---	35-45	---	---
mountain big sagebrush	ARVA2	---	---	---	5-10	---
quaking aspen	POTRT	---	---	---	---	45-60
snowberry	SYMPH	---	2-8	---	2-5	2-5
Range site number		023XY014NV	023XY065NV	023XY008NV	023XY026NV	023XY027NV
Potential production (lb/acre):						
Favorable years		800	2600	400	1400	800
Normal years		600	1800	250	1100	500
Unfavorable years		400	1400	200	600	300

1346--LAYVIEW-WESTBUTTE-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--					
		LAYVIEW	WESTBUTTE	HAPGOOD	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	40-50	30-40	10-20	15-25	10-20	---
Nevada bluegrass	PONE3	---	---	2-5	---	---	40-50
Thurber needlegrass	STTH2	---	2-8	---	---	---	---
basin wildrye	ELCI2	---	5-10	---	---	---	---
bluebunch wheatgrass	AGSP	2-5	25-40	---	---	5-15	---
bluegrass	POA++	5-15	2-5	---	5-15	2-5	---
mountain brome	BRCA5	---	---	10-20	---	2-8	---
needlegrass	STIPA	---	---	10-20	---	5-15	---
onespike oatgrass	DAUN	1-3	---	---	---	---	---
purple oniongrass	MESP	---	---	2-5	---	---	---
sedge	CAREX	---	---	---	---	---	5-15
slender wheatgrass	AGTR	---	---	2-8	---	---	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---
goldenweed	HAPLO2	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	---	2-10	2-5	---	---	---
curlleaf mountainmahogany	CELE3	---	---	---	---	25-40	---
low sagebrush	ARAR8	10-20	---	---	35-45	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	5-10	---
snowberry	SYMPH	---	---	2-8	---	2-5	---

Range site number	023XY014NV	023XY007NV	023XY065NV	023XY008NV	023XY026NV	023XY013NV
Potential production (lb/acre):						
Favorable years	800	1600	2600	400	1400	2200
Normal years	600	1200	1800	250	1100	1700
Unfavorable years	400	900	1400	200	600	1300

1355--BADGERCAMP-HACKWOOD-EASTE ASSOCIATION, 4 TO 30 PERCENT SLOPES

(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--						
		BADGERCAMP	HACKWOOD	EASTE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	5-15	---	---	---
Idaho fescue	FEID	10-20	X	---	---	30-40	2-5	---
Letterman needlegrass	STLE4	---	---	X	---	---	---	---
Nevada bluegrass	PONE3	---	X	---	---	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	2-8	---	---
basin wildrye	ELCI2	---	---	---	---	5-10	2-5	---
big squirreltail	SIJU	---	X	---	---	---	---	---
bluebunch wheatgrass	AGSP	5-15	---	X	---	25-40	---	---
bluegrass	POA++	2-5	---	---	---	2-5	5-10	10-20
meadow barley	HOBR2	---	---	---	---	---	---	5-10
melic	MELIC	---	X	---	---	---	---	---
mountain brome	BRCA5	2-8	X	---	5-15	---	20-40	---
muttongrass	POFE	---	---	X	---	---	---	---
needlegrass	STIPA	5-15	---	---	---	---	10-20	---
rush	JUNCU	---	---	---	---	---	---	5-10
sedge	CAREX	---	---	X	---	---	---	5-10
slender wheatgrass	AGTR	---	X	---	5-10	---	---	---
tufted hairgrass	DECE	---	---	---	---	---	---	30-50
meadowrue	THALI2	---	X	---	---	---	---	---
antelope bitterbrush	PUTR2	---	---	---	---	2-10	---	---
common juniper	JUCO6	---	---	X	---	---	---	---
curlleaf mountainmahogany	CELE3	25-40	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-10	X	X	---	10-20	5-15	---
quaking aspen	POTRT	---	X	---	45-60	---	---	---
snowberry	SYMPH	2-5	X	---	2-5	---	2-5	---
snowbrush ceanothus	CEVE	---	---	X	---	---	---	---
white fir	ABCO	---	---	X	---	---	---	---
quaking aspen	POTRT	---	X	---	45-60	---	---	---

Range site number	023XY026NV	023XY028NV	023XY092NV	023XY027NV	023XY007NV	023XY019NV	023XY025NV
Potential production (lb/acre):							
Favorable years	1400	600	700	800	1600	2200	4000
Normal years	1100	400	500	500	1200	1800	3000
Unfavorable years	600	250	300	300	900	1500	2000

1356--BADGERCAMP-HACKWOOD-EASTE ASSOCIATION, 30 TO 70 PERCENT SLOPES

(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--						
		BADGERCAMP	HACKWOOD	EASTE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	5-15	---	---	---
Idaho fescue	FEID	10-20	X	---	---	10-20	30-40	2-5
Letterman needlegrass	STLE4	---	---	X	---	---	---	---
Nevada bluegrass	PONE3	---	X	---	---	2-5	---	---
Thurber needlegrass	STTH2	---	---	---	---	---	2-8	---
basin wildrye	ELCI2	---	---	---	---	---	5-10	2-5
big squirreltail	SIJU	---	X	---	---	---	---	---
bluebunch wheatgrass	AGSP	5-15	---	X	---	---	25-40	---
bluegrass	POA++	2-5	---	---	---	---	2-5	5-10
melic	MELIC	---	X	---	---	---	---	---
mountain brome	BRCA5	2-8	X	---	5-15	10-20	---	20-40
muttongrass	POFE	---	---	X	---	---	---	---
needlegrass	STIPA	5-15	---	---	---	10-20	---	10-20
purple oniongrass	MESP	---	---	---	---	2-5	---	---
sedge	CAREX	---	---	X	---	---	---	---
slender wheatgrass	AGTR	---	X	---	5-10	2-8	---	---
meadowrue	THALI2	---	X	---	---	---	---	---
antelope bitterbrush	PUTR2	---	---	---	---	2-5	2-10	---
common juniper	JUCO6	---	---	X	---	---	---	---
curlleaf mountainmahogany	CELE3	25-40	---	---	---	---	---	---
mountain big sagebrush	ARVA2	5-10	X	X	---	---	10-20	5-15
quaking aspen	POTRT	---	X	---	45-60	---	---	---
snowberry	SYMPH	2-5	X	---	2-5	2-8	---	2-5
snowbrush ceanothus	CEVE	---	---	X	---	---	---	---
white fir	ABCO	---	---	X	---	---	---	---
quaking aspen	POTRT	---	X	---	45-60	---	---	---

Range site number	023XY026NV	023XY028NV	023XY092NV	023XY027NV	023XY065NV	023XY007NV	023XY019NV
Potential production (lb/acre):							
Favorable years	1400	600	700	800	2600	1600	2200
Normal years	1100	400	500	500	1800	1200	1800
Unfavorable years	600	250	300	300	1400	900	1500

1358--BADGERCAMP-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--				
		BADGERCAMP	HACKWOOD	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	10-20	X	30-40	10-20	---
Nevada bluegrass	PONE3	---	X	---	2-5	---
Thurber needlegrass	STTH2	---	---	2-8	---	5-10
basin wildrye	ELCI2	---	---	5-10	---	2-10
big squirreltail	SIJU	---	X	---	---	---
bluebunch wheatgrass	AGSP	5-15	---	25-40	---	60-70
bluegrass	POA++	2-5	---	2-5	---	---
melic	MELIC	---	X	---	---	---
mountain brome	BRCA5	2-8	X	---	10-20	---
needlegrass	STIPA	5-15	---	---	10-20	---
purple oniongrass	MESP	---	---	---	2-5	---
slender wheatgrass	AGTR	---	X	---	2-8	---
meadowrue	THALI2	---	X	---	---	---
antelope bitterbrush	PUTR2	---	---	2-10	2-5	2-8
curlleaf mountainmahogany	CELE3	25-40	---	---	---	---
mountain big sagebrush	ARVA2	5-10	X	10-20	---	10-20
snowberry	SYMPH	2-5	X	---	2-8	---
quaking aspen	POTRT	---	X	---	---	---
Range site number		023XY026NV	023XY028NV	023XY007NV	023XY065NV	023XY016NV
Potential production (lb/acre):						
Favorable years		1400	600	1600	2600	1500
Normal years		1100	400	1200	1800	1100
Unfavorable years		600	250	900	1400	800

1360--WELCH CLAY LOAM, 0 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--		
		WELCH	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	---	40-50	2-10
basin wildrye	ELCI2	---	---	40-60
bluegrass	POA++	10-20	---	---
meadow barley	HOBR2	5-10	---	---
rush	JUNCU	5-10	---	---
sedge	CAREX	5-10	5-15	---
tufted hairgrass	DECE	30-50	---	---
western wheatgrass	AGSM	---	---	2-10
povertyweed	IVAX	---	---	2-5
thelypody	THELY	---	---	1-3
basin big sagebrush	ARTRT	---	---	5-15
Range site number		023XY025NV	023XY013NV	023XY005NV
Potential production (lb/acre):				
Favorable years		4000	2200	3000
Normal years		3000	1700	2000
Unfavorable years		2000	1300	1300

1361--WETVIT 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--				
		WETVIT	WETVIT	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	2-8	---	---	---	---
Lemmon alkaligrass	PULE	---	---	---	2-8	20-35
Nevada bluegrass	PONE3	40-60	40-50	2-10	10-20	40-50
basin wildrye	ELCI2	2-8	---	40-60	50-60	2-8
inland saltgrass	DISPS2	---	---	---	2-8	5-20
meadow barley	HOBR2	2-8	---	---	---	---
sedge	CAREX	10-20	5-15	---	---	---
western wheatgrass	AGSM	---	---	2-10	---	---
other perennial forbs	PPFF	---	---	---	---	10-20
povertyweed	IVAX	---	---	2-5	---	---
thelypody	THELY	---	---	1-3	---	---
basin big sagebrush	ARTRT	---	---	5-15	---	---
black greasewood	SAVE4	---	---	---	5-10	---
other shrubs	SSSS	---	---	---	---	0-5
threadleaf rubber rabbitbrush	CHNAC2	---	---	---	2-5	---
Range site number		023XY089NV	023XY013NV	023XY005NV	023XY010NV	023XY002NV
Potential production (lb/acre):						
Favorable years		4000	2200	3000	2200	1300
Normal years		3000	1700	2000	1700	1000
Unfavorable years		2000	1300	1300	1000	700

1365--RUBBLE LAND-DOSIE 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--					
		RUBBLE LAND	DOSIE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	2-5	---	---	---
Idaho fescue	FEID	---	---	---	X	30-40	X
Nevada bluegrass	PONE3	---	---	---	X	---	X
Sandberg bluegrass	POSE	---	---	---	X	---	---
Thurber needlegrass	STTH2	---	5-10	2-5	X	2-8	---
basin wildrye	ELCI2	---	2-10	10-20	X	5-10	---
big squirreltail	SIJU	---	---	---	---	---	X
bluebunch wheatgrass	AGSP	---	60-70	20-40	X	25-40	---
bluegrass	POA++	---	---	---	---	2-5	---
melic	MELIC	---	---	---	---	---	X
mountain brome	BRCA5	---	---	---	---	---	X
slender wheatgrass	AGTR	---	---	---	---	---	X
meadowrue	THALI2	---	---	---	---	---	X
antelope bitterbrush	PUTR2	---	2-8	2-10	---	2-10	---
mountain big sagebrush	ARVA2	---	10-20	5-15	X	10-20	X
snowberry	SYMPH	---	---	---	---	---	X
quaking aspen	POTRT	---	---	---	---	---	X

Range site number	none	023XY016NV	023XY041NV	023XY024NV	023XY007NV	023XY028NV
Potential production (lb/acre):						
Favorable years		1500	1400	700	1600	600
Normal years		1100	1200	500	1200	400
Unfavorable years		800	900	300	900	250

1366--DOSIE VERY STONY LOAM, 15 TO 50 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--				
		DOSIE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	2-5	---	2-5	---
Idaho fescue	FEID	---	---	30-40	---	5-20
Thurber needlegrass	STTH2	5-10	2-5	2-8	15-20	5-10
basin wildrye	ELCI2	2-10	10-20	5-10	5-10	5-10
bluebunch wheatgrass	AGSP	60-70	20-40	25-40	30-40	25-35
bluegrass	POA++	---	---	2-5	---	---
antelope bitterbrush	PUTR2	2-8	2-10	2-10	2-10	15-25
big sagebrush	ARTR2	---	---	---	15-25	---
mountain big sagebrush	ARVA2	10-20	5-15	10-20	---	5-15
Range site number		023XY016NV	023XY041NV	023XY007NV	023XY020NV	023XY015NV
Potential production (lb/acre):						
Favorable years		1500	1400	1600	1100	1500
Normal years		1100	1200	1200	900	1200
Unfavorable years		800	900	900	600	900

1367--DOSIE-FIDDLER-RUBBLE LAND 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--						
		DOSIE	FIDDLER	RUBBLE LAND	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	X	---	---	---	30-40	5-20
Nevada bluegrass	PONE3	---	X	---	---	---	---	---
Sandberg bluegrass	POSE	---	X	---	---	---	---	---
Thurber needlegrass	STTH2	5-10	X	---	10-25	10-20	2-8	5-10
basin wildrye	ELCI2	2-10	X	---	---	2-10	5-10	5-10
bluebunch wheatgrass	AGSP	60-70	X	---	20-50	40-60	25-40	25-35
bluegrass	POA++	---	---	---	5-10	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	10-20	---	---
antelope bitterbrush	PUTR2	2-8	---	---	---	2-5	2-10	15-25
big sagebrush	ARTR2	---	---	---	---	15-25	---	---
low sagebrush	ARAR8	---	---	---	10-20	---	---	---
mountain big sagebrush	ARVA2	10-20	X	---	---	10-20	10-20	5-15
Range site number		023XY016NV	023XY024NV	none	023XY031NV	023XY039NV	023XY007NV	023XY015NV
Potential production (lb/acre):								
Favorable years		1500	700		900	900	1600	1500
Normal years		1100	500		700	700	1200	1200
Unfavorable years		800	300		500	500	900	900

1375--COTANT-MADELINE 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	MADELINE	Inclusion 1	Inclusion 2
Idaho fescue	FEID	30-50	5-20	30-50	10-20
Nevada bluegrass	PONE3	---	---	---	2-5
Thurber needlegrass	STTH2	2-8	5-10	2-8	---
basin wildrye	ELCI2	---	5-10	---	---
bluebunch wheatgrass	AGSP	15-30	25-35	15-30	---
bluegrass	POA++	2-8	---	2-8	---
mountain brome	BRCA5	---	---	---	10-20
needlegrass	STIPA	---	---	---	10-20
purple oniongrass	MESP	---	---	---	2-5
slender wheatgrass	AGTR	---	---	---	2-8
antelope bitterbrush	PUTR2	---	15-25	---	2-5
low sagebrush	ARAR8	10-20	---	10-20	---
mountain big sagebrush	ARVA2	---	5-15	---	---
snowberry	SYMPH	---	---	---	2-8
Range site number		023XY017NV	023XY015NV	023XY017NV	023XY065NV
Potential production (lb/acre):					
Favorable years		900	1500	900	2600
Normal years		700	1200	700	1800
Unfavorable years		500	900	500	1400

1380--WEIMER-BOULDER LAKE 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 end production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		WEIMER	BOULDER LAKE	Inclusion 1	Inclusion 2
Cusick bluegrass	POCU3	---	---	---	20-30
Nevada bluegrass	PONE3	---	15-35	40-50	2-8
Thurber needlegrass	STTH2	---	---	---	25-35
basin wildrye	ELCI2	---	---	---	5-15
creeping wildrye	ELTR3	---	5-15	---	---
mat muhly	MURI	5-10	5-10	---	---
sedge	CAREX	---	---	5-15	---
dock	RUMEX	1-2	---	---	---
eveningprimrose	OENOT	2-5	---	---	---
lupine	LUPIN	---	---	---	2-5
povertyweed	IVAX	5-10	---	---	---
early sagebrush	ARLO9	---	---	---	15-25
rubber rabbitbrush	CHNA2	---	2-5	---	---
silver sagebrush	ARCA13	---	30-40	---	---
Range site number		023XY023NV	023XY003NV	023XY013NV	023XY090NV
Potential production (lb/acre):					
Favorable years		1500	1800	2200	900
Normal years		400	1400	1700	700
Unfavorable years		0	700	1300	450

1385--FERNPOINT VERY GRAVELLY SANDY LOAM, 8 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--			
		FERNPOINT	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	2-5	---	---	2-5
Indian ricegrass	ORHY	---	15-25	5-15	---
Sandberg bluegrass	POSE	---	---	2-5	---
Thurber needlegrass	STTH2	15-20	---	20-40	15-20
Webber needlegrass	STWE	---	---	2-8	---
basin wildrye	ELCI2	5-10	2-8	---	5-10
bluebunch wheatgrass	AGSP	30-40	---	---	30-40
bottlebrush squirreltail	SIHY	---	---	2-5	---
needleendthread	STCO4	---	20-40	---	---
thickspike wheatgrass	AGDA	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	20-30	---
antelope bitterbrush	PUTR2	2-10	---	---	2-10
big sagebrush	ARTR2	15-25	10-20	---	15-25
spiny hopsage	GRSP	---	2-5	2-5	---
Range site number		023XY020NV	023XY051NV	023XY006NV	023XY020NV
Potential production (lb/acre):					
Favoreble years		1100	900	800	1100
Normal years		900	700	600	900
Unfavoreble years		600	500	400	600

1395--ORR-FERNPOINT 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--				
		ORR	FERNPOINT	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	2-5	2-5	2-5	2-5	---
Nevada bluegrass	PONE3	---	---	---	---	2-10
Thurber needlegrass	STTH2	15-20	15-20	15-20	15-20	---
basin wildrye	ELCI2	5-10	5-10	5-10	5-10	40-60
bluebunch wheatgrass	AGSP	30-40	30-40	30-40	30-40	---
western wheatgrass	AGSM	---	---	---	---	2-10
povertyweed	IVAX	---	---	---	---	2-5
thelypody	THELY	---	---	---	---	1-3
antelope bitterbrush	PUTR2	2-10	2-10	2-10	2-10	---
basin big sagebrush	ARTRT	---	---	---	---	5-15
big sagebrush	ARTR2	15-25	15-25	15-25	15-25	---
Range site number		023XY020NV	023XY020NV	023XY020NV	023XY020NV	023XY005NV
Potential production (lb/acre):						
Favorable years		1100	1100	1100	1100	3000
Normal years		900	900	900	900	2000
Unfavorable years		600	600	600	600	1300

1400--BOMBADIL-CEEJAY 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--					
		BOMBADIL	CEEJAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	---	5-15	---	---	---
Sandberg bluegrass	POSE	2-5	---	2-5	---	---	---
Thurber needlegrass	STTH2	20-40	---	20-40	10-20	---	---
Webber needlegrass	STWE	2-8	5-15	2-8	---	5-15	---
basin wildrye	ELCI2	---	---	---	2-10	---	---
bluebunch wheatgrass	AGSP	---	---	---	40-60	---	---
bottlebrush squirreltail	SIHY	2-5	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	2-5	---
Wyoming big sagebrush	ARTRW	20-30	---	20-30	10-20	---	---
antelope bitterbrush	PUTR2	---	---	---	2-5	---	---
big sagebrush	ARTR2	---	---	---	15-25	---	---
mountain big sagebrush	ARVA2	---	---	---	10-20	---	---
spiny hopsage	GRSP	2-5	---	2-5	---	---	---
Range site number		023XY006NV	023XY093NV	023XY006NV	023XY039NV	023XY093NV	none
Potential production (lb/acre):							
Favorable years		800	600	800	900	600	
Normal years		600	450	600	700	450	
Unfavorable years		400	300	400	500	300	

1410--FULSTONE-SARAPH-TUFFO 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	SARAPH	TUFFO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	5-15	15-30	---	5-15	---
Sandberg bluegrass	POSE	---	2-5	---	---	2-5	---
Thurber needlegrass	STTH2	---	20-40	---	5-15	20-40	---
Webber needlegrass	STWE	5-15	2-8	---	---	2-8	5-15
basin wildrye	ELCI2	---	---	2-8	30-40	---	---
bluegrass	POA++	---	---	---	30-40	---	---
bottlebrush squirreltail	SIHY	---	2-5	5-10	---	2-5	---
lupine	LUPIN	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	20-30	30-40	---	20-30	---
antelope bitterbrush	PUTR2	---	---	T-10	---	---	---
big sagebrush	ARTR2	---	---	---	15-25	---	---
spiny hopsage	GRSP	---	2-5	2-10	---	2-5	---
winterfat	EULA5	---	---	T-10	---	---	---
Range site number		023XY093NV	023XY006NV	023XY088NV	023XY082NV	023XY006NV	023XY093NV
Potential production (lb/acre):							
Favorable years		600	800	350	1100	800	600
Normal years		450	600	200	800	600	450
Unfavoreble years		300	400	100	600	400	300

1412--FULSTONE-NELLSPRING-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--						
		FULSTONE	NELLSPRING	BUFFARAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	2-8	5-15	---	---	---	---
Sandberg bluegrass	POSE	---	2-5	2-5	---	---	5-10	---
Thurber needlegrass	STTH2	---	15-30	20-40	30-40	---	---	---
Webber needlegrass	STWE	5-15	---	2-8	5-15	5-15	---	---
bluebunch wheatgrass	AGSP	---	---	---	2-8	---	---	---
bluegrass	POA++	---	---	---	5-10	---	---	---
bottlebrush squirreltail	SIHY	---	2-5	2-5	---	---	10-20	---
desert needlegrass	STSP3	---	2-10	---	---	---	---	---
eriogonum	ERIOG	---	---	---	---	---	1-5	---
lupine	LUPIN	---	---	---	---	---	1-3	---
Douglas rabbitbrush	CHVI8	2-5	---	---	2-5	2-5	---	---
Lahontan sagebrush	ARARL*	---	30-45	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	20-30	---	---	---	---
ephedra	EPHED	---	2-5	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	20-30	---	2-10	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	30-50	---
shadscale	ATCO	---	2-5	---	---	---	---	---
spiny hopsage	GRSP	---	2-5	2-5	---	---	---	---
Range site number		023XY093NV	023XY047NV	023XY006NV	023XY059NV	023XY093NV	023XY001NV	none
Potential production (lb/acre):								
Favorable years		600	500	800	600	600	350	
Normal years		450	350	600	450	450	225	
Unfavorable years		300	200	400	300	300	150	

1420--HANGROCK VERY GRAVELLY LOAM, 2 TO 15 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--				
		HANGROCK	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	5-15	---	---	15-30
Sandberg bluegrass	POSE	2-5	2-5	---	---	---
Thurber needlegrass	STTH2	20-40	20-40	5-15	---	---
Wabber needlegrass	STWE	2-8	2-8	---	5-15	---
basin wildrye	ELCI2	---	---	30-40	---	2-8
bluegrass	POA++	---	---	30-40	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	---	---	5-10
lupine	LUPIN	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	20-30	20-30	---	---	30-40
antelope bitterbrush	PUTR2	---	---	---	---	T-10
big sagebrush	ARTR2	---	---	15-25	---	---
spiny hopsage	GRSP	2-5	2-5	---	---	2-10
winterfat	EULA5	---	---	---	---	T-10
Range site number		023XY006NV	023XY006NV	023XY082NV	023XY093NV	023XY088NV
Potential production (lb/acre):						
Favorable years		800	800	1100	600	350
Normal years		600	600	800	450	200
Unfavorable years		400	400	600	300	100

1430--GRASSYCAN 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--					
		GRASSYCAN	GRASSYCAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	5-15	---	---
Sandberg bluegrass	POSE	---	30-45	---	2-5	---	---
Thurber needlegrass	STTH2	30-40	---	---	20-40	10-25	---
Webber needlegrass	STWE	5-15	2-5	5-15	2-8	---	---
bluebunch wheatgrass	AGSP	2-8	---	---	---	20-50	---
bluegrass	POA++	5-10	---	---	---	5-10	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	2-5	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---	---
low sagebrush	ARAR8	20-30	30-45	---	---	10-20	---
spiny hopsage	GRSP	---	---	---	2-5	---	---
Range site number		023XY059NV	023XY021NV	023XY093NV	023XY006NV	023XY031NV	none
Potential production (lb/acre):							
Favorable years		600	300	600	800	900	
Normal years		450	200	450	600	700	
Unfavorable years		300	150	300	400	500	

1431--ESMOD-POWLOW 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--					
		ESMOD	POWLOW	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	2-5	---	---	2-5	---
Nevada bluegrass	PONE3	---	---	---	40-50	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	5-10
Thurber needlegrass	STTH2	30-40	15-20	5-15	---	15-20	---
Webber needlegrass	STWE	5-15	---	---	---	---	---
basin wildrye	ELCI2	---	5-10	30-40	---	5-10	---
bluebunch wheatgrass	AGSP	2-8	30-40	---	---	30-40	---
bluegrass	POA++	5-10	---	30-40	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	10-20
sedge	CAREX	---	---	---	5-15	---	---
eriogonum	ERIOG	---	---	---	---	---	1-5
lupine	LUPIN	---	---	2-5	---	---	1-3
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---	---
antelope bitterbrush	PUTR2	---	2-10	---	---	2-10	---
big sagebrush	ARTR2	---	15-25	15-25	---	15-25	---
low sagebrush	ARAR8	20-30	---	---	---	---	2-10
rubber rabbitbrush	CHNA2	---	---	---	---	---	30-50
Range site number		023XY059NV	023XY020NV	023XY082NV	023XY013NV	023XY020NV	023XY001NV
Potential production (lb/acre):							
Favorable years		600	1100	1100	2200	1100	350
Normal years		450	900	800	1700	900	225
Unfavorable years		300	600	600	1300	600	150

1440--TUSUNE-HARTIG 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--					
		TUSUNE	HARTIG	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Cusick bluegrass	POCU3	5-15	---	---	---	---	---
Idaho fescue	FEID	50-60	---	---	5-20	30-50	---
Nevada bluegrass	PONE3	---	---	---	---	---	2-8
Thurber needlegrass	STTH2	---	5-10	---	5-10	2-8	---
basin wildrye	ELCI2	2-5	2-10	---	5-10	---	65-75
bluebunch wheatgrass	AGSP	5-15	60-70	---	25-35	15-30	---
bluegrass	POA++	---	---	---	---	2-8	---
antelope bitterbrush	PUTR2	---	2-8	---	15-25	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
low sagebrush	ARAR8	---	---	---	---	10-20	---
mountain big sagebrush	ARVA2	5-15	10-20	---	5-15	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	1-3
snowberry	SYMPH	2-5	---	---	---	---	---
Range site number		023XY054NV	023XY016NV	none	023XY015NV	023XY017NV	023XY009NV
Potential production (lb/acre):							
Favorable years		1500	1500		1500	900	5500
Normal years		1200	1100		1200	700	4500
Unfavorable years		900	800		900	500	2500

1450--EMAGERT-WETVIT 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--				
		EMAGERT	WETVIT	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	---	2-8	---	---	---
Nevada bluegrass	PONE3	2-8	40-60	2-10	---	40-50
Thurber needlegrass	STTH2	---	---	---	5-15	---
basin wildrye	ELCI2	65-75	2-8	40-60	30-40	---
bluegrass	POA++	---	---	---	30-40	---
meadow barley	HOBR2	---	2-8	---	---	---
sedge	CAREX	---	10-20	---	---	5-15
western wheatgrass	AGSM	---	---	2-10	---	---
lupine	LUPIN	---	---	---	2-5	---
povertyweed	IVAX	---	---	2-5	---	---
thelypody	THELY	---	---	1-3	---	---
basin big sagebrush	ARTRT	5-10	---	5-15	---	---
big sagebrush	ARTR2	---	---	---	15-25	---
rubber rabbitbrush	CHNA2	1-3	---	---	---	---
Range site number		023XY009NV	023XY089NV	023XY005NV	023XY082NV	023XY013NV
Potential production (lb/acre):						
Favorable years		5500	4000	3000	1100	2200
Normal years		4500	3000	2000	800	1700
Unfavorable years		2500	2000	1300	600	1300

1460--WEEZWEED 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--			
		WEEZWEED	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	---	---	---	2-8
Nevada bluegrass	PONE3	2-10	2-8	---	40-60
Thurber needlegrass	STTH2	---	---	5-15	---
basin wildrye	ELCI2	40-60	65-75	30-40	2-8
bluegrass	POA++	---	---	30-40	---
meadow barley	HOBR2	---	---	---	2-8
sedge	CAREX	---	---	---	10-20
western wheatgrass	AGSM	2-10	---	---	---
lupine	LUPIN	---	---	2-5	---
povertyweed	IVAX	2-5	---	---	---
thelypody	THELY	1-3	---	---	---
basin big sagebrush	ARTRT	5-15	5-10	---	---
big sagebrush	ARTR2	---	---	15-25	---
rubber rabbitbrush	CHNA2	---	1-3	---	---
Range site number		023XY005NV	023XY009NV	023XY082NV	023XY089NV
Potential production (lb/acre):					
Favorable years		3000	5500	1100	4000
Normal years		2000	4500	800	3000
Unfavorable years		1300	2500	600	2000

1470--NINEMILE VERY COBBLY LOAM, 2 TO 15 PERCENT SLOPES

(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--			
		NINEMILE	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	X
Cusick bluegrass	POCU3	---	---	---	X
Idaho fescue	FEID	30-50	---	5-20	X
Thurber needlegrass	STTH2	2-8	10-25	5-10	X
basin wildrye	ELCI2	---	---	5-10	---
bluebunch wheatgrass	AGSP	15-30	20-50	25-35	X
bluegrass	POA++	2-8	5-10	---	---
western needlegrass	STOC2	---	---	---	X
low sagebrush	ARAR8	10-20	10-20	---	X
antelope bitterbrush	PUTR2	---	---	15-25	---
low sagebrush	ARAR8	10-20	10-20	---	X
mountain big sagebrush	ARVA2	---	---	5-15	---
Range site number		023XY017NV	023XY031NV	023XY015NV	023XY095NV
Potential production (lb/acre):					
Favorable years		900	900	1500	600
Normal years		700	700	1200	400
Unfavorable years		500	500	900	200

9901--PLAYAS

(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--
		PLAYAS

Range site number none

Potential production (lb/acre):
Favorable years
Normal years
Unfavorable years

9902--ROCK OUTCROP-RUBBLE LAND COMPLEX, 50 TO 75 PERCENT SLOPES

(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--				
		ROCK OUTCROP	RUBBLE LAND	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	---	X	X	---
Nevada bluegrass	PONE3	---	---	X	X	---
Sandberg bluegrass	POSE	---	---	---	X	---
Thurber needlegrass	STTH2	---	---	---	X	5-10
basin wildrye	ELCI2	---	---	---	X	2-10
big squirreltail	SIJU	---	---	X	---	---
bluebunch wheatgrass	AGSP	---	---	---	X	60-70
melic	MELIC	---	---	X	---	---
mountain brome	BRCA5	---	---	X	---	---
slender wheatgrass	AGTR	---	---	X	---	---
meadowrue	THALI2	---	---	X	---	---
antelope bitterbrush	PUTR2	---	---	---	---	2-8
mountain big sagebrush	ARVA2	---	---	X	X	10-20
snowberry	SYMPH	---	---	X	---	---
quaking aspen	POTRT	---	---	X	---	---
Range site number		none	none	023XY028NV	023XY024NV	023XY016NV
Potential production (lb/acre):						
Favorable years				600	700	1500
Normal years				400	500	1100
Unfavorable years				250	300	800

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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